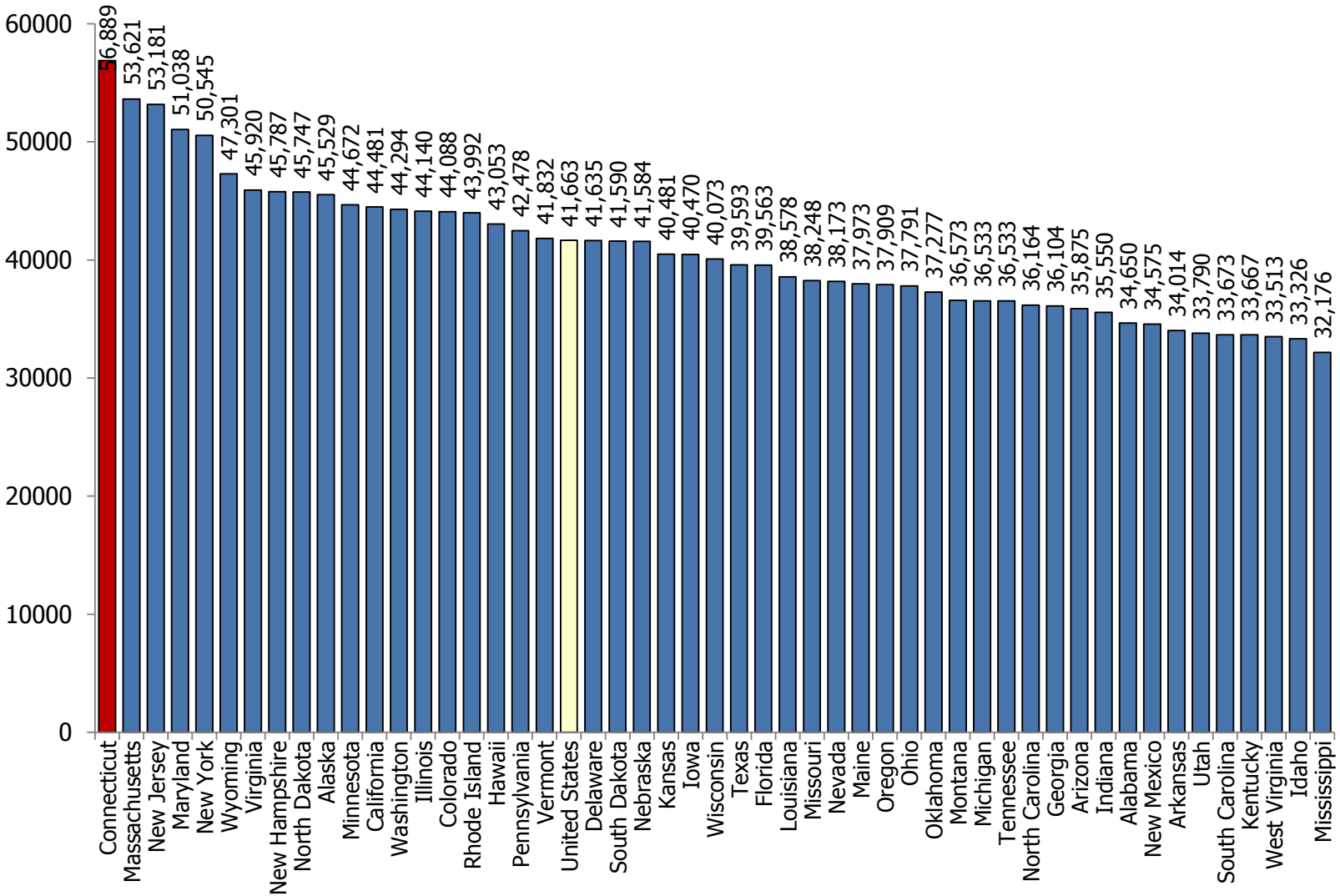
The Context for Higher Education Policymaking in Connecticut - #2

Prepared for
Planning Commission for Higher Education
Hartford, CT
November 12, 2013

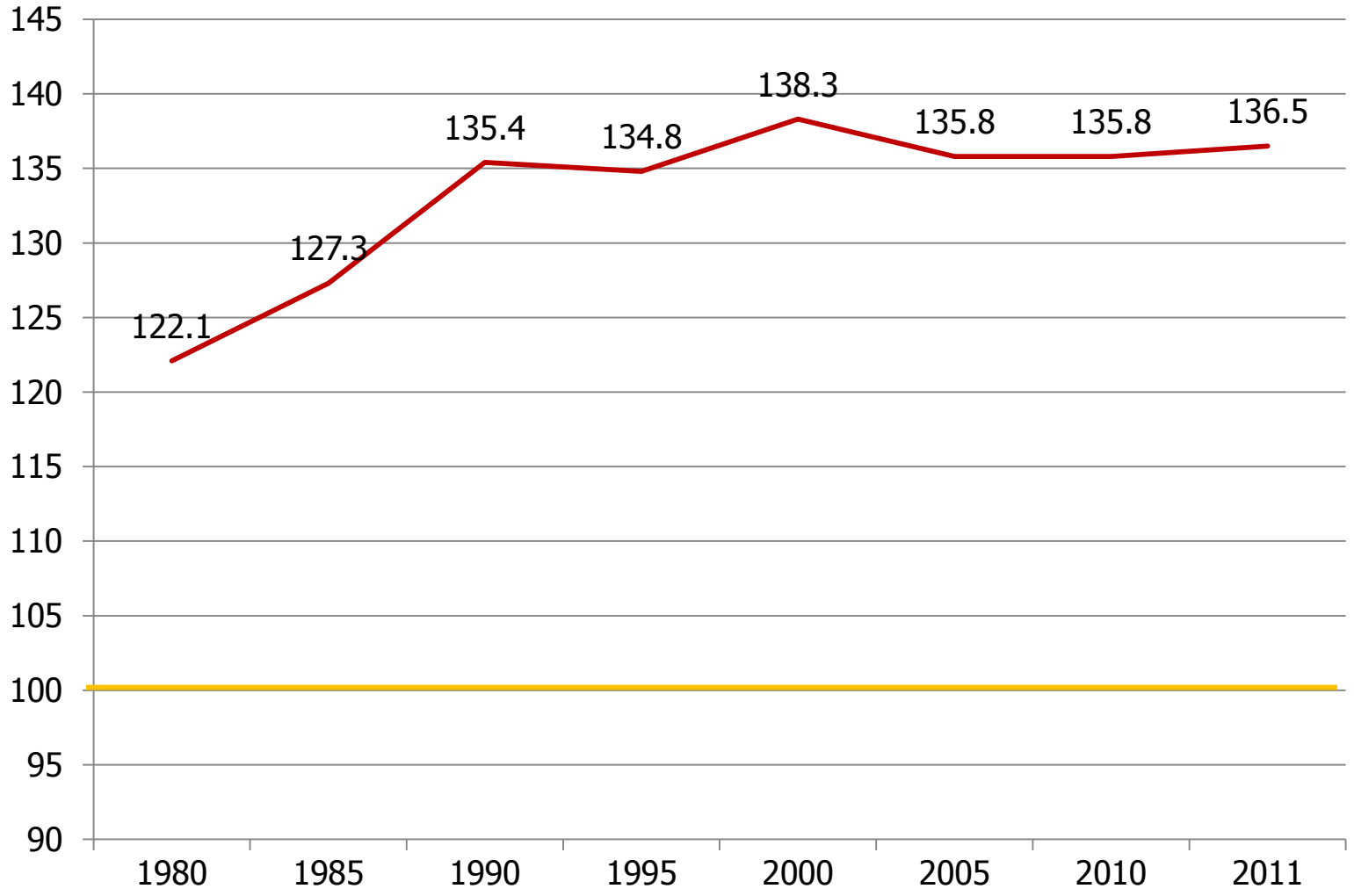
NCHEMS
National Center for Higher Education Management Systems
3035 Center Green Drive, Suite 150
Boulder, Colorado 80301

Personal Income per Capita (2011)



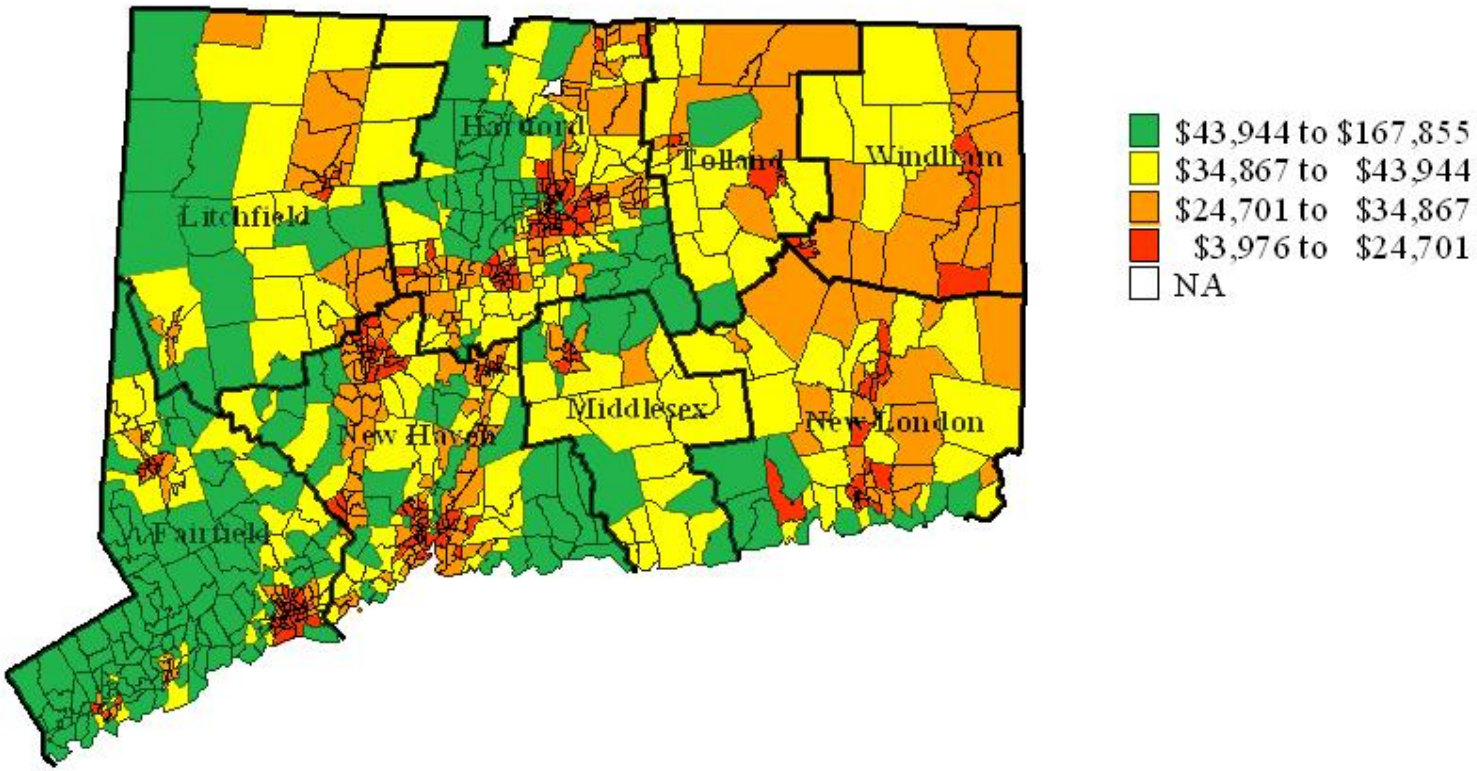
Source: U.S. Bureau of Economic Analysis

Connecticut Personal Income per Capita as a Percent of the U.S. Average, (1980-2011)



Source: Bureau of Economic Analysis

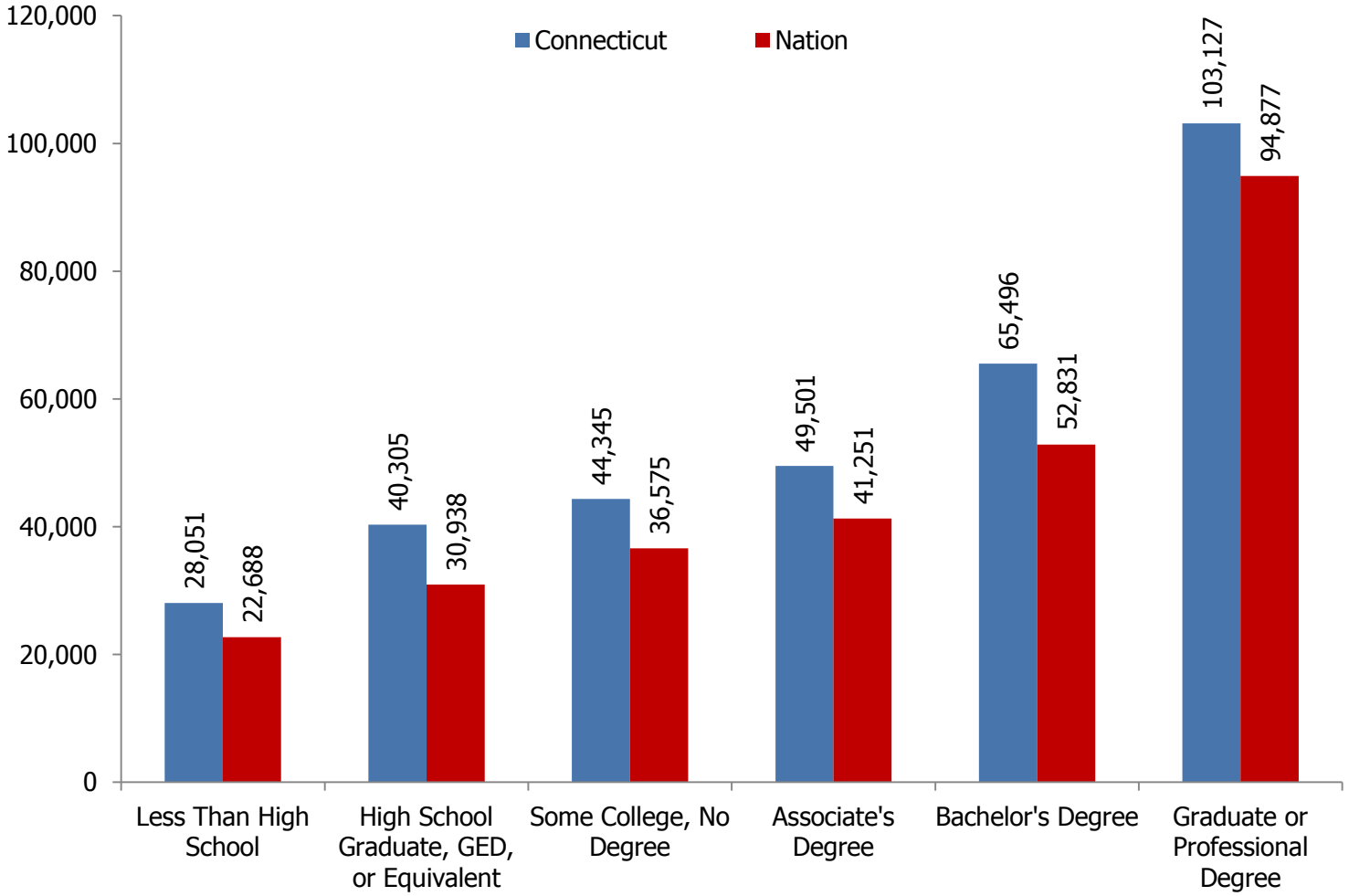
Per Capita Income by Census Tract, 2007-11



Connecticut = $37,627

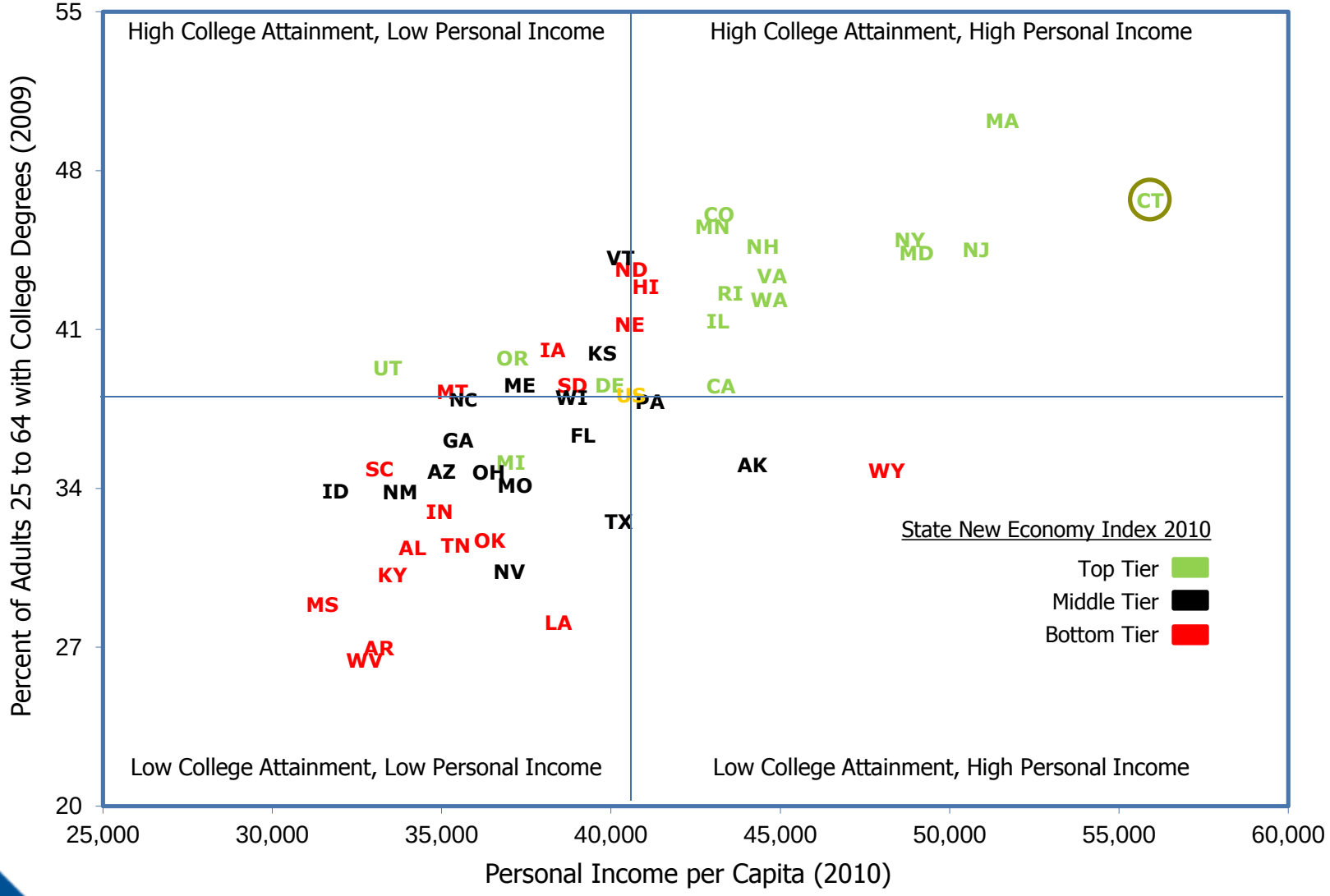
Source: U.S. Census Bureau, 2007-11 American Community Survey 5-Year Estimates.

Median Annual Wages for Employed Workers Aged 25 to 64 – by Level of Education (Connecticut, 2010)



Source: U.S. Census Bureau, 2010 American Community Survey (Public Use Microdata Samples)

The Relationship Between Educational Attainment, Personal Income, and the State New Economy Index (2010)



Source: U.S. Census Bureau, 2010 American Community Survey; Bureau of Economic Analysis; Kauffman Foundation

State New Economy Index – Connecticut's Strengths and Weaknesses

Strengths (Top 10)

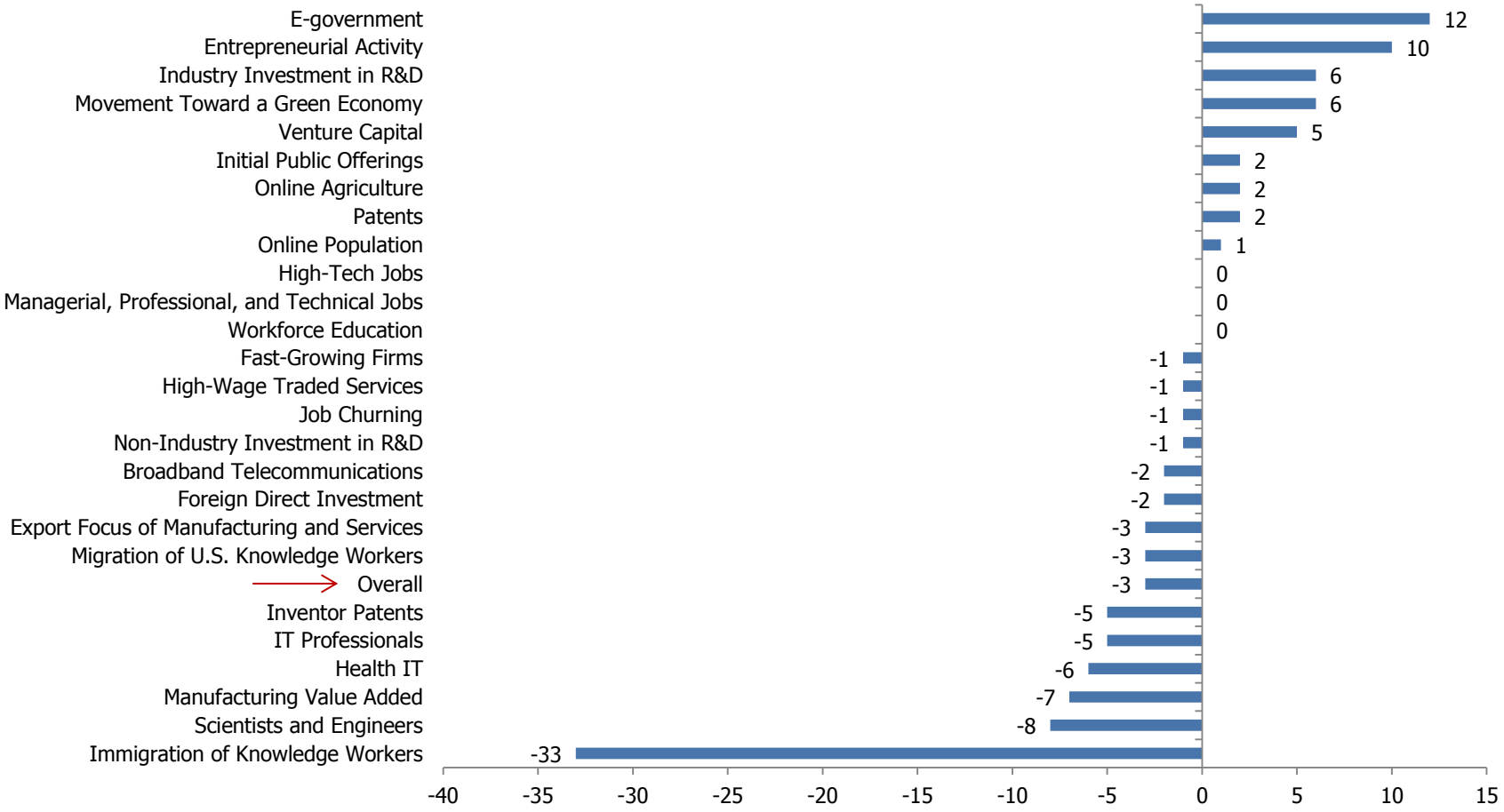
- IT Professionals (10th)
- Managerial, Professional, Technical Jobs (4th)
- Workforce Education (4th)
- Migration of US Knowledge Workers (3rd)
- Manufacturing Value-Added (2nd)
- High-Wage Traded Services (2nd)
- Foreign Direct Investments (3rd)
- Fastest Growing Firms (5th)
- IPOs (8th)
- Inventor Patents (5th)
- Online Agriculture (2nd)
- Broadband Telecommunications (5th)
- Industry Investment in R&D (5th)
- Alternative Energy Use (8th)
- Venture Capital (7th)

Weaknesses (Bottom 10)

- Job Churning (50th)

Source: The Kauffman Foundation

Change in Connecticut's New Economy Rankings, 2008-2012



NCHEMS

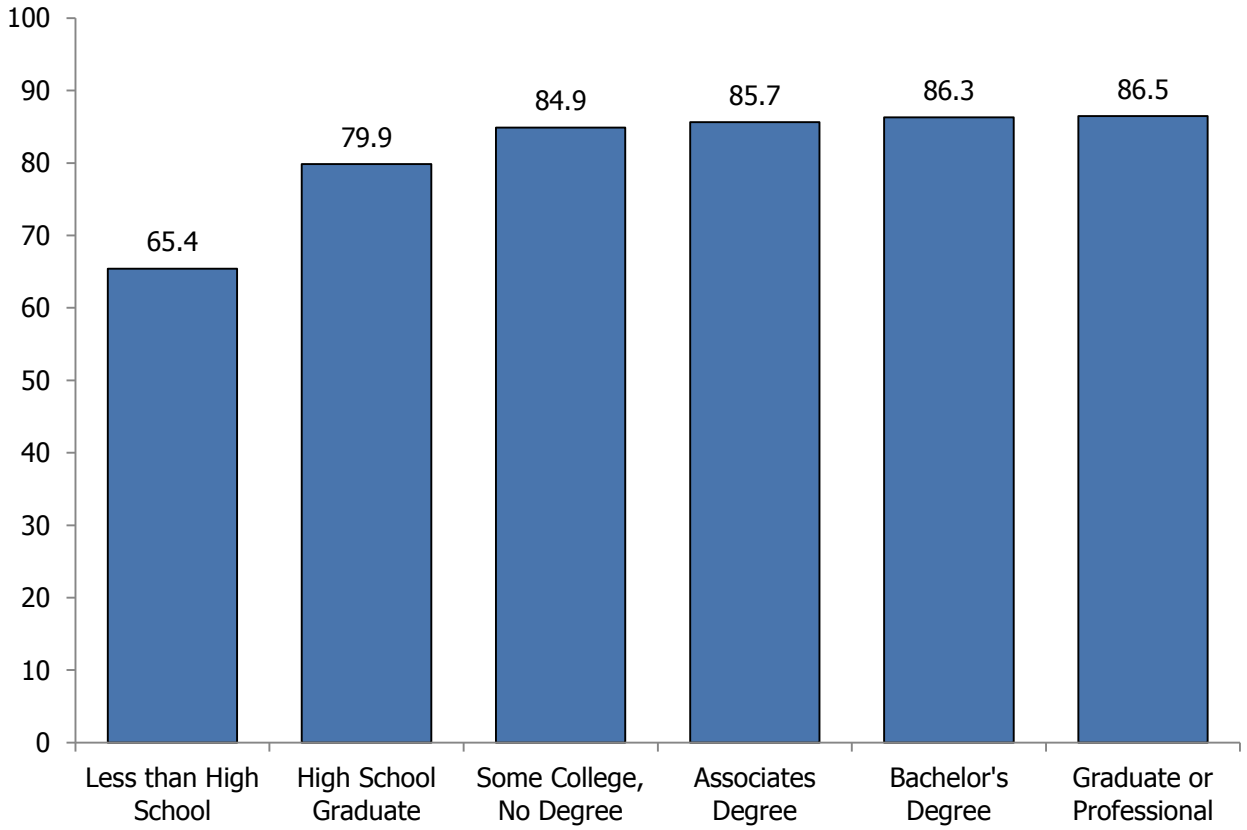
Sources: ITIF, The 2012 State New Economy Index, The 2008 State New Economy Index

Connecticut's Rank in Federally Financed R&D Expenditures by Field

Field	Rank
Engineering	37
Math & Computer Sciences	32
Physical Sciences	21
Life Sciences	3
Geosciences	38
Total, All Disciplines	5

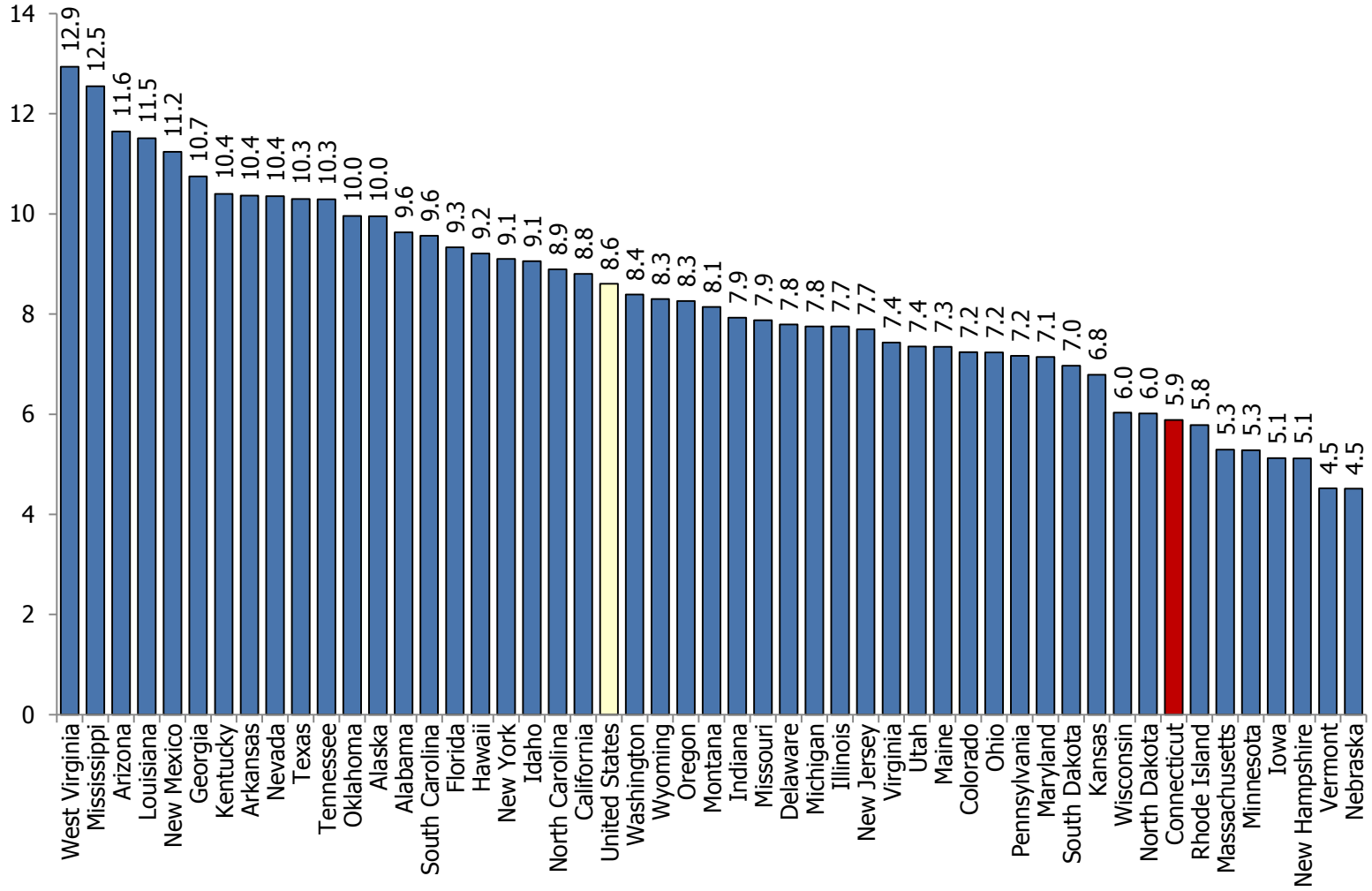
Source: National Science Foundation; WebCASPAR
U.S. Census Bureau State Population Estimates, 2011
https://webcaspar.nsf.gov/index.jsp?subHeader=WebCASPARHome

Percentage of Working-Aged Adults (25 to 64) Participating in the Workforce – by Education Level Attained (Connecticut, 2010)



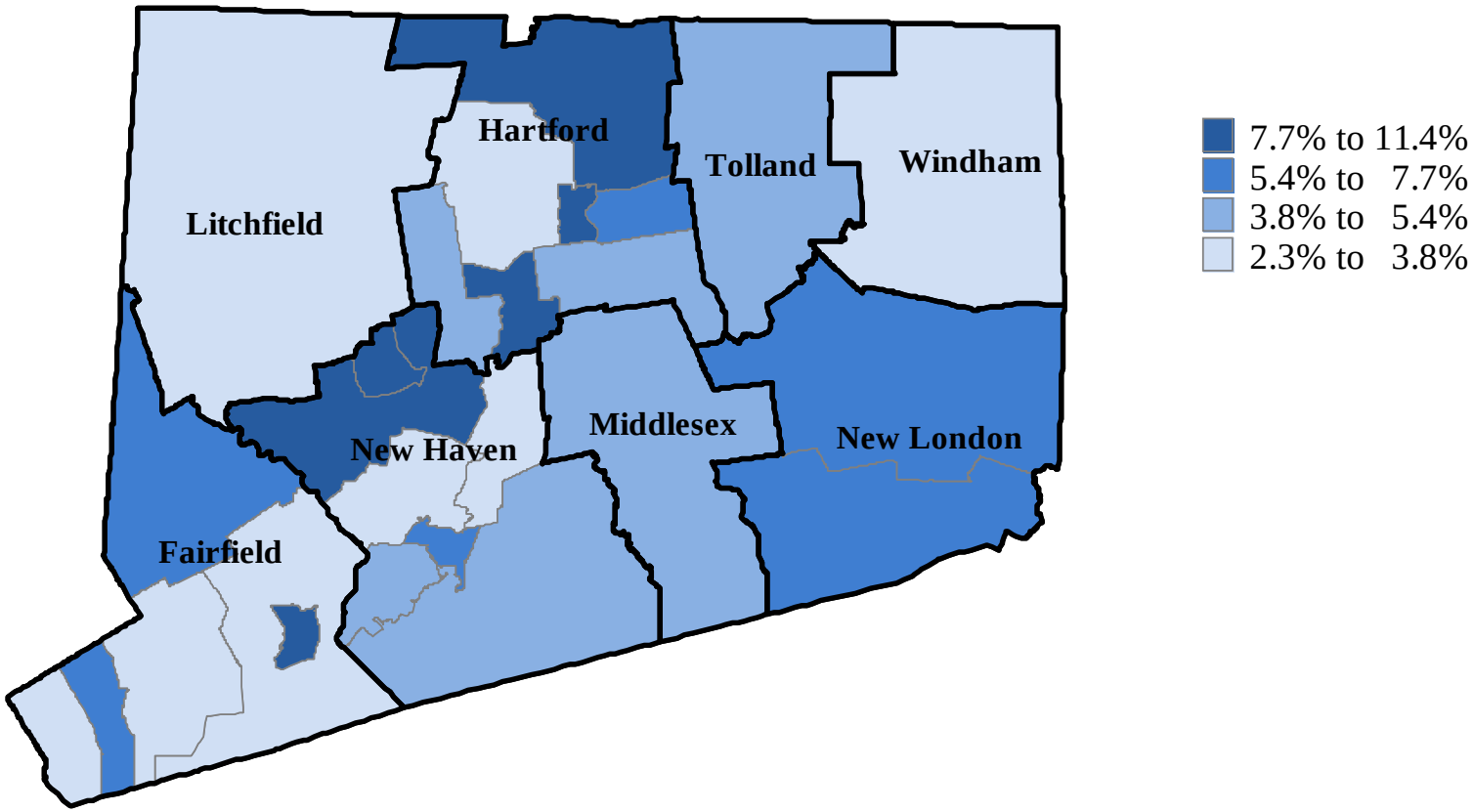
Source: U.S. Census Bureau, 2008-10 American Community Survey (Public Use Microdata Samples)

Average Annual Percent of Population Age 16-24 Not Working and Not in School, 2009-11



Source: U.S. Census Bureau, 2009-11 American Community Survey 3-Year Public Use Microdata Sample.

Percent of Population Age 16-24 Not Working and Not Enrolled in School, 2006-10

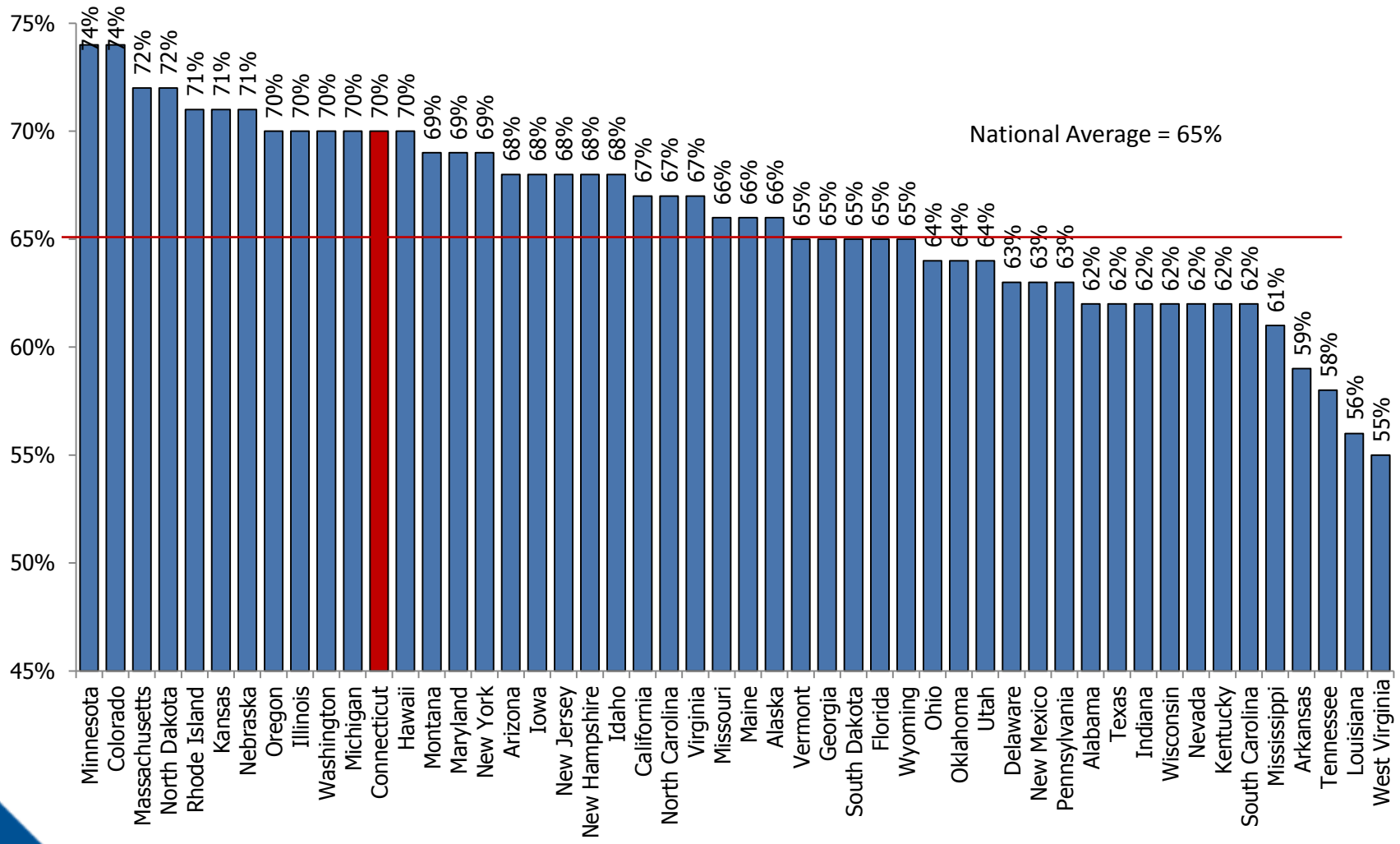


NCHEMS

Connecticut = 5.5% (2006-10)

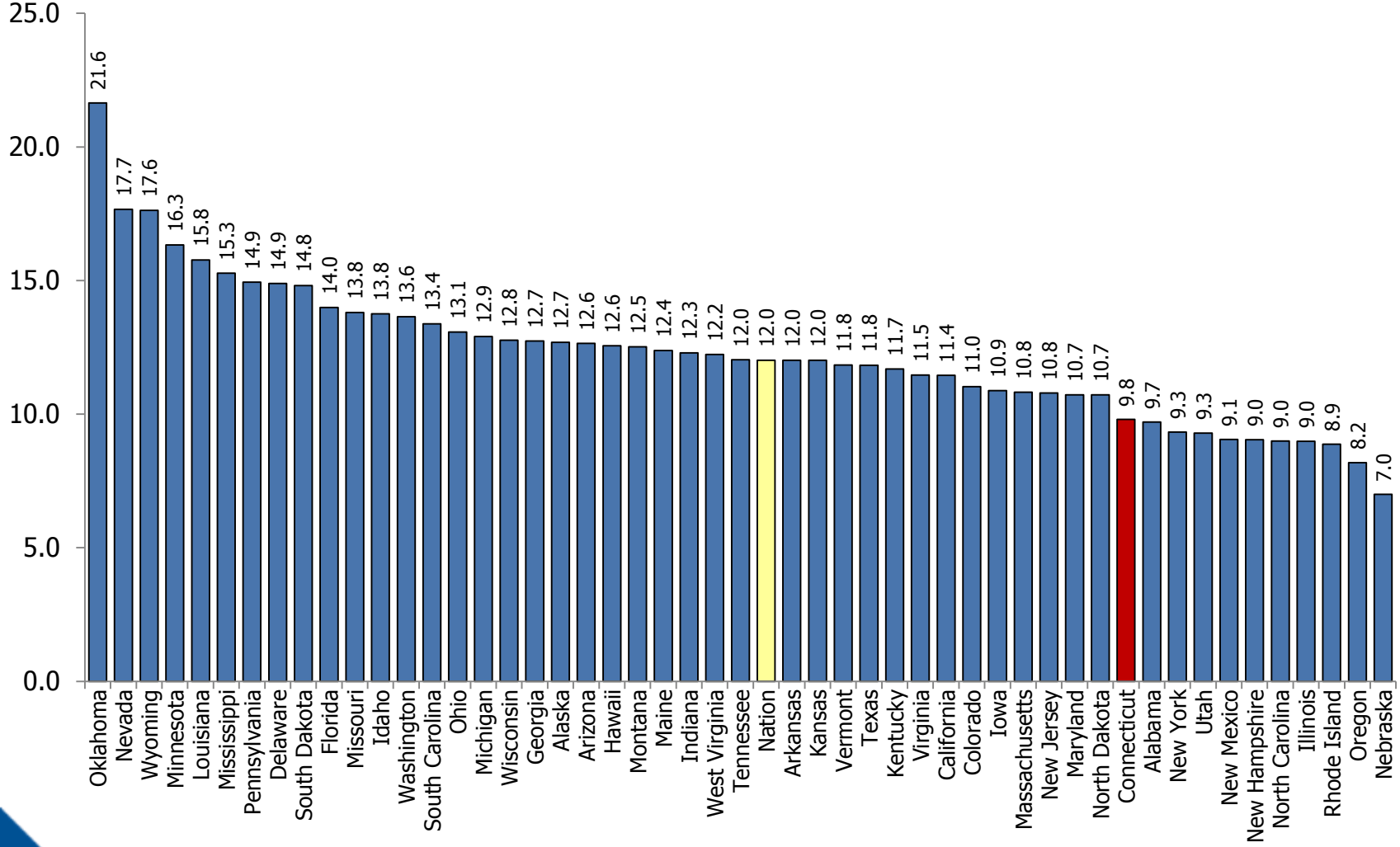
Source: U.S. Census Bureau, 2006-10 American Community Survey 5-Year Estimates.

Percentage of Jobs in 2020 that Will Require a Postsecondary Education, by State



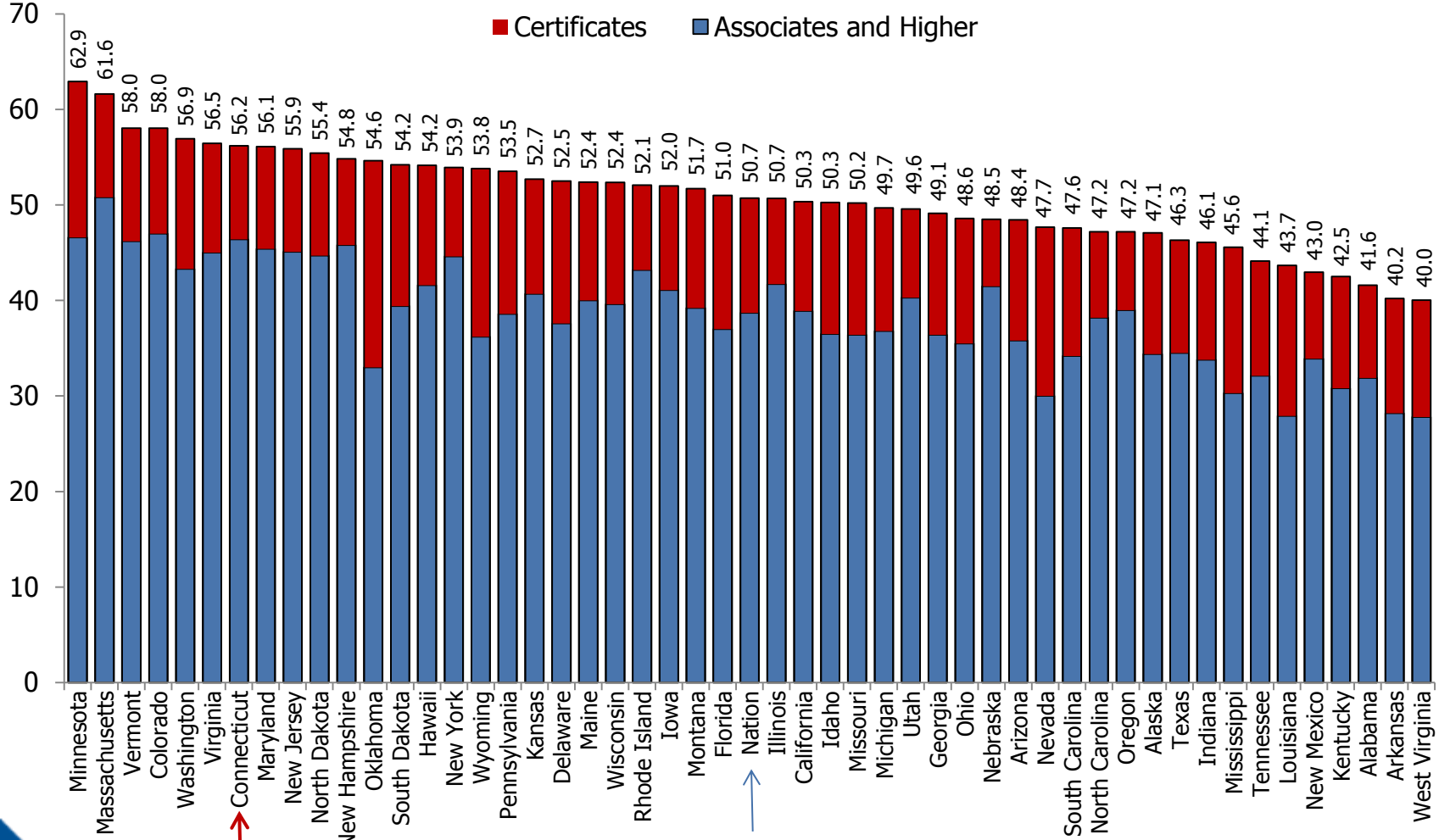
Source: Georgetown University Center on Education and the Workforce, Projections of Jobs and Education Requirements through 2020; 2013

Percent of 25-64 Year Olds with Certificates, 2011



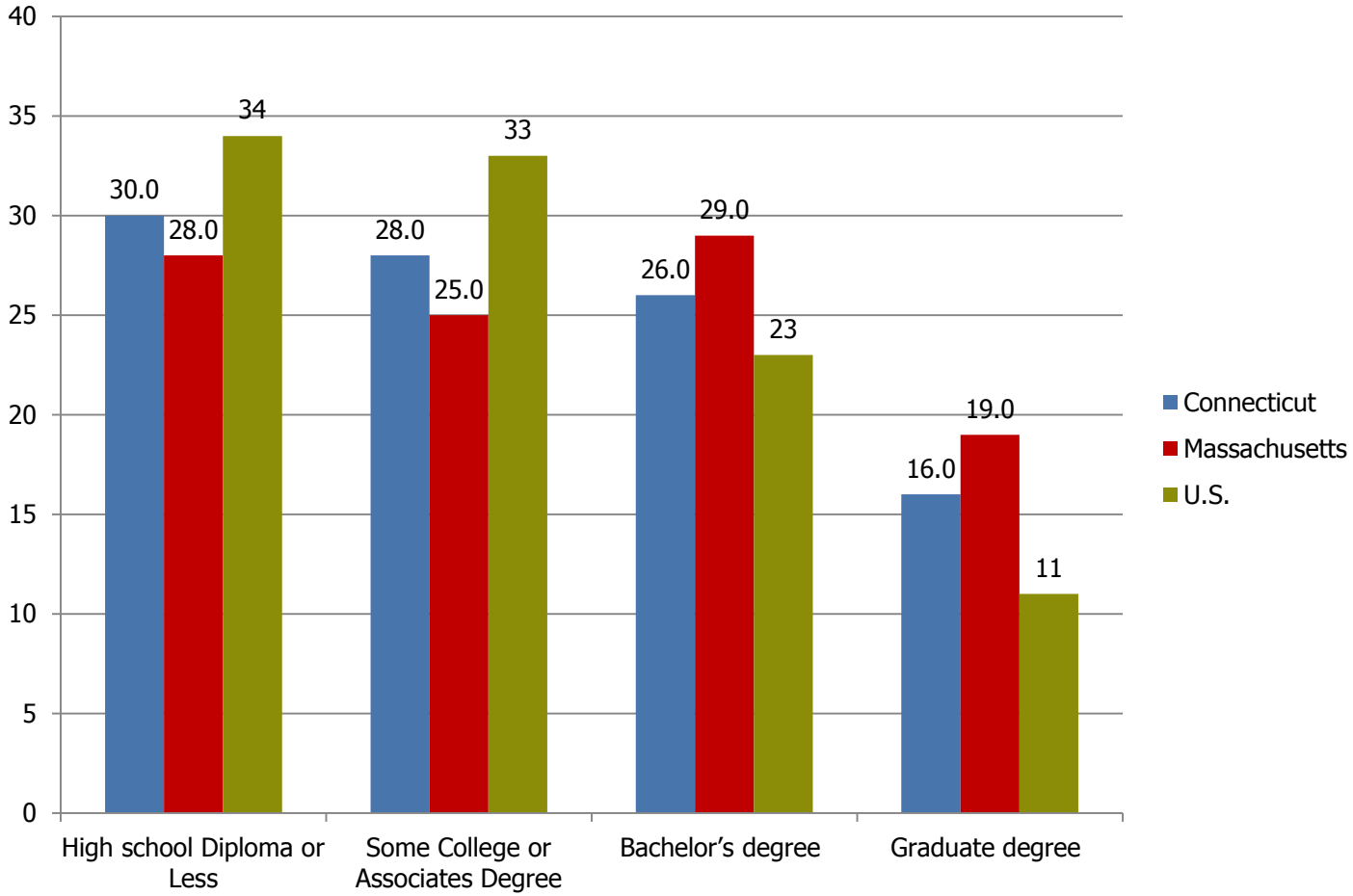
Source: U.S. Census Bureau, 2008 SIPP Survey of Income and Program Participation

Percent of 25-64 Year Olds with College Degrees – Associate and Higher, Certificates and Total, 2011



Source: U.S. Census Bureau, 2011 American Community Survey, 2008 SIPP, Survey of Income and Program Participation

Percentage of Connecticut, Massachusetts, & U.S. Jobs in 2020, by Education Level



Source: Georgetown University Center on Education and the Workforce, RECOVERY: Projections of Jobs and Educa tion Requirements Through 2020; June 2013

Connecticut Jobs in 2018, by Education Level, Less Current Workers by Degree Level

	Connecticut Jobs in 2018*	Current Workers**	Difference
High School Dropouts	145,000	107,282	37,718
High School Graduates	562,000	397,793	164,207
Some college, no degree	364,000	311,351	52,649
Associate's degree	166,000	133,171	32,829
Bachelor's degree	426,000	369,232	56,768
Graduate degree	282,000	275,524	6,476

*Source: Georgetown University Center on Education and the Workforce, Projections of Jobs and Education Requirements through 2018; June 2010
**Source: U.S. Census Bureau, 2010 American Community Survey (ACS) Public Use Microdata Sample (PUMS) File.

Connecticut Occupations with the Most Projected Annual Openings, 2010-2020

Occupation	Projected Openings	Required Education
Cashiers	1,962	Less than high school
Retail Salespersons	1,936	Less than high school
Waiters and Waitresses	1,479	Less than high school
Registered Nurses	1,392	Associate's degree
Customer Service Representatives	987	High school diploma or equivalent
Combined Food Preparation and Serving Workers, Including Fast Food	978	Less than high school
Personal Care Aides	962	Less than high school
Laborers and Freight, Stock, and Material Movers, Hand	935	Less than high school
First-Line Supervisors of Office and Administrative Support Workers	849	High school diploma or equivalent
Childcare Workers	834	High school diploma or equivalent
Janitors and Cleaners, Except Maids and Housekeeping Cleaners	812	Less than high school
Teacher Assistants	802	High school diploma or equivalent
Office Clerks, General	778	High school diploma or equivalent
Receptionists and Information Clerks	639	High school diploma or equivalent
Landscaping and Groundskeeping Workers	609	Less than high school
Elementary School Teachers, Except Special Education	600	Bachelor's degree
Food Preparation Workers	589	Less than high school
Counter Attendants, Cafeteria, Food Concession, and Coffee Shop	569	Less than high school
General and Operations Managers	560	Associate's degree
Nursing Aides, Orderlies, and Attendants	555	Postsecondary non-degree award
First-Line Supervisors of Retail Sales Workers	544	High school diploma or equivalent
Accountants and Auditors	528	Bachelor's degree
Home Health Aides	517	Less than high school
Stock Clerks and Order Fillers	506	Less than high school
Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	503	High school diploma or equivalent

Connecticut Occupations with the Most Projected Annual Openings Requiring Some College Education, 2010-2020

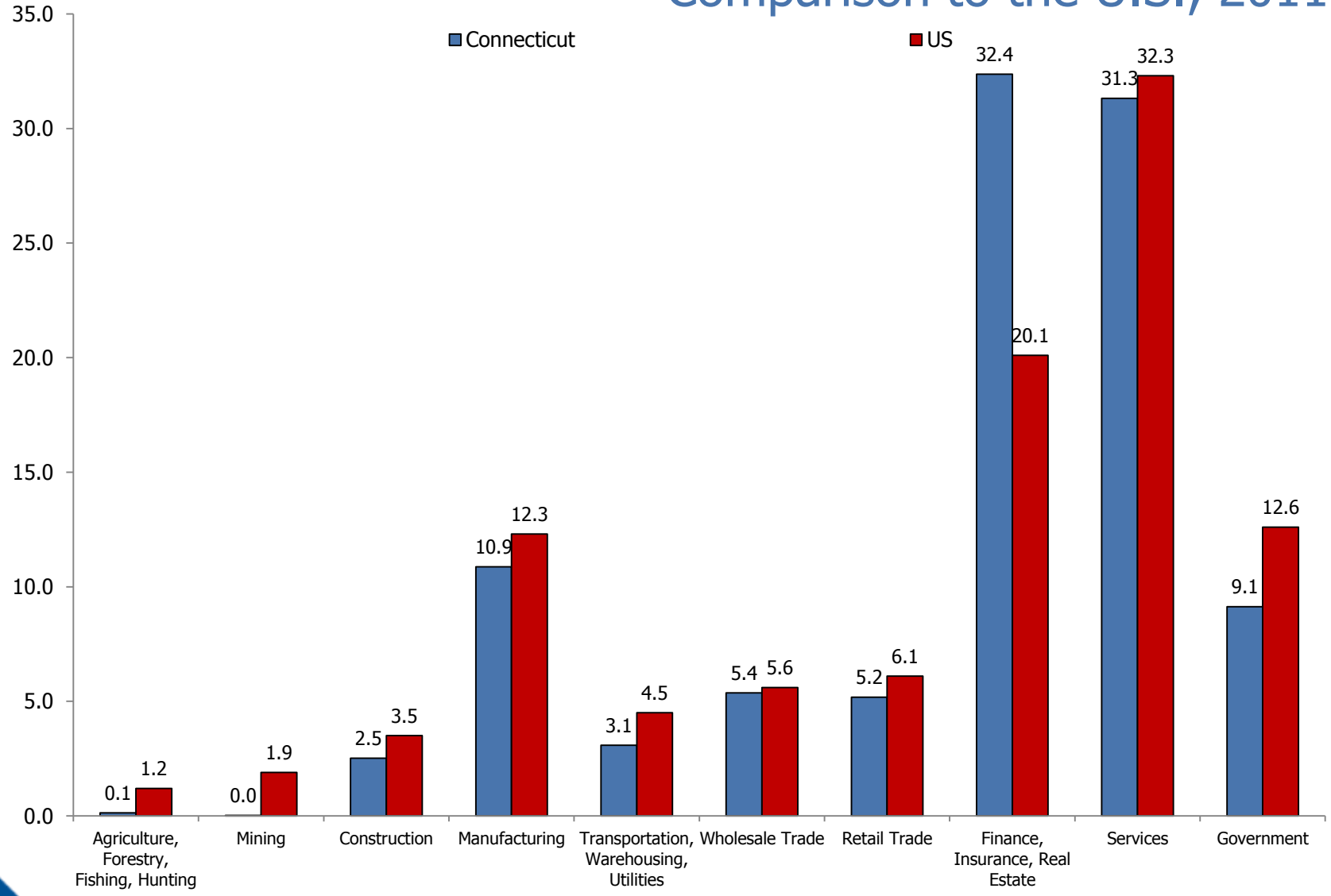
Occupation	Projected Openings	Required Education
Registered Nurses	1,392	Associate's degree
Elementary School Teachers, Except Special Education	600	Bachelor's degree
General and Operations Managers	560	Associate's degree
Nursing Aides, Orderlies, and Attendants	555	Postsecondary non-degree award
Accountants and Auditors	528	Bachelor's degree
Secondary School Teachers, Except Special and Career/Technical Education	473	Bachelor's degree
Graduate Teaching Assistants	391	Master's degree
Preschool Teachers, Except Special Education	380	Associate's degree
Computer Support Specialists	368	Some college, no degree
Middle School Teachers, Except Special and Career/Technical Education	359	Bachelor's degree
Licensed Practical and Licensed Vocational Nurses	347	Postsecondary non-degree award
Securities, Commodities, and Financial Services Sales Agents	343	Bachelor's degree
Hairdressers, Hairstylists, and Cosmetologists	304	Postsecondary non-degree award
Computer Systems Analysts	303	Bachelor's degree
Financial Managers	294	Bachelor's degree
Teachers and Instructors, All Other	288	Bachelor's degree
Sales Managers	287	Bachelor's degree
Management Analysts	283	Bachelor's degree
Market Research Analysts and Marketing Specialists	276	Bachelor's degree
Sales Representatives, Wholesale and Manufacturing, Technical and Scientific Products	264	Bachelor's degree
Financial Analysts	235	Bachelor's degree
Computer and Information Systems Managers	227	Bachelor's degree
Software Developers, Applications	204	Bachelor's degree
Marketing Managers	201	Bachelor's degree
Personal Financial Advisors	201	Bachelor's degree

Connecticut Job Openings in 2020 by Occupation and Education Level

OCCUPATION	JOB OPENINGS BY OCCUPATION AND EDUCATION LEVEL (IN THOUSANDS)					
	Less than high school	High school diploma	Some college/ no degree	Associate's degree	Bachelor's degree	Master's degree or better
Managerial and Professional Office	0	3	4	2	9	6
STEM	0	1	1	1	3	2
Social Sciences	0	0	0	0	0	1
Community Services and Arts	0	1	1	1	3	1
Education	0	1	1	0	3	4
Healthcare Professional and Technical	0	1	1	2	3	3
Healthcare Support	1	2	1	0	0	0
Food and Personal Services	4	12	6	2	3	0
Sales and Office Support	2	18	13	4	8	1
Blue Collar	5	14	6	2	1	0
TOTAL	**12**	**52**	**33**	**15**	**32**	**19**

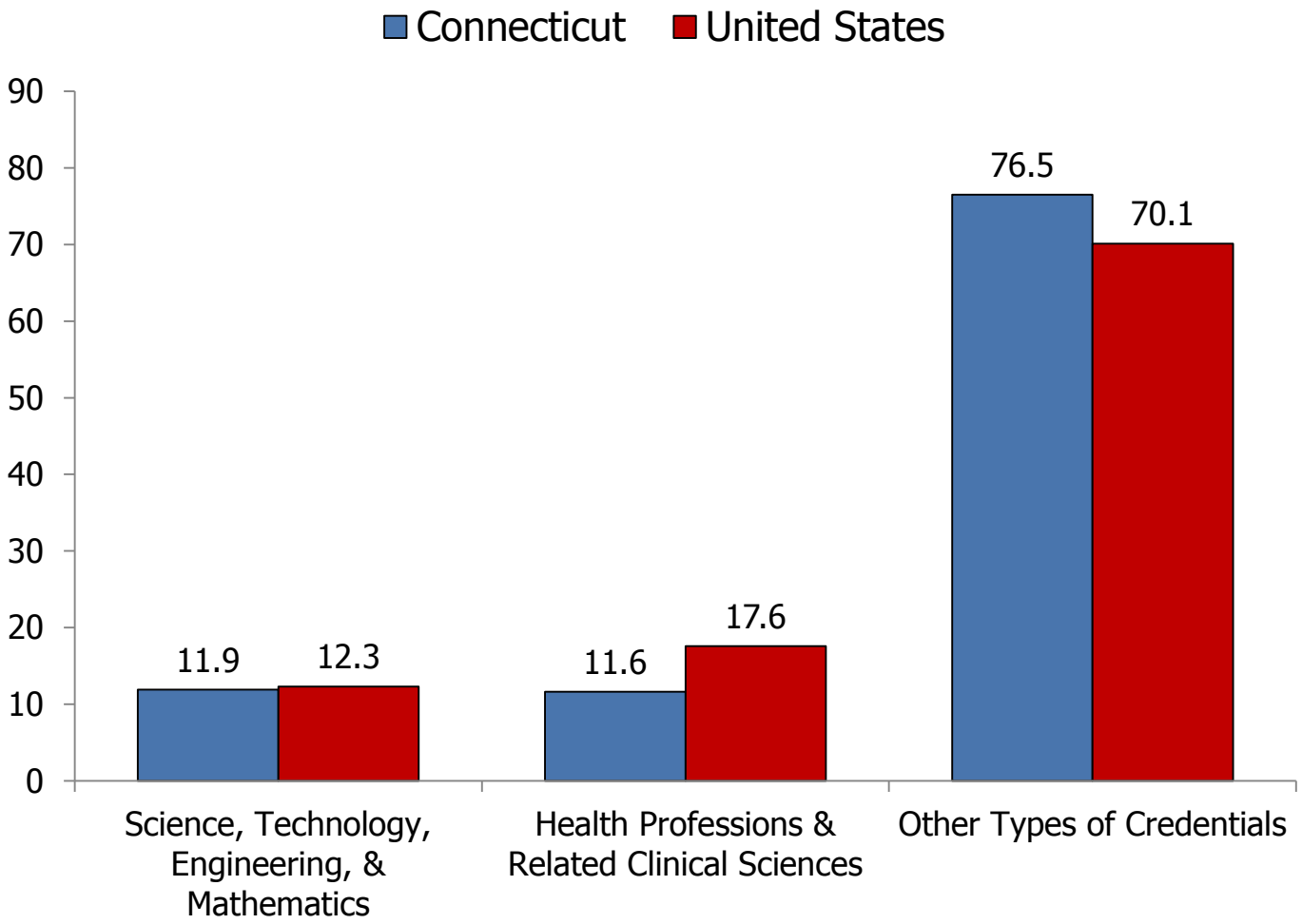
Source: Georgetown University Center on Education and the Workforce, Projections of Jobs and Education Requirements through 2020;

Percent of Total Gross Domestic Product by Industry and Comparison to the U.S., 2011



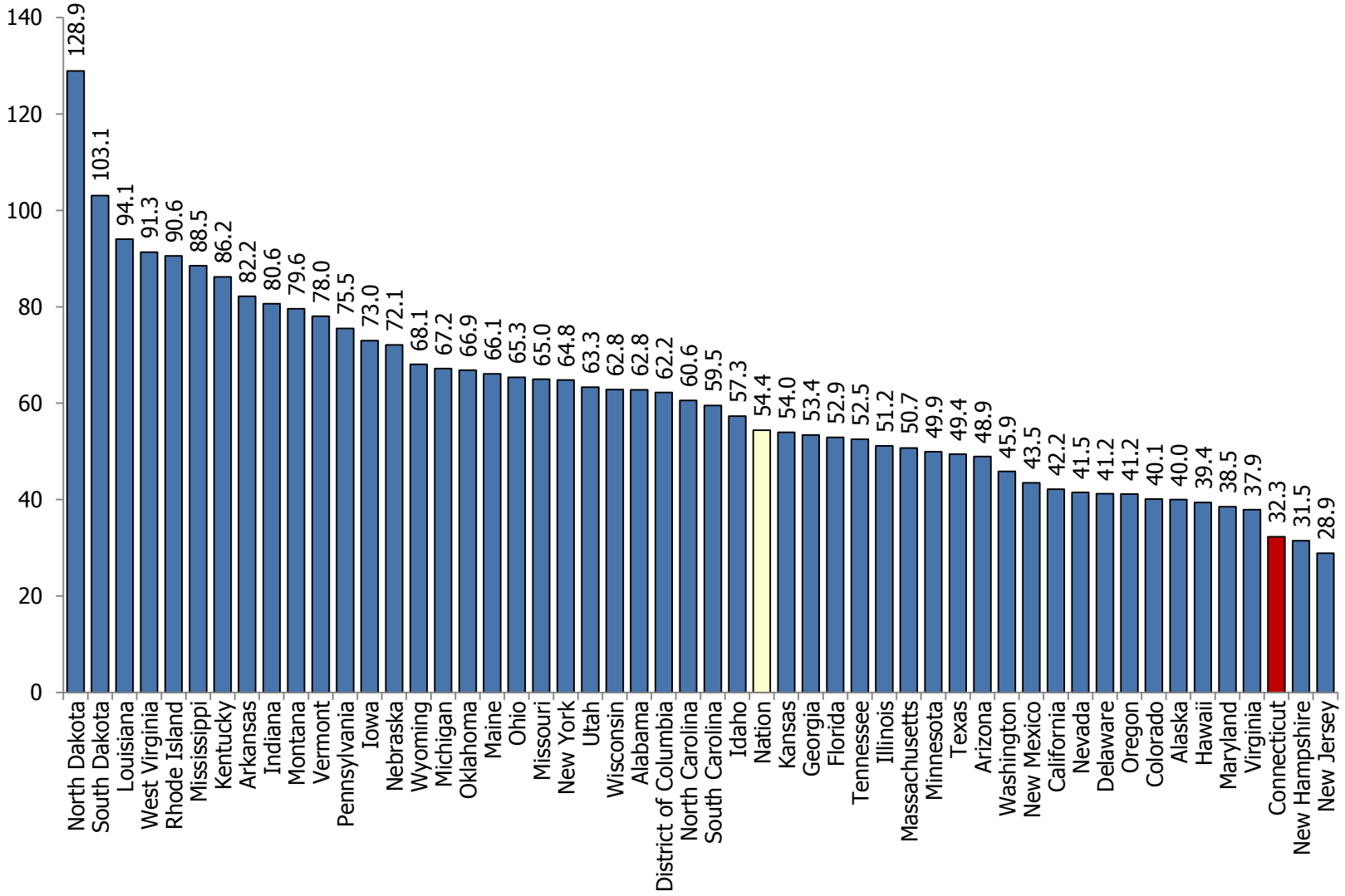
Source: Bureau of Economic Analysis

Proportion (%) of Undergraduate Credentials Awarded by Type – STEM, Health, and Other (2008-09)



Source: NCES, IPEDS Completions Survey

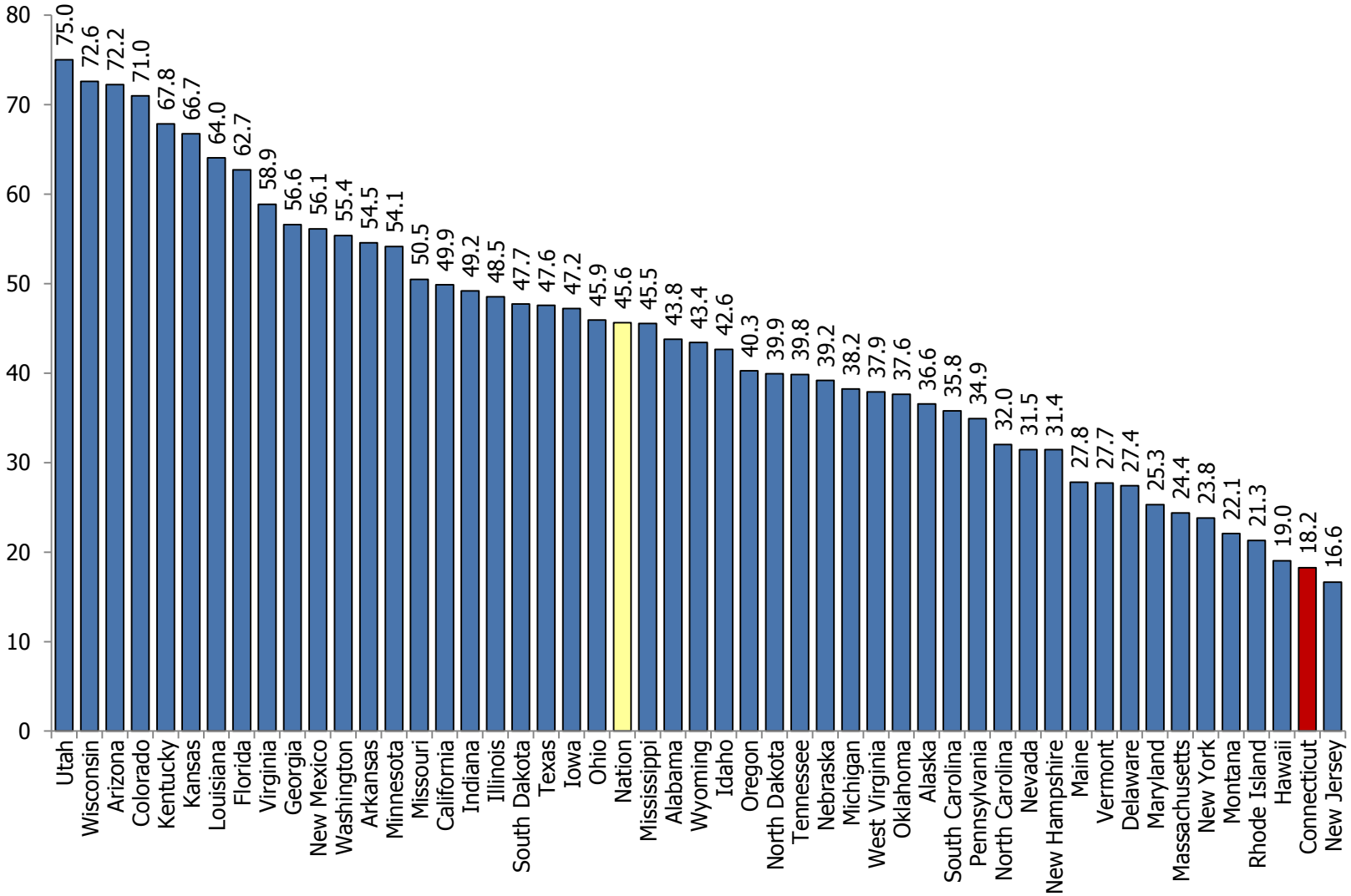
Undergraduate STEM Credentials Awarded per 1,000 STEM Employees, 2008-10



Source: U.S. Census Bureau, 2008-10 American Community Survey Three-Year Public Use Microdata Sample File.
NCES, IPEDS 2009-10 Completions File; c2010_a Final Release Data File.

Note: Awards for Arizona, Colorado, Iowa, and West Virginia reduced to reflect private for-profit production primarily serving out-of-state students online.

Undergraduate Health Credentials Awarded per 1,000 Health Employees, 2008-10

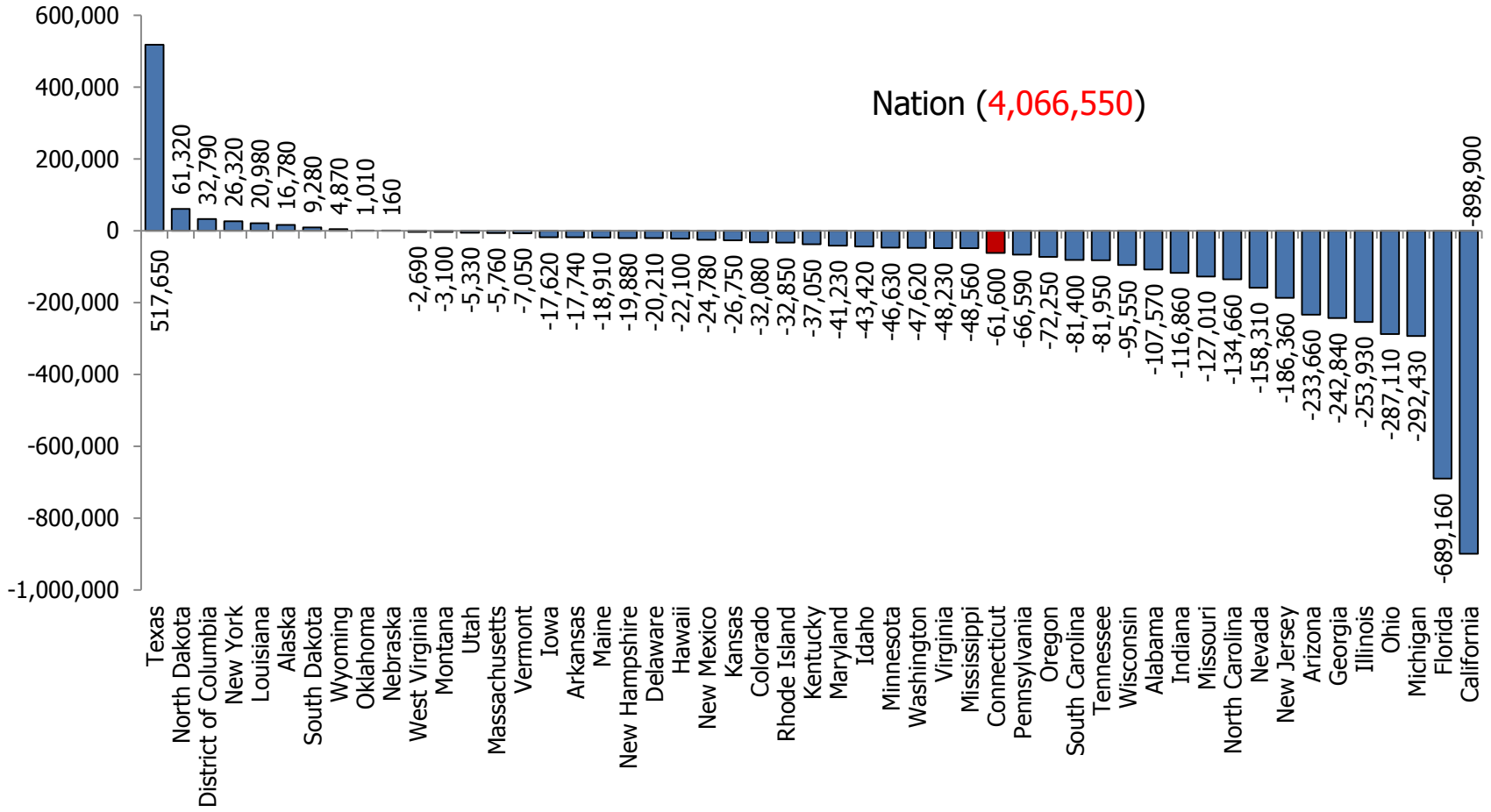


Source: U.S. Census Bureau, 2008-10 American Community Survey Three-Year Public Use Microdata Sample File.
NCES, IPEDS 2009-10 Completions File; c2010_a Final Release Data File.

Note: Awards for Arizona, Colorado, Iowa, and West Virginia reduced to reflect private for-profit production primarily serving out-of-state students online.

Connecticut Change in Employment Charts

Change in Employment, Headcount 2007-2012

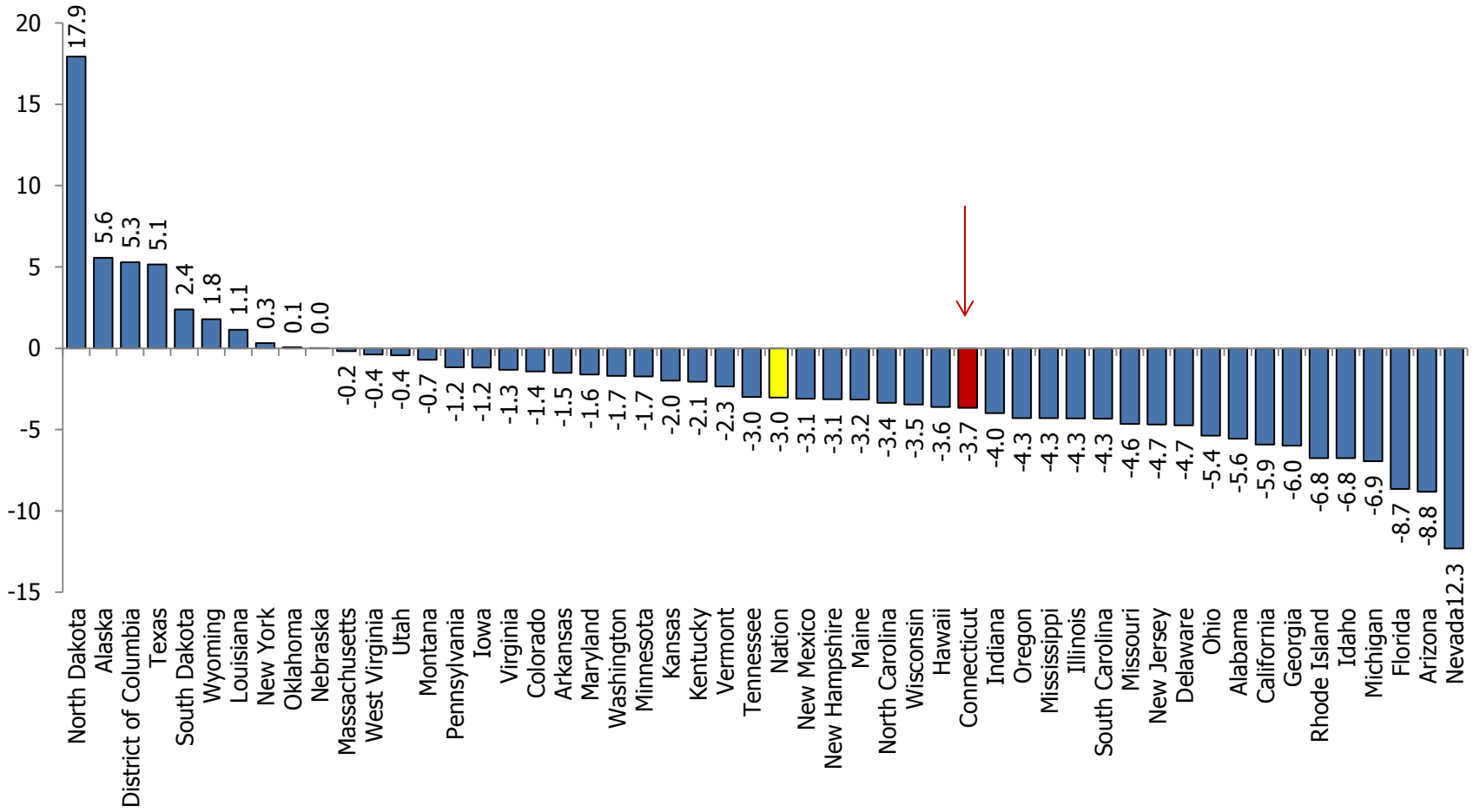


Source: Bureau of Labor Statistics, Occupational Employment Statistics May 2007 & May 2012
http://www.bls.gov/oes/tables.htm

Note: Science & Innovation Occupations Include computer & mathematical, architecture & engineering, life and physical scientists & technicians, and postsecondary instructors in related fields.
State figures may not add to National totals due to data suppression.

NCHEMS

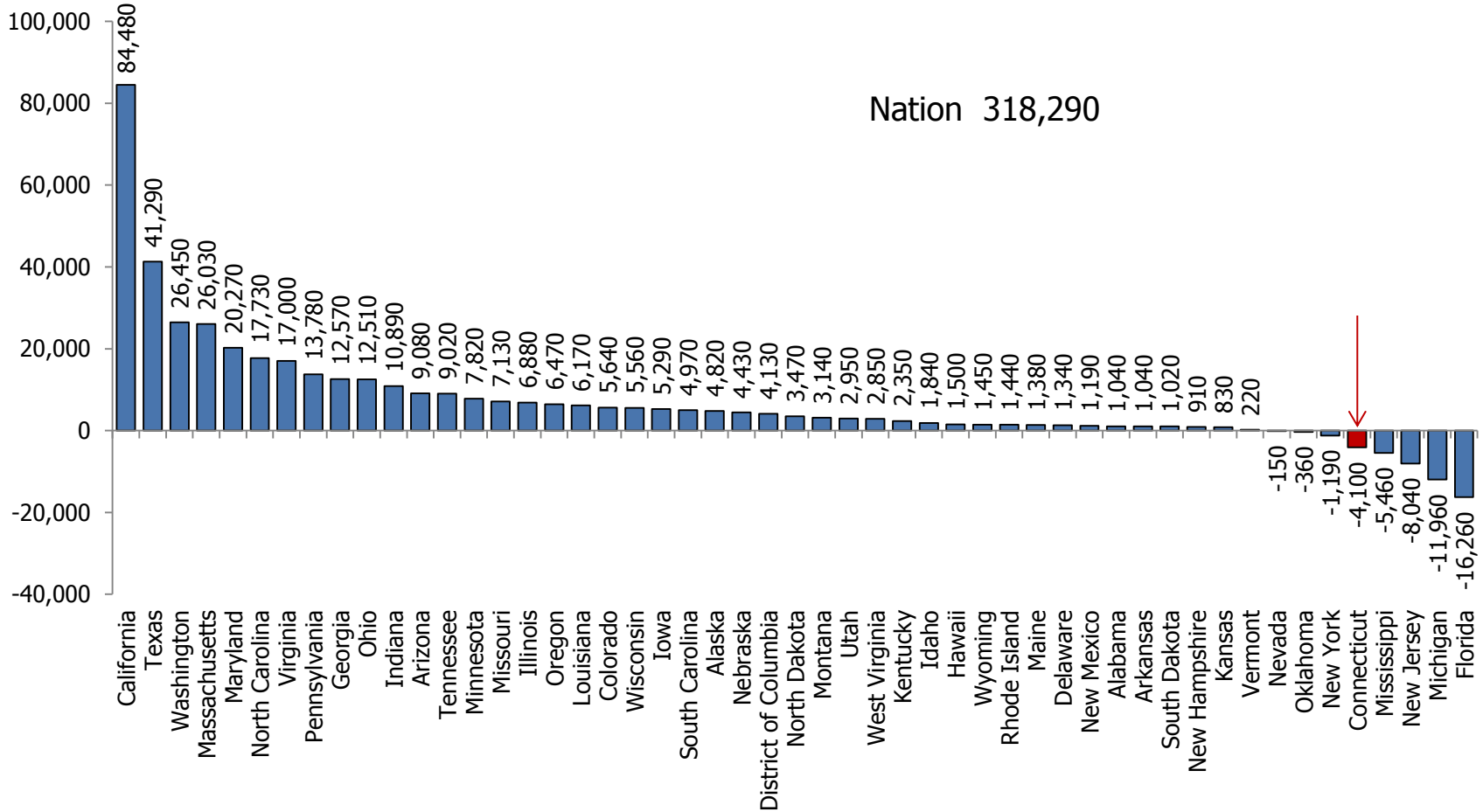
Change in Employment, Percent 2007-2012



Source: Bureau of Labor Statistics, Occupational Employment Statistics May 2007 & May 2012
http://www.bls.gov/oes/tables.htm

Note: Science & Innovation Occupations Include computer & mathematical, architecture & engineering, life and physical scientists & technicians, and postsecondary instructors in related fields. State figures may not add to National totals due to data suppression.

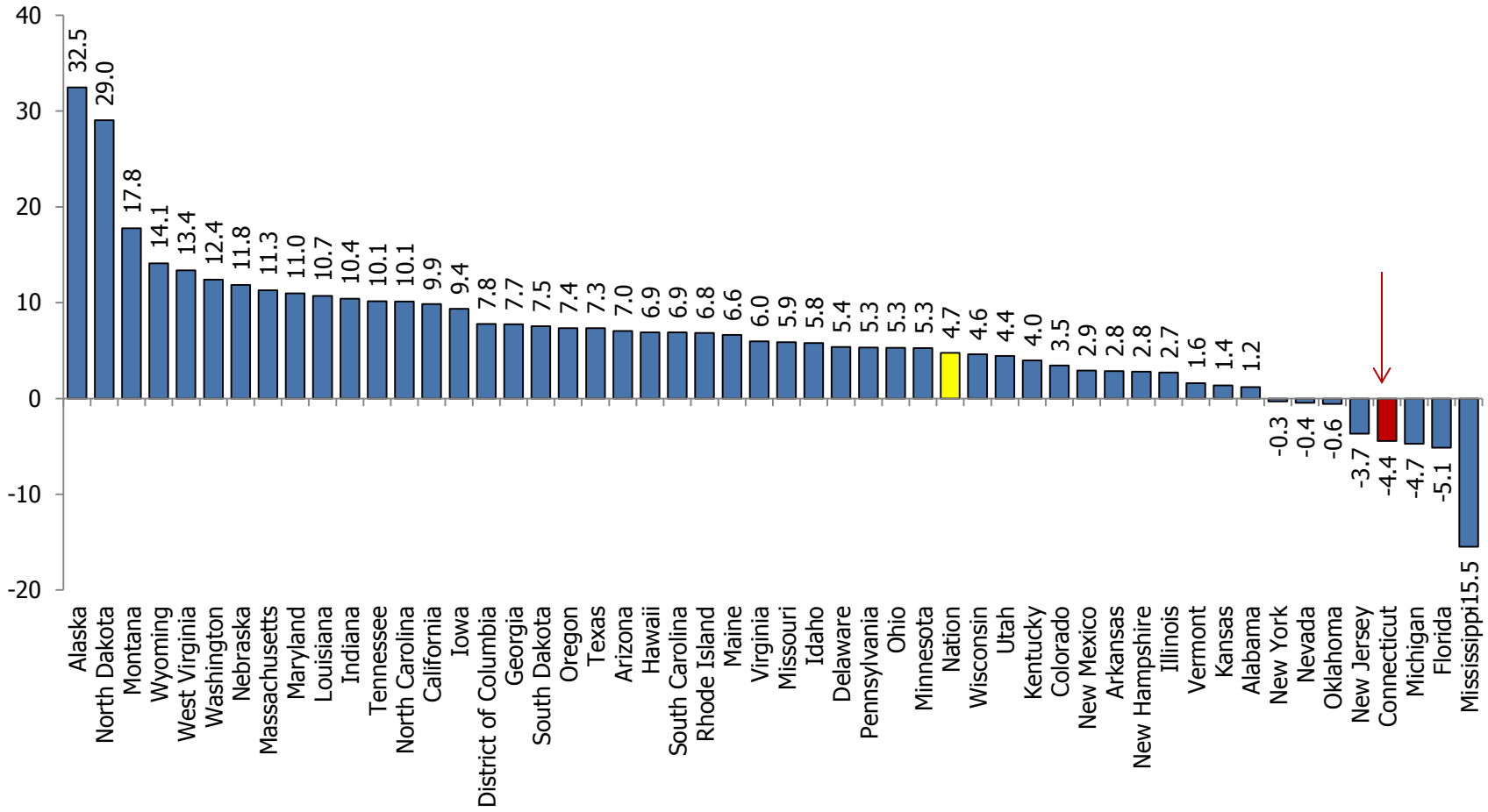
Change in Science and Innovation Employment, Headcount 2007-2012



Source: Bureau of Labor Statistics, Occupational Employment Statistics May 2007 & May 2012
http://www.bls.gov/oes/tables.htm

Note: Science & Innovation Occupations Include computer & mathematical, architecture & engineering, life and physical scientists & technicians, and postsecondary instructors in related fields. State figures may not add to National totals due to data suppression.

Change in Science and Innovation Employment, Percent 2007-2012

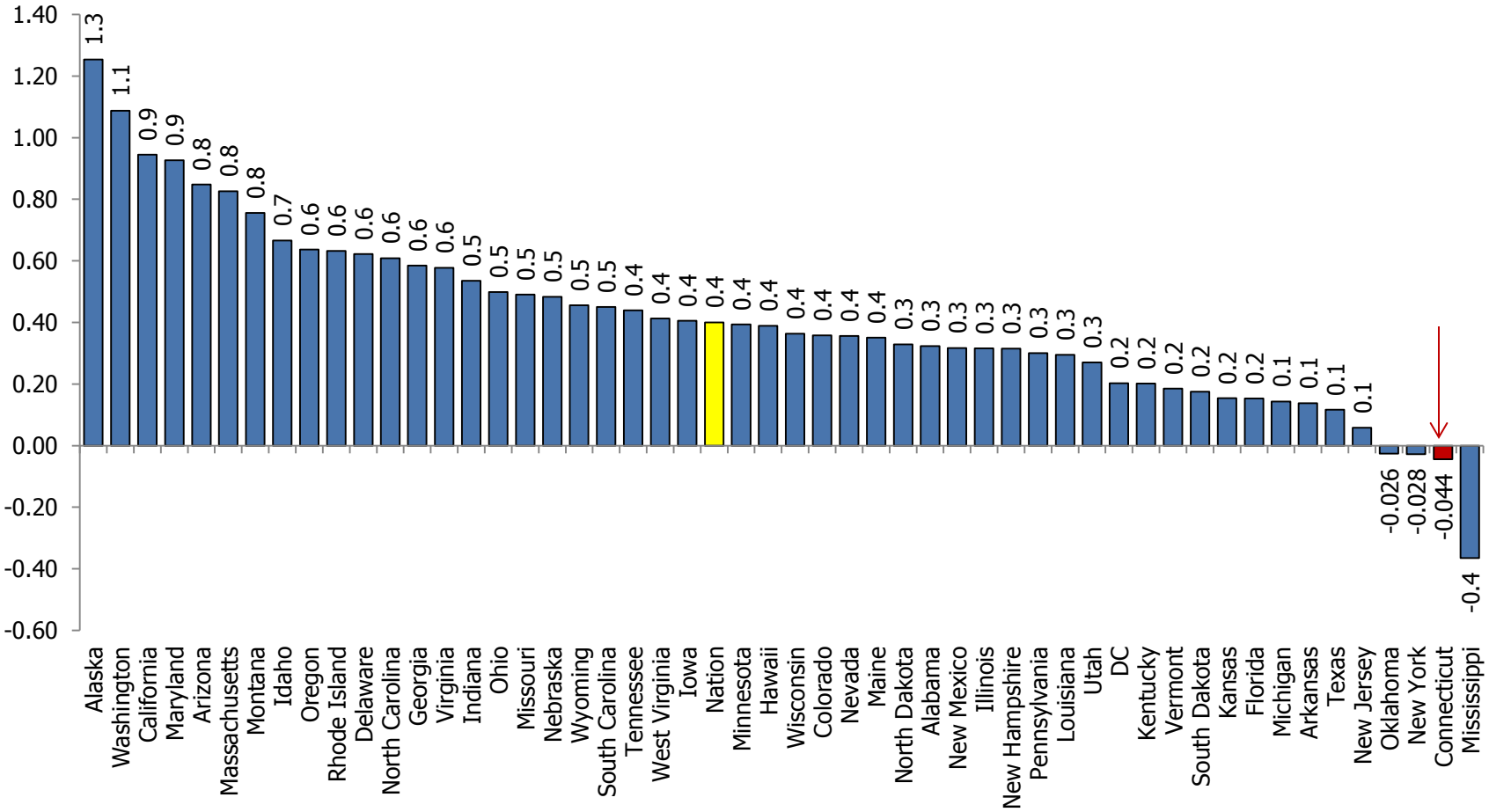


Source: Bureau of Labor Statistics, Occupational Employment Statistics May 2007 & May 2012
http://www.bls.gov/oes/tables.htm

Note: Science & Innovation Occupations Include computer & mathematical, architecture & engineering, life and physical scientists & technicians, and postsecondary instructors in related fields. State figures may not add to National totals due to data suppression.

NCHEMS

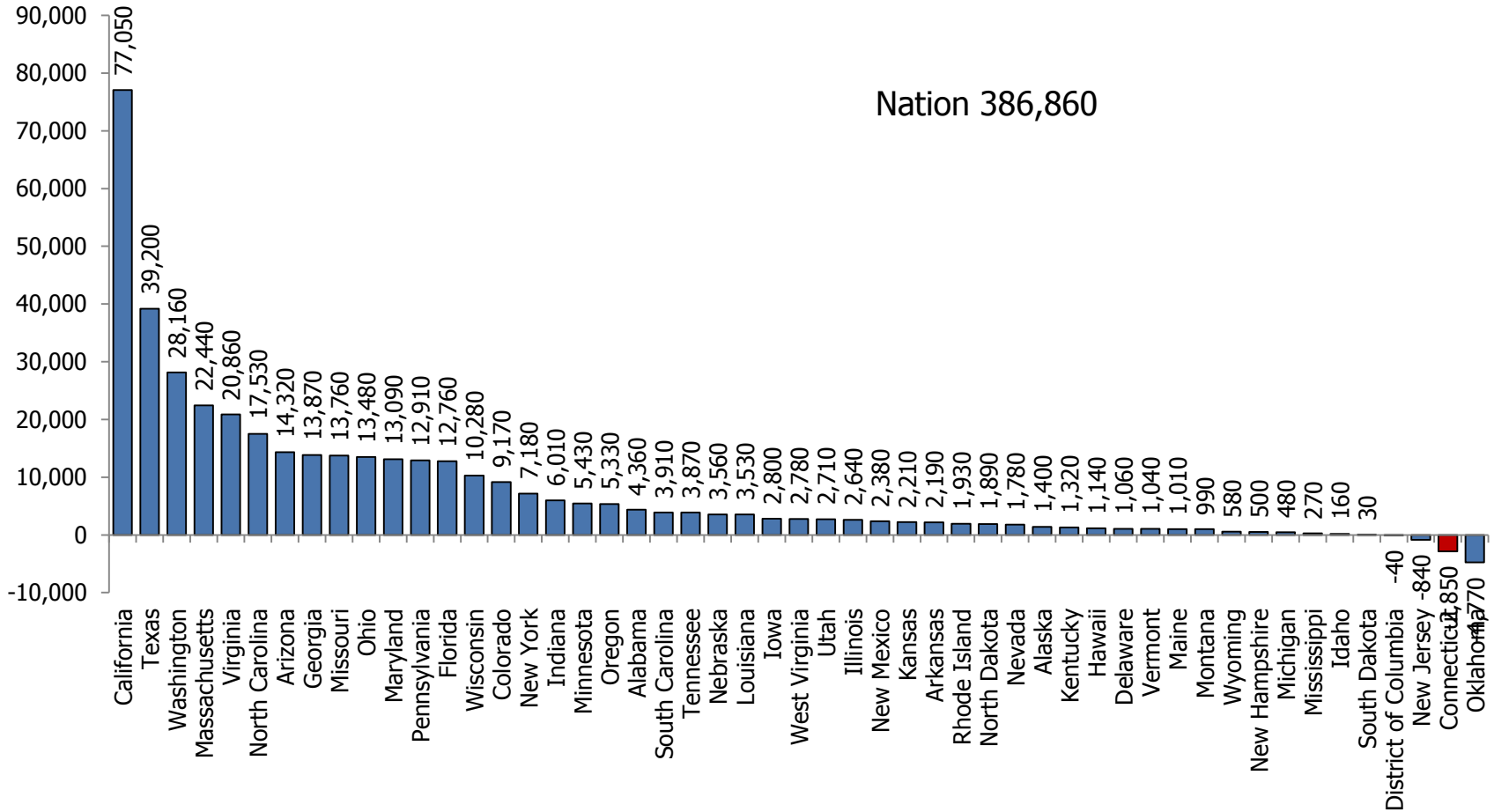
Change in Science and Innovation Employment, Share, 2007-2012



Source: Bureau of Labor Statistics, Occupational Employment Statistics May 2007 & May 2012
http://www.bls.gov/oes/tables.htm

Note: Science & Innovation Occupations Include computer & mathematical, architecture & engineering, life and physical scientists & technicians, and postsecondary instructors in related fields. State figures may not add to National totals due to data suppression.

Change in Computer and Mathematical Employment, Headcount 2007-2012

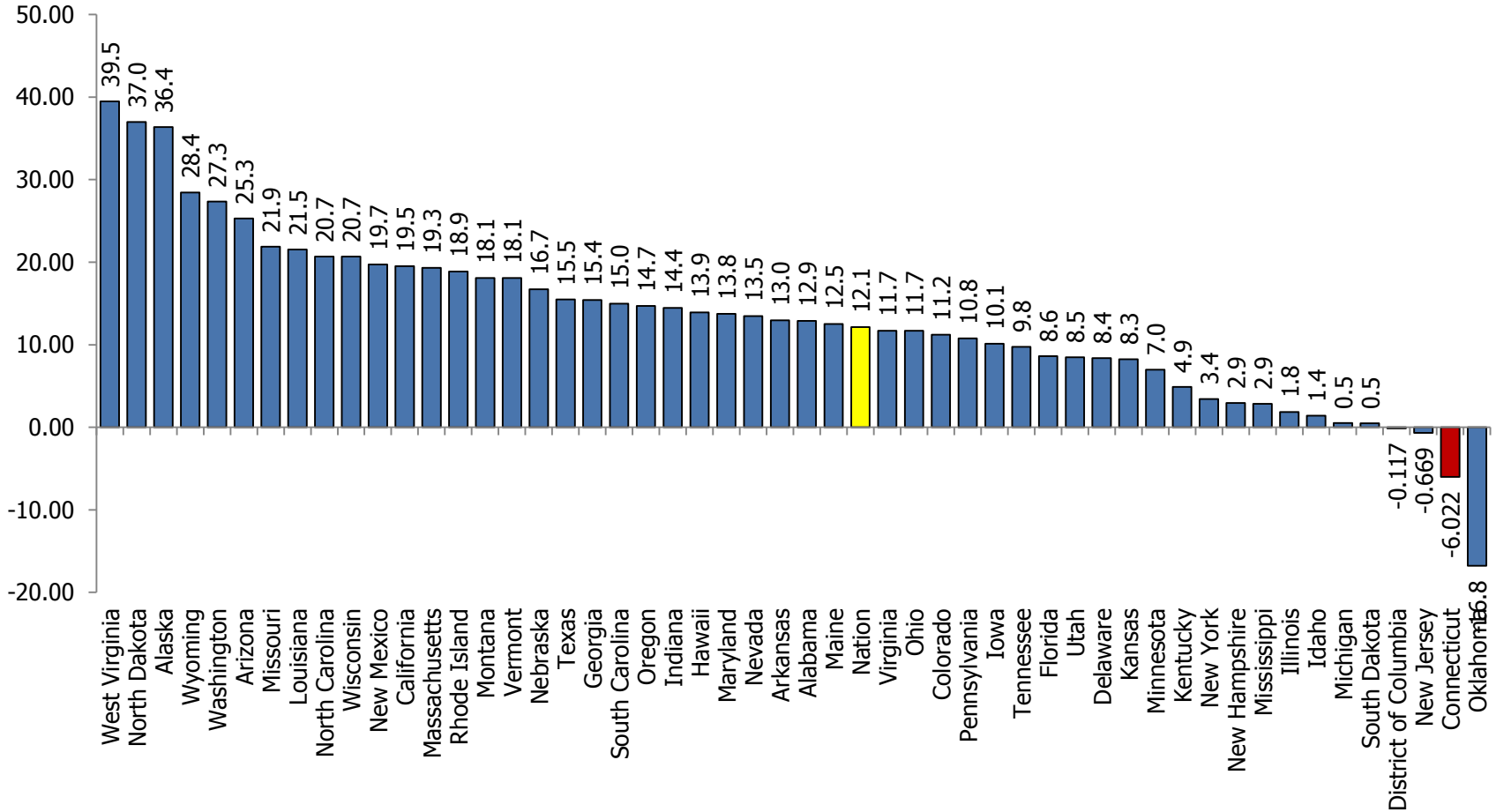


Source: Bureau of Labor Statistics, Occupational Employment Statistics May 2007 & May 2012
http://www.bls.gov/oes/tables.htm

Note: Science & Innovation Occupations Include computer & mathematical, architecture & engineering, life and physical scientists & technicians, and postsecondary instructors in related fields.
State figures may not add to National totals due to data suppression.

NCHEMS

Change in Computer and Mathematical Employment, Percent, 2007-2012

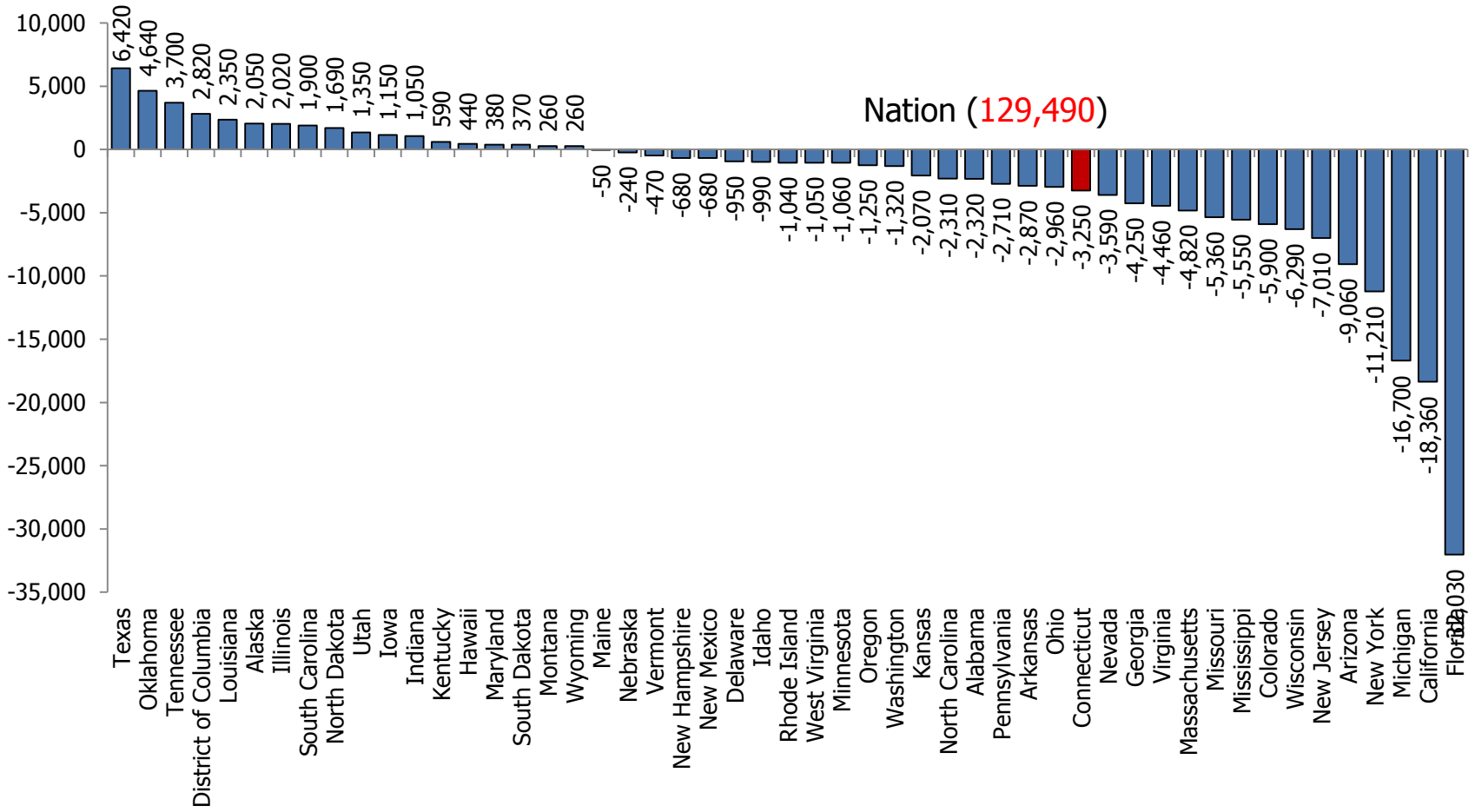


Source: Bureau of Labor Statistics, Occupational Employment Statistics May 2007 & May 2012
http://www.bls.gov/oes/tables.htm

Note: Science & Innovation Occupations Include computer & mathematical, architecture & engineering, life and physical scientists & technicians, and postsecondary instructors in related fields.
State figures may not add to National totals due to data suppression.

NCHEMS

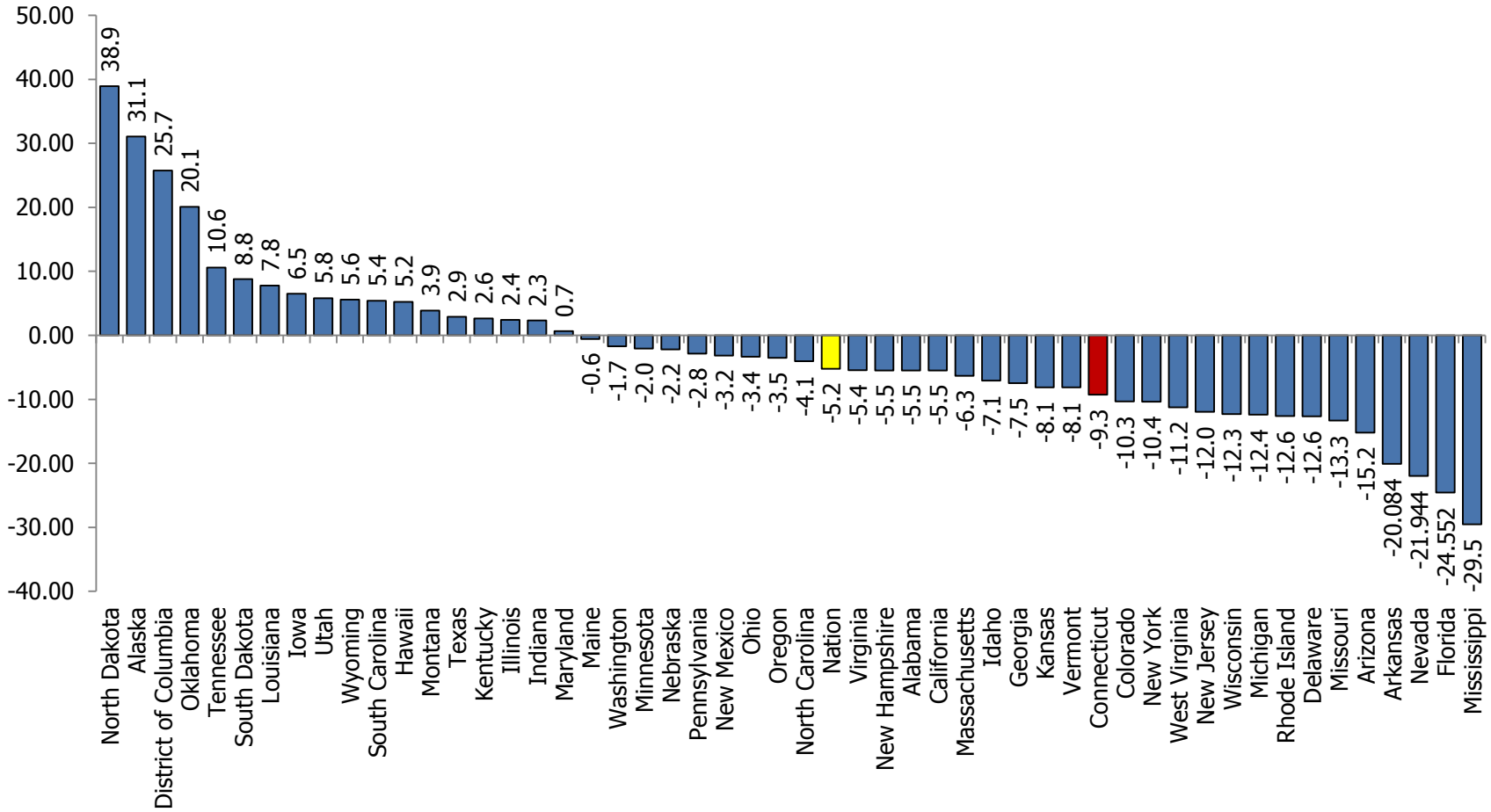
Change in Architecture & Engineering Employment, Headcount 2007-2012



Source: Bureau of Labor Statistics, Occupational Employment Statistics May 2007 & May 2012
http://www.bls.gov/oes/tables.htm

Note: Science & Innovation Occupations Include computer & mathematical, architecture & engineering, life and physical scientists & technicians, and postsecondary instructors in related fields.
State figures may not add to National totals due to data suppression.

Change in Architecture & Engineering Employment, Percent, 2007-2012

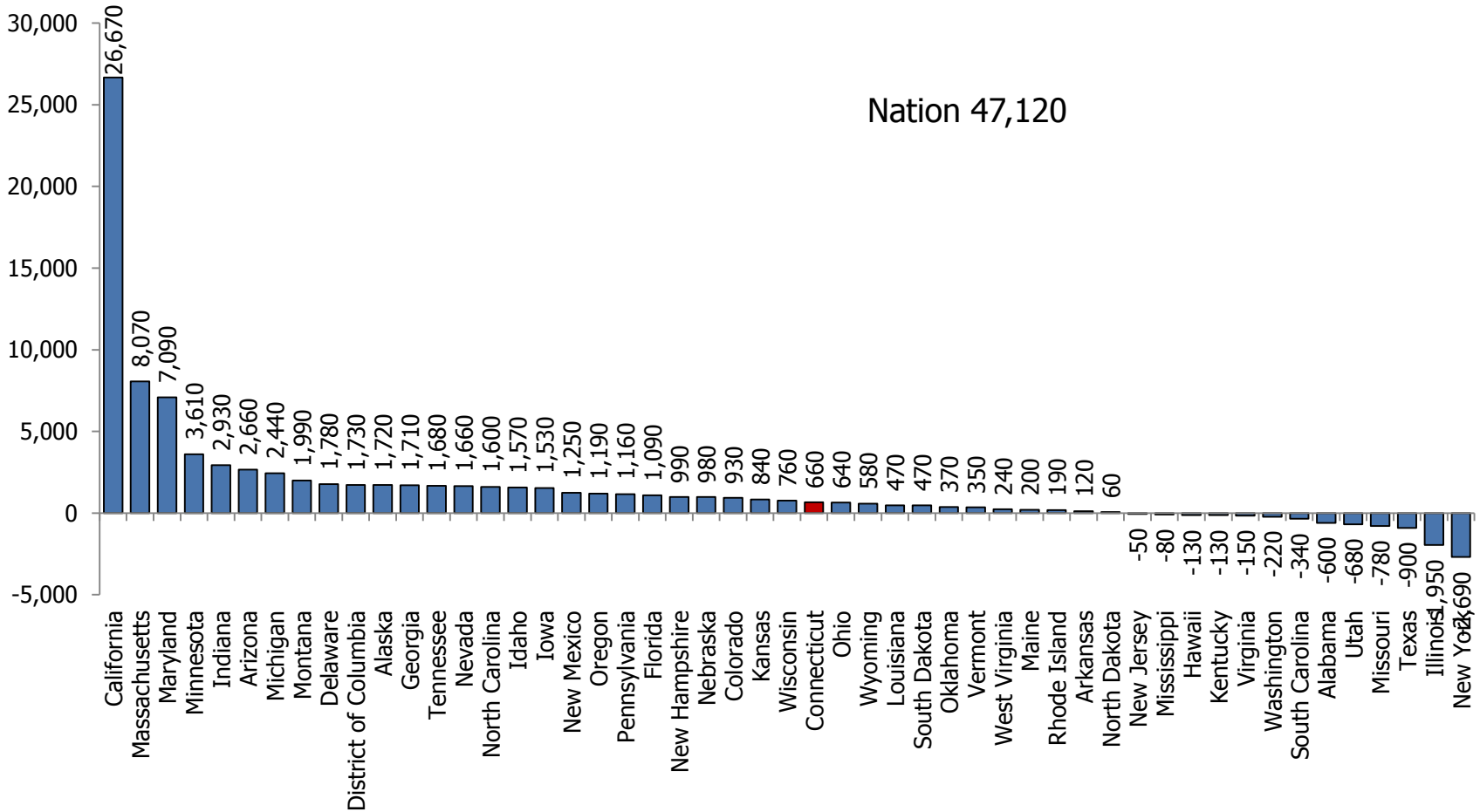


Source: Bureau of Labor Statistics, Occupational Employment Statistics May 2007 & May 2012
http://www.bls.gov/oes/tables.htm

Note: Science & Innovation Occupations Include computer & mathematical, architecture & engineering, life and physical scientists & technicians, and postsecondary instructors in related fields.
State figures may not add to National totals due to data suppression.

NCHEMS

Change in Life & Physical Scientists & Technicians Employment, Headcount 2007-2012

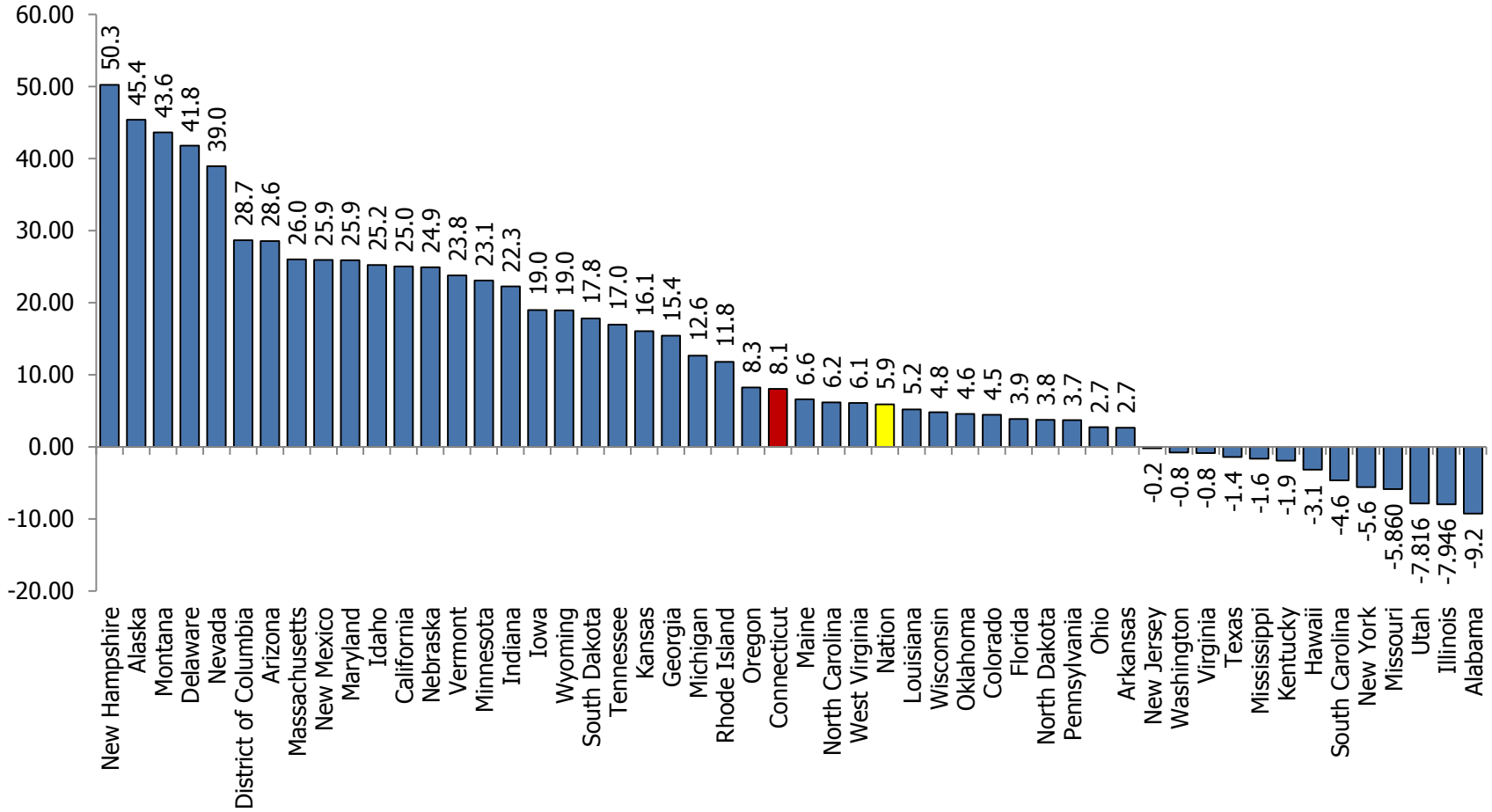


Source: Bureau of Labor Statistics, Occupational Employment Statistics May 2007 & May 2012
http://www.bls.gov/oes/tables.htm

Note: Science & Innovation Occupations Include computer & mathematical, architecture & engineering, life and physical scientists & technicians, and postsecondary instructors in related fields. State figures may not add to National totals due to data suppression.

NCHEMS

Change in Life & Physical Scientists & Technicians Employment, Percent, 2007-2012

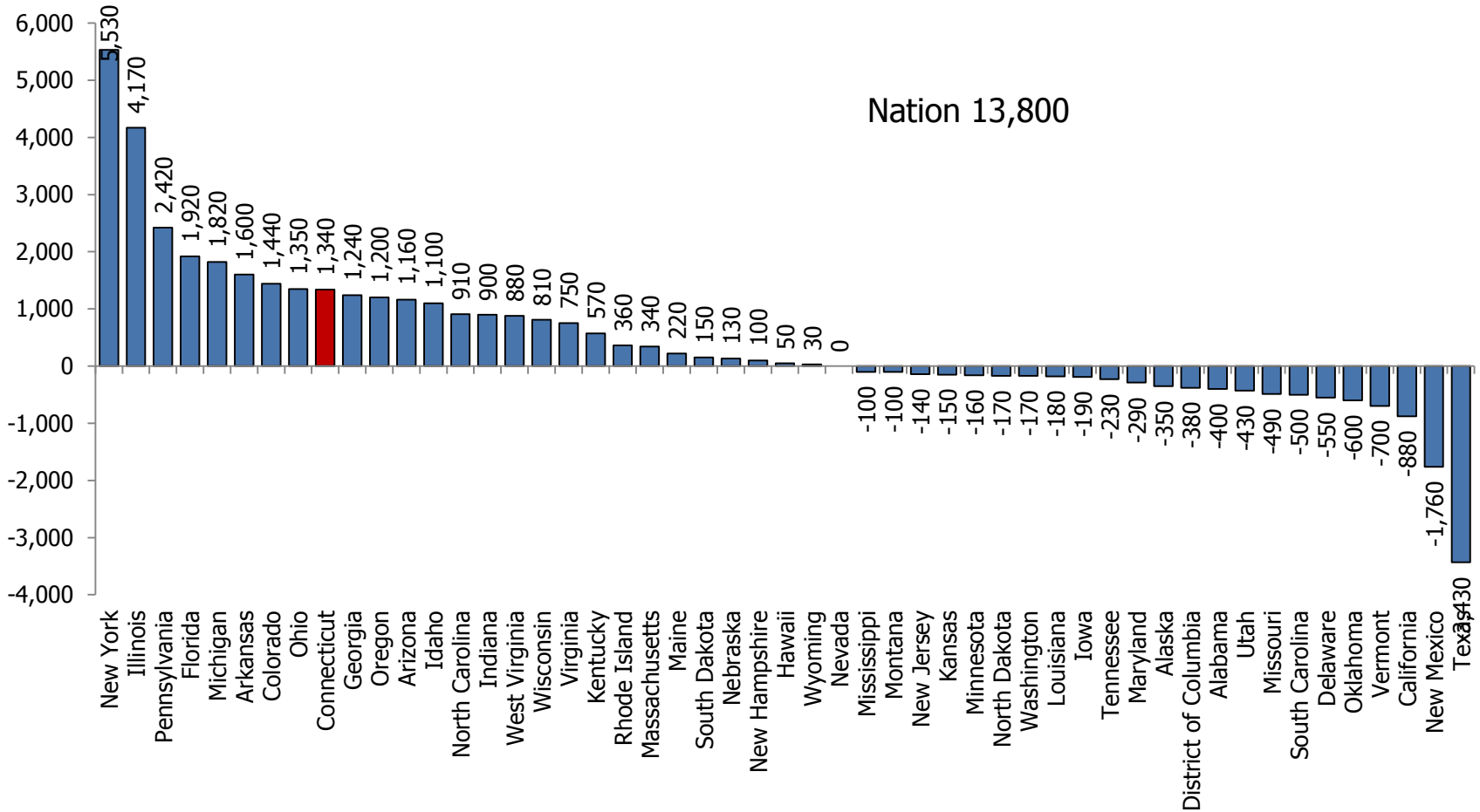


Source: Bureau of Labor Statistics, Occupational Employment Statistics May 2007 & May 2012
http://www.bls.gov/oes/tables.htm

Note: Science & Innovation Occupations Include computer & mathematical, architecture & engineering, life and physical scientists & technicians, and postsecondary instructors in related fields.
State figures may not add to National totals due to data suppression.

NCHEMS

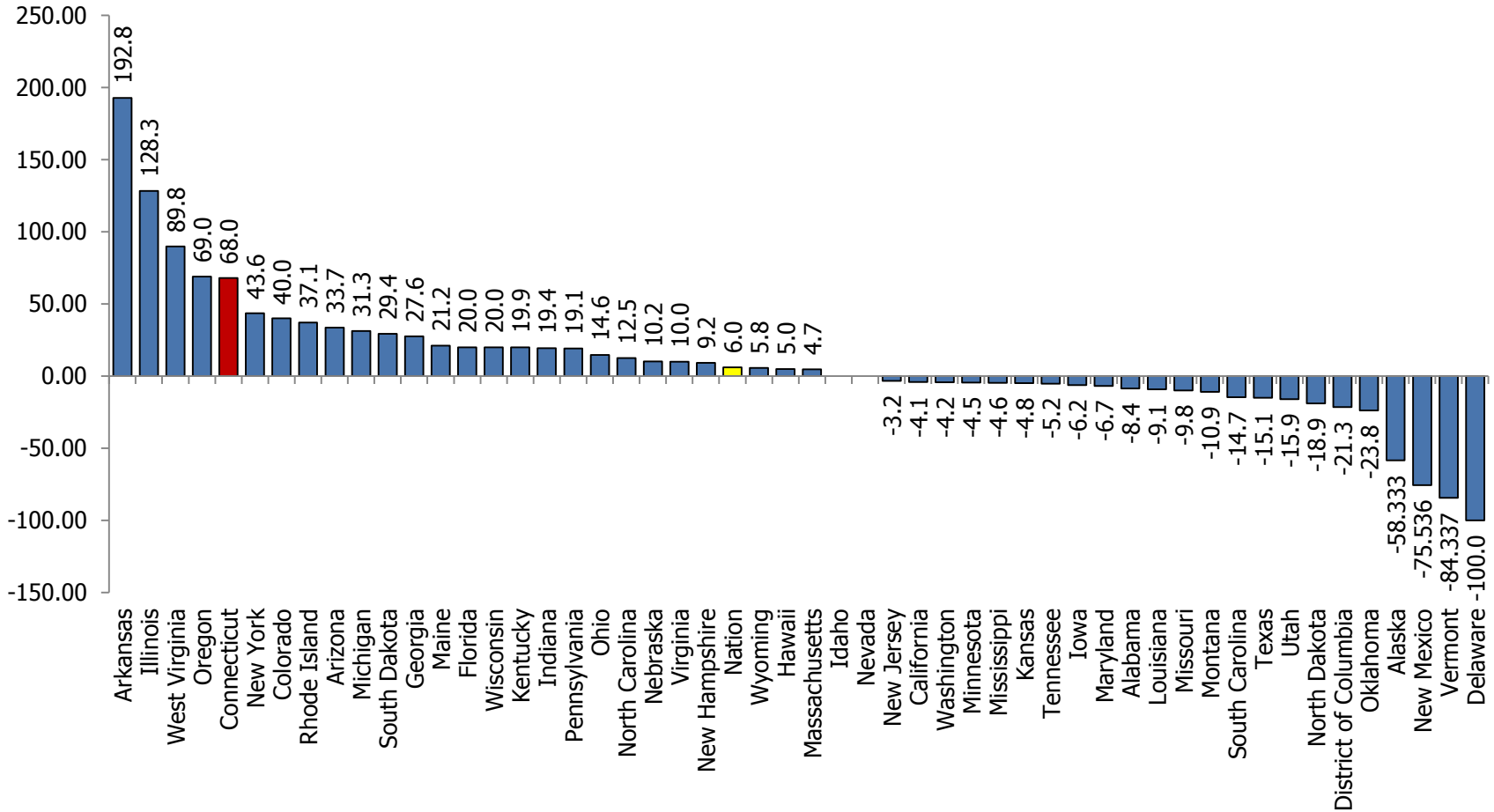
Change in Related Postsecondary Teachers Employment, Headcount 2007-2012



Source: Bureau of Labor Statistics, Occupational Employment Statistics May 2007 & May 2012
http://www.bls.gov/oes/tables.htm

Note: Science & Innovation Occupations Include computer & mathematical, architecture & engineering, life and physical scientists & technicians, and postsecondary instructors in related fields.
State figures may not add to National totals due to data suppression.

Change in Related Postsecondary Teachers Employment, Percent, 2007-2012



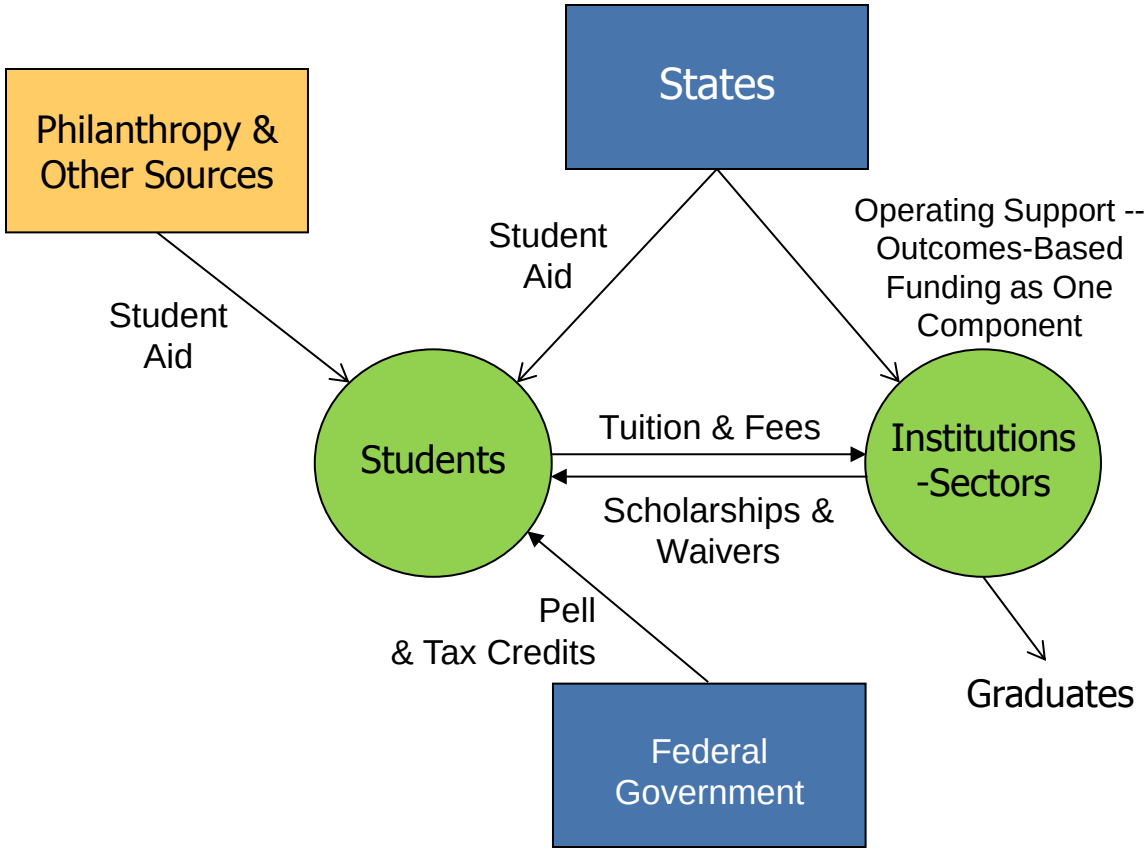
Source: Bureau of Labor Statistics, Occupational Employment Statistics May 2007 & May 2012
http://www.bls.gov/oes/tables.htm

Note: Science & Innovation Occupations Include computer & mathematical, architecture & engineering, life and physical scientists & technicians, and postsecondary instructors in related fields. State figures may not add to National totals due to data suppression.

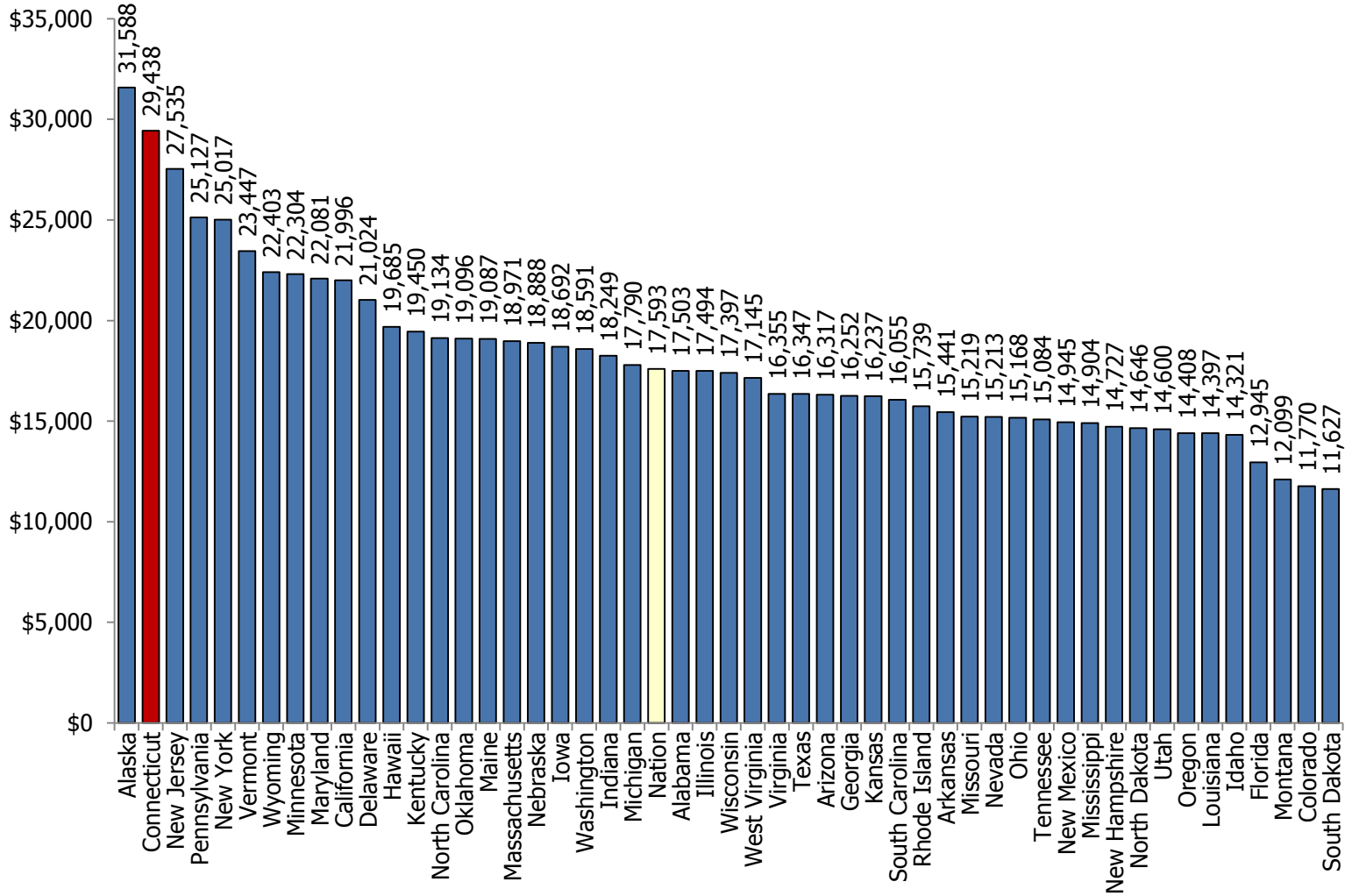
NCHEMS

The Financing of Higher Education in Connecticut

The Elements of Finance Policy

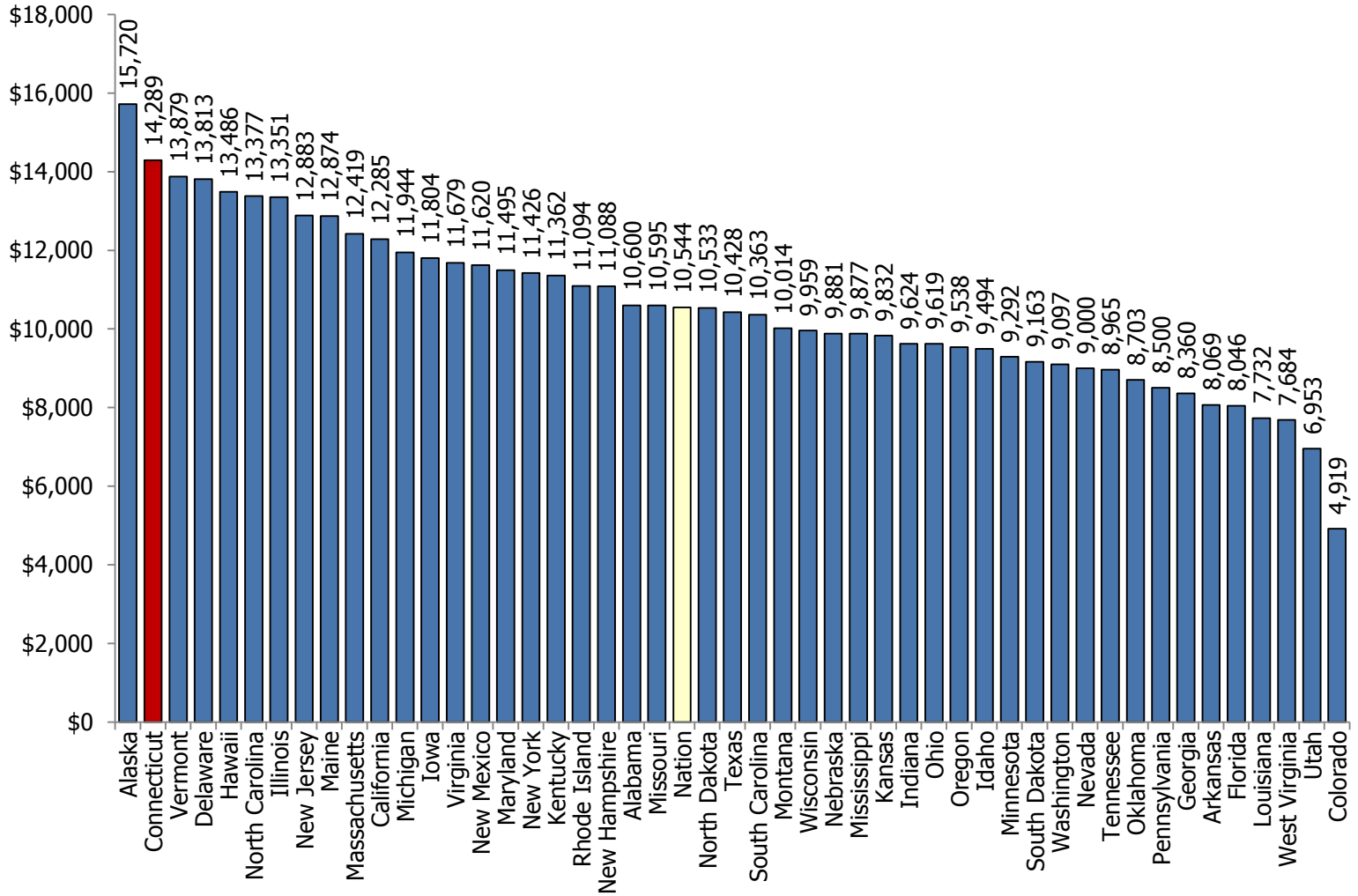


State & Local Appropriations and Tuition & Fee Revenues per FTES, Public Research (Includes Medical), 2010-11



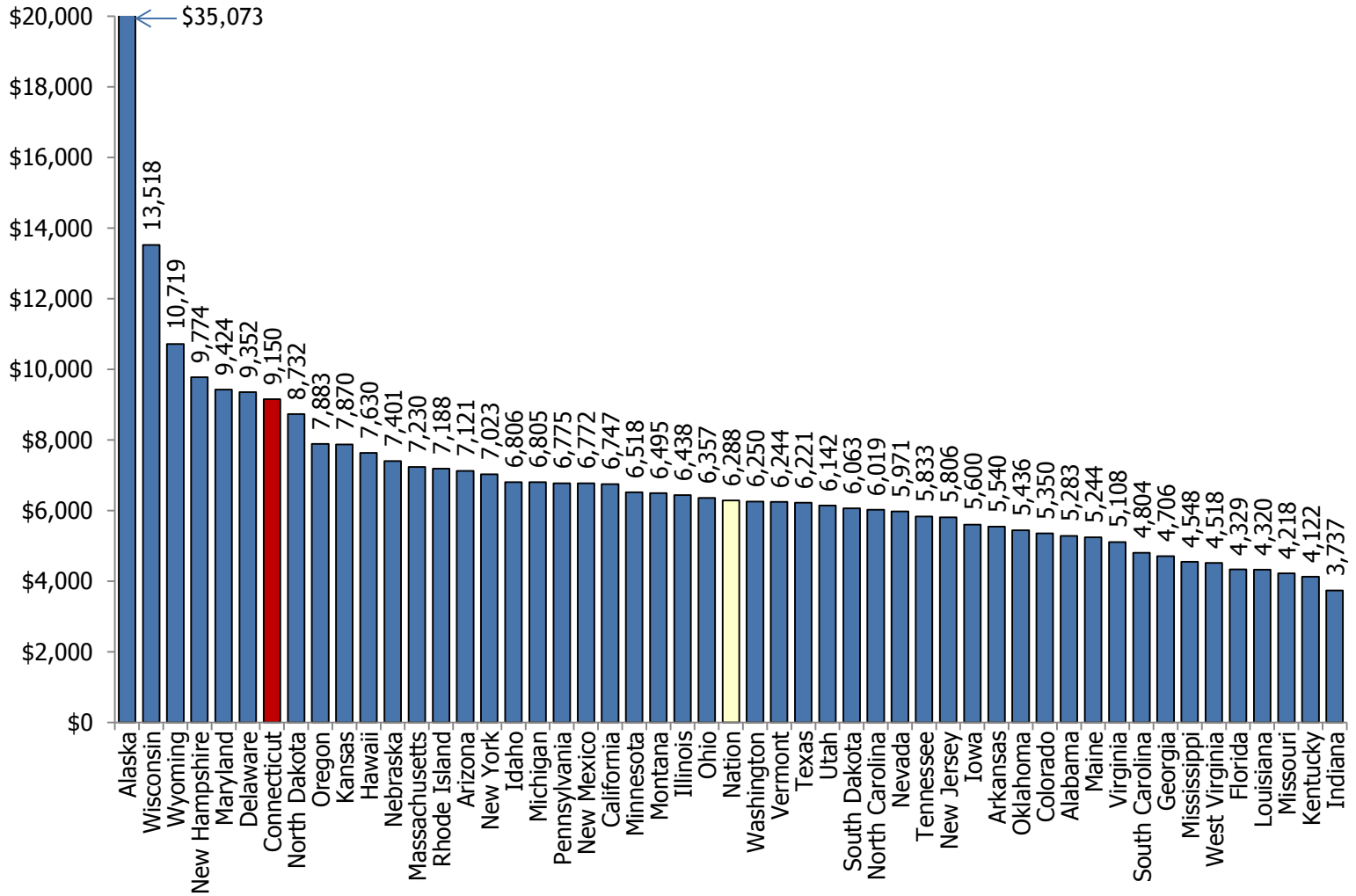
Sources: NCES, IPEDS 2010-11 Preliminary Release Finance Files; f1011_f1a, f1011_f2 GASB & FASB Finance Files; NCES, IPEDS 2010-11 Instructional Activity File; efia2011 Final Release Data File; NCES, IPEDS 2011-12 Institutional Characteristics File; hd2011 Final Release Data File.
Note: Figures for Postsecondary Title IV Degree Granting Institutions.
Note: Connecticut revenues include UConn branch campuses (Associates Institutions) so Connecticut enrollment adjusted to include UConn branch campuses.

State & Local Appropriations and Tuition & Fee Revenues per FTES, Public Masters, Bachelors, & Other 4-Year, 2010-11



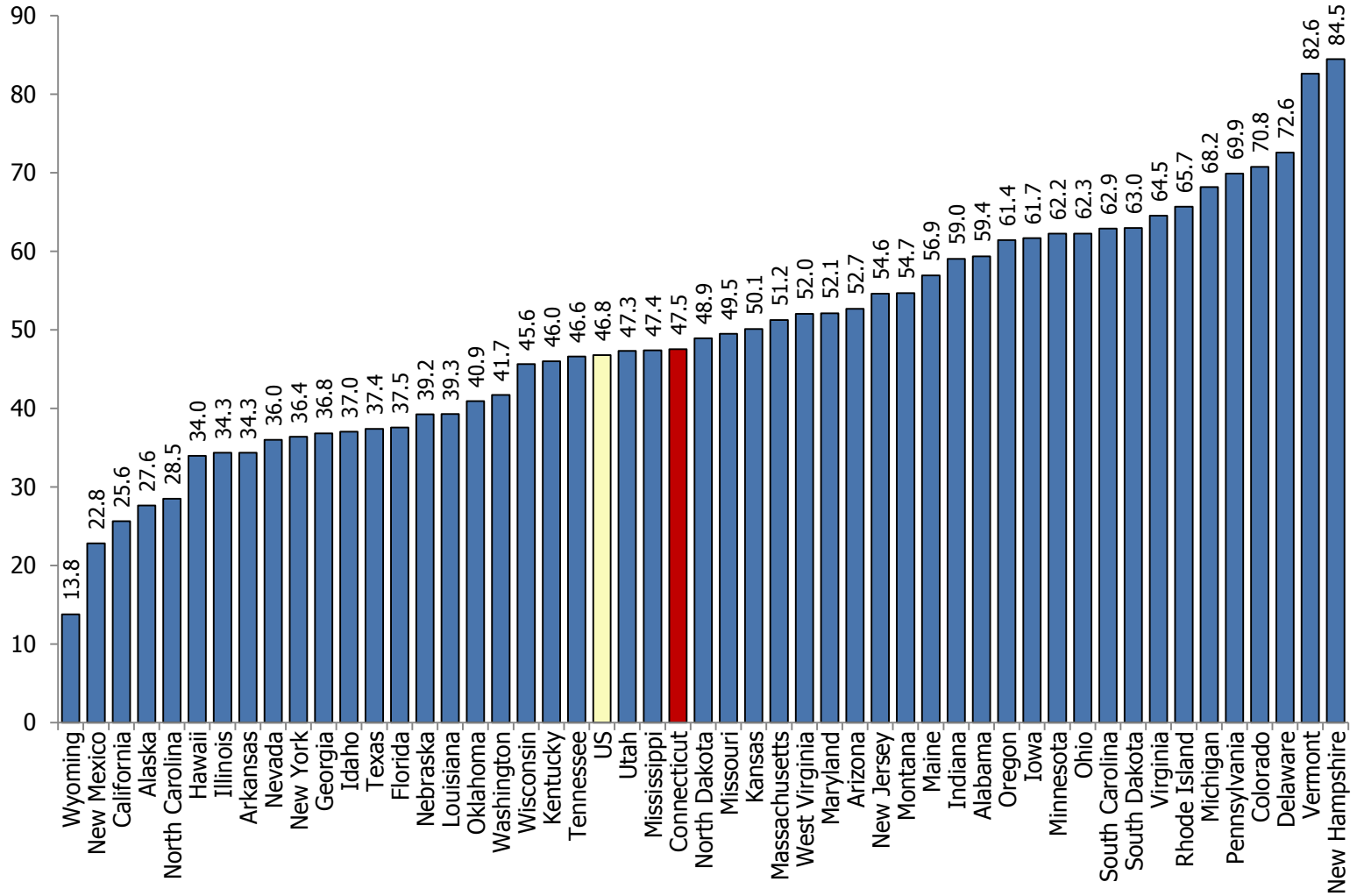
Sources: NCES, IPEDS 2010-11 Preliminary Release Finance Files; f1011_f1a, f1011_f2 GASB & FASB Finance Files; NCES, IPEDS 2010-11 Instructional Activity File; efia2011 Final Release Data File; NCES, IPEDS 2011-12 Institutional Characteristics File; hd2011 Final Release Data File.
Note: Figures for Postsecondary Title IV Degree Granting Institutions.

State & Local Appropriations and Tuition & Fee Revenues per FTES, Public Associates & Other 2-Year, 2010-11



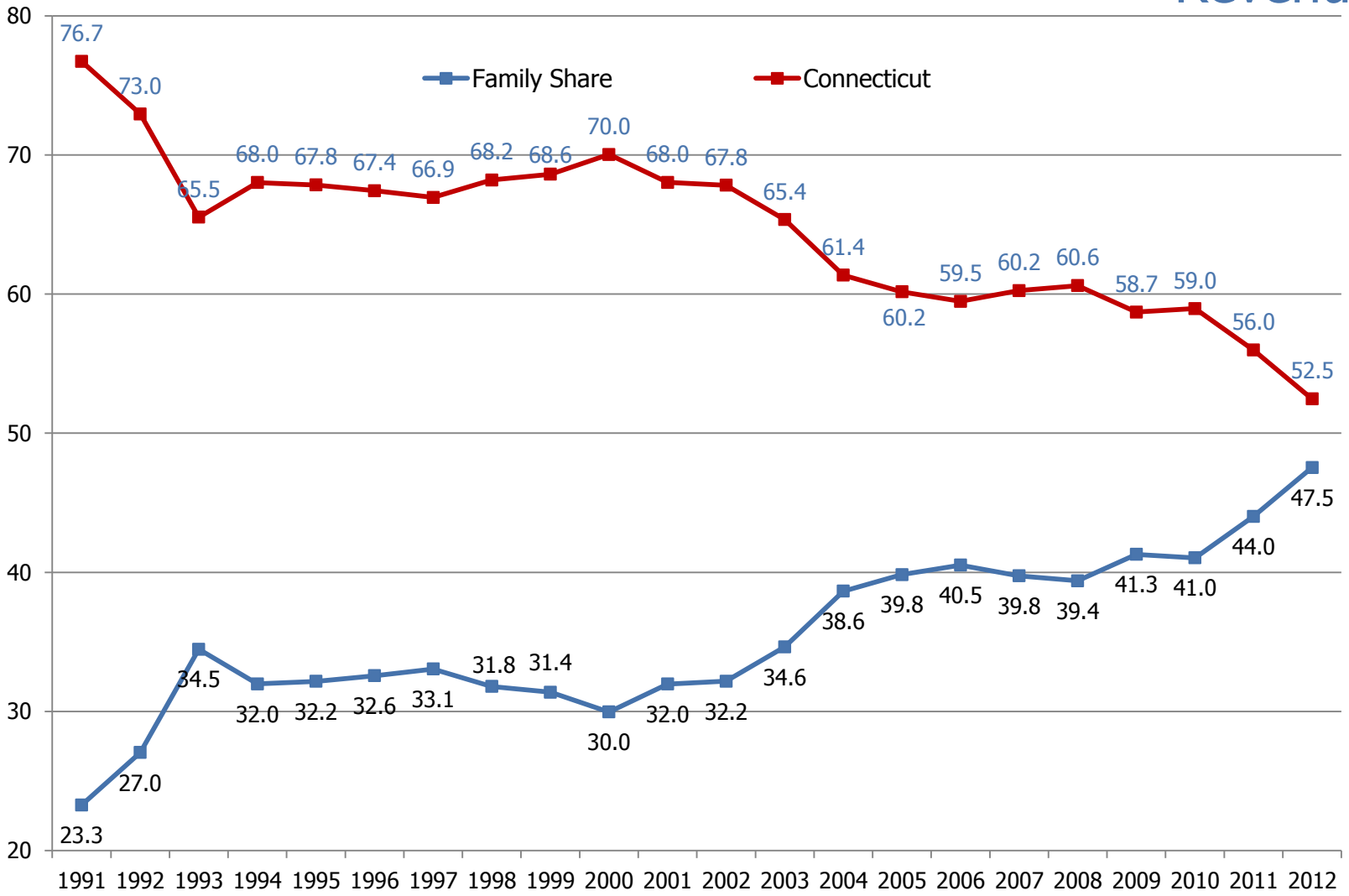
Sources: NCES, IPEDS 2010-11 Preliminary Release Finance Files; f1011_f1a, f1011_f2 GASB & FASB Finance Files; NCES, IPEDS 2010-11 Instructional Activity File; efia2011 Final Release Data File; NCES, IPEDS 2011-12 Institutional Characteristics File; hd2011 Final Release Data File.
Note: Figures for Postsecondary Title IV Degree Granting Institutions.; Note: Connecticut revenues include UConn branch campuses (Associates Institutions) so Connecticut enrollment adjusted to include UConn branch campuses.

Net Tuition as a Percent of Public Higher Education Total Educational Revenue, by State, FY 2012



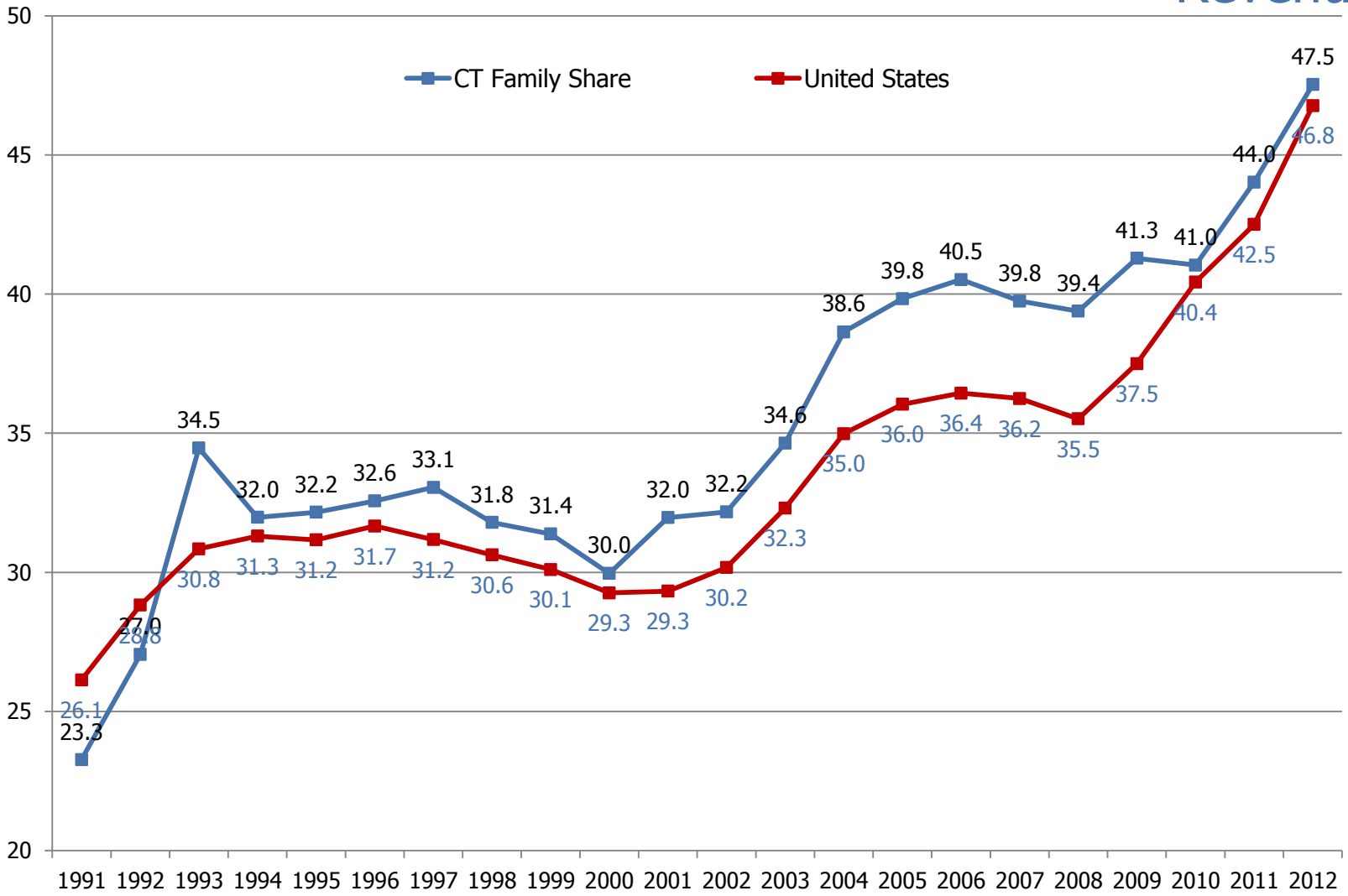
Source: SHEEO SHEF FY 2012

Family Share of Public Higher Education Operating Revenues



Source: SHEEO SSDB

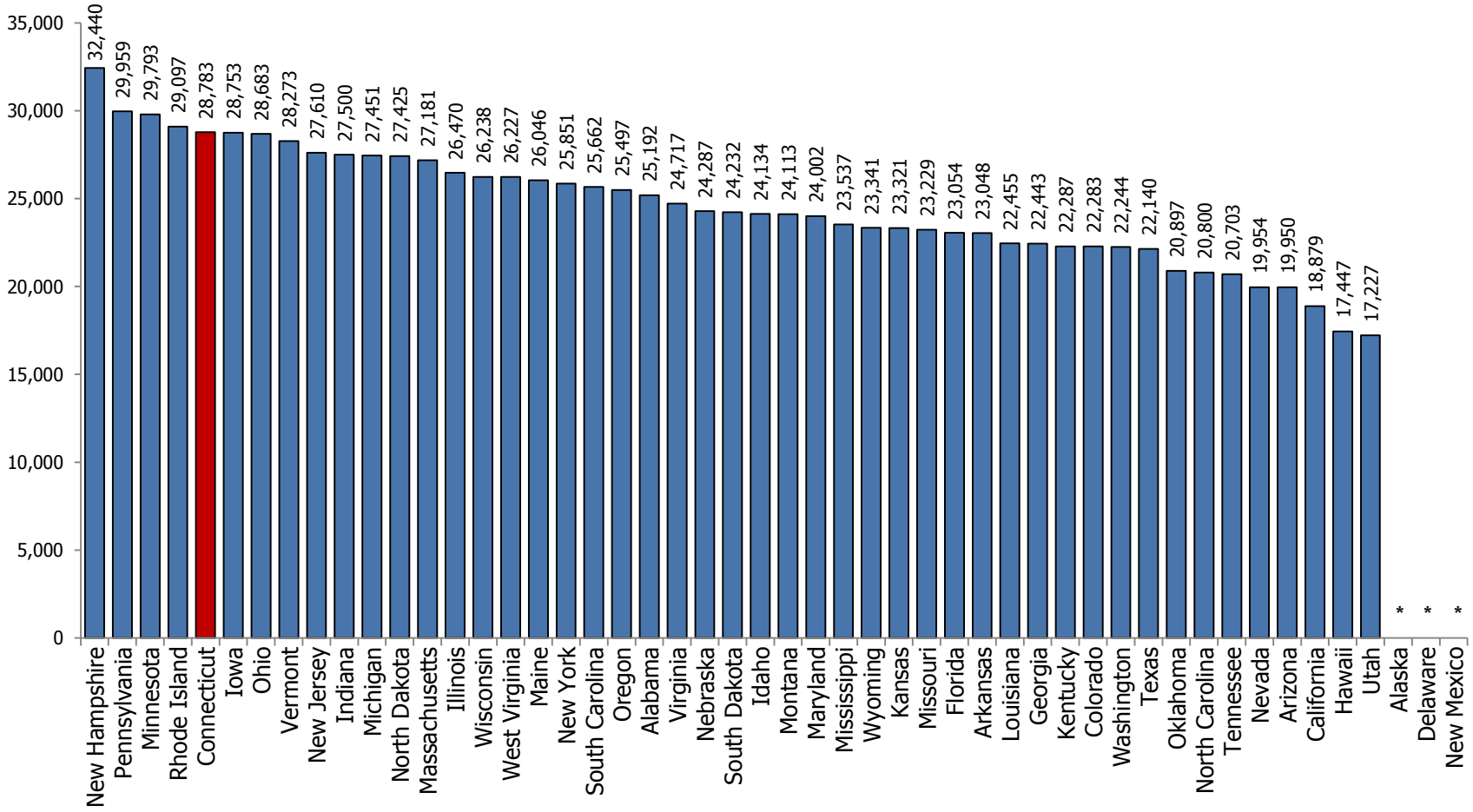
Family Share of Public Higher Education Operating Revenues



Source: SHEEO SSDB

Average Loan Debt of Graduates, by State

Class of 2011



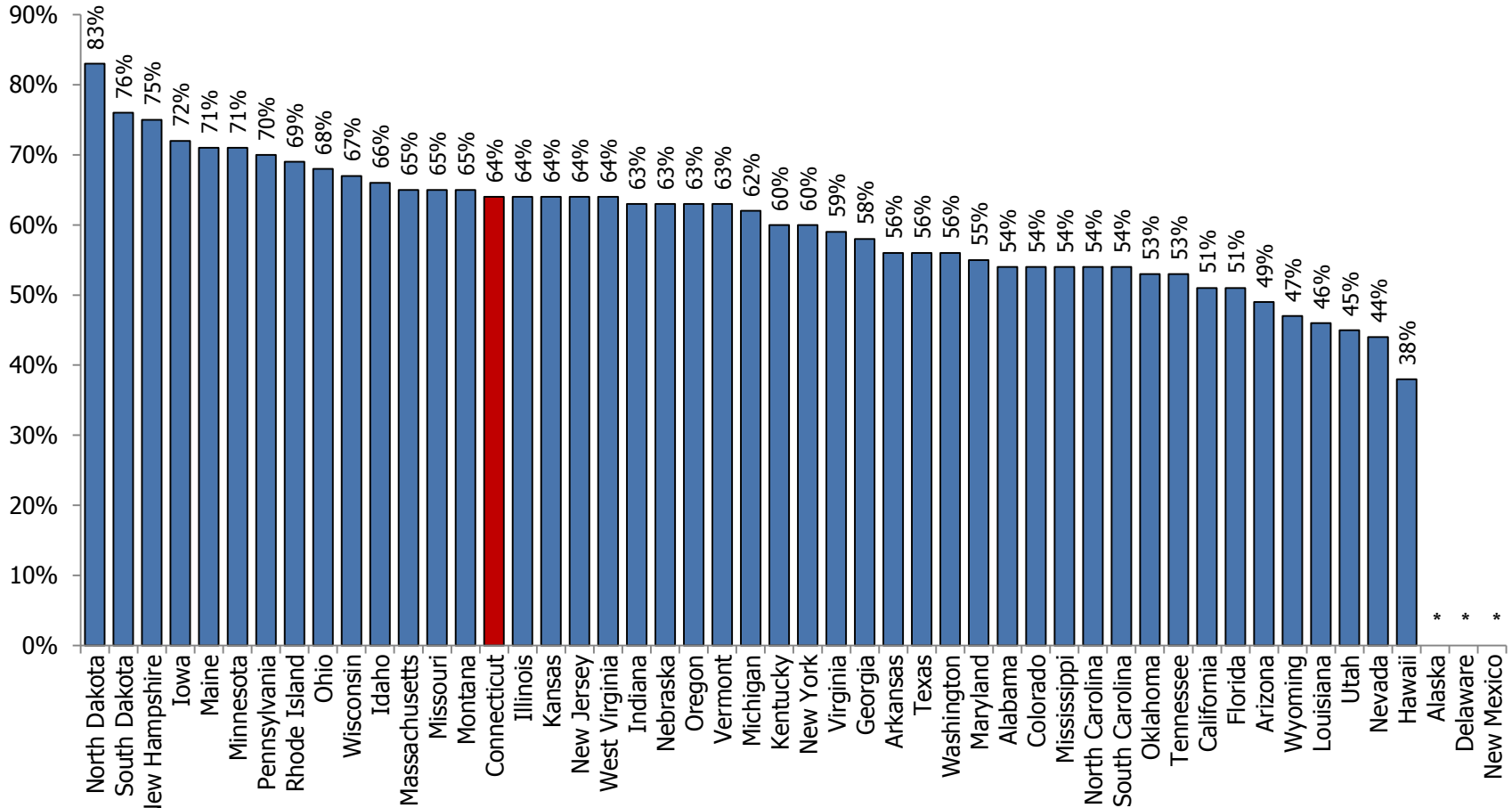
NCHEMS

Source: The Institute for College Access & Success

*State averages when the usable cases with student debt data covered less than 30 percent of bachelor's degree recipients in the Class of 2011 or when the underlying data for that state showed a change of 30 percent or more in average debt from the previous year were not calculated.

Percent of Graduates with Debt

Class of 2011

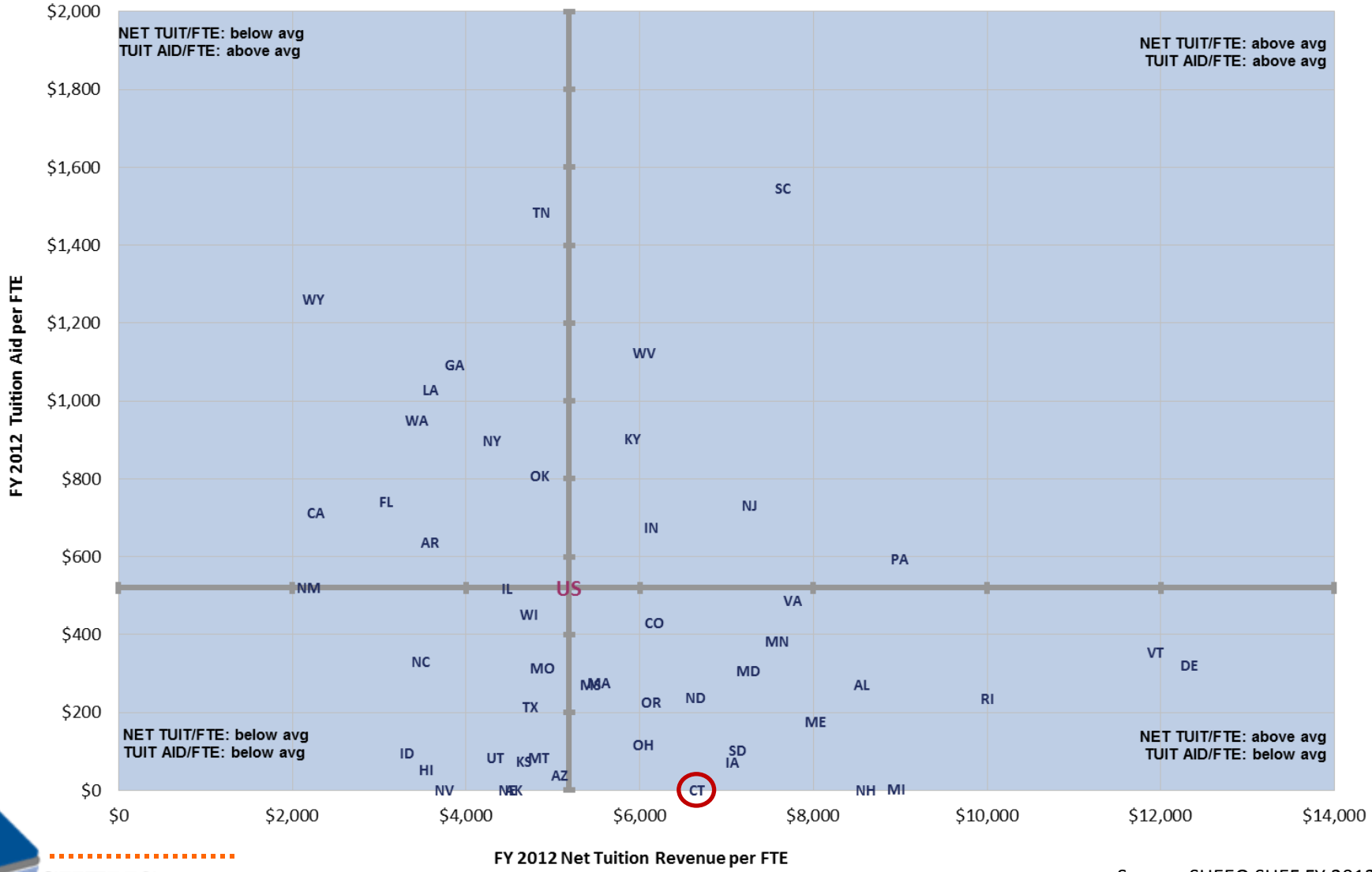


NCHEMS

Source: The Institute for College Access & Success

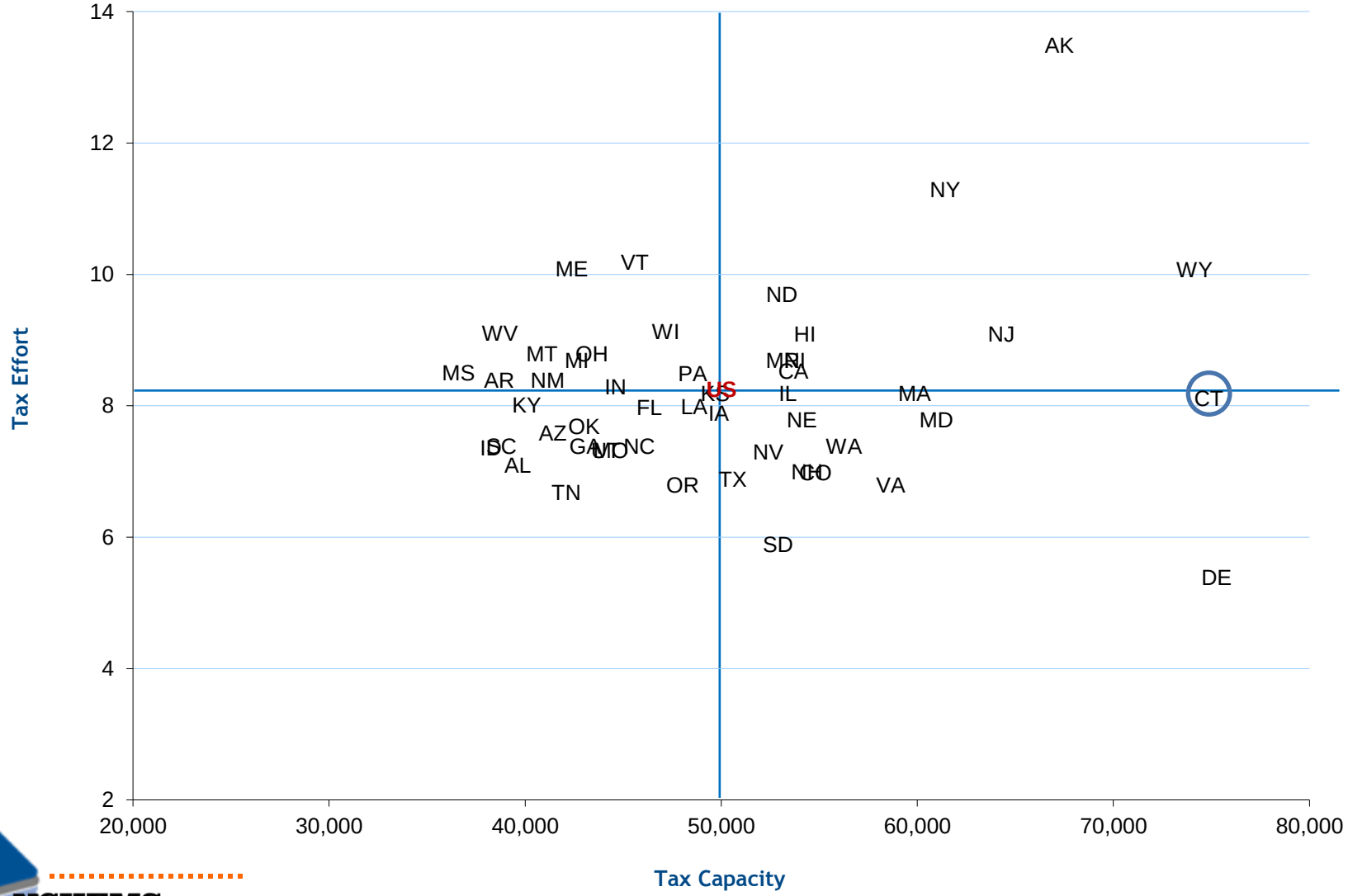
*State averages when the usable cases with student debt data covered less than 30 percent of bachelor's degree recipients in the Class of 2011 or when the underlying data for that state showed a change of 30 percent or more in average debt from the previous year were not calculated.

Net Tuition Revenue per FTE and State-Funded Tuition Aid per FTE by State, FY 2012 (Public Institutions Only)



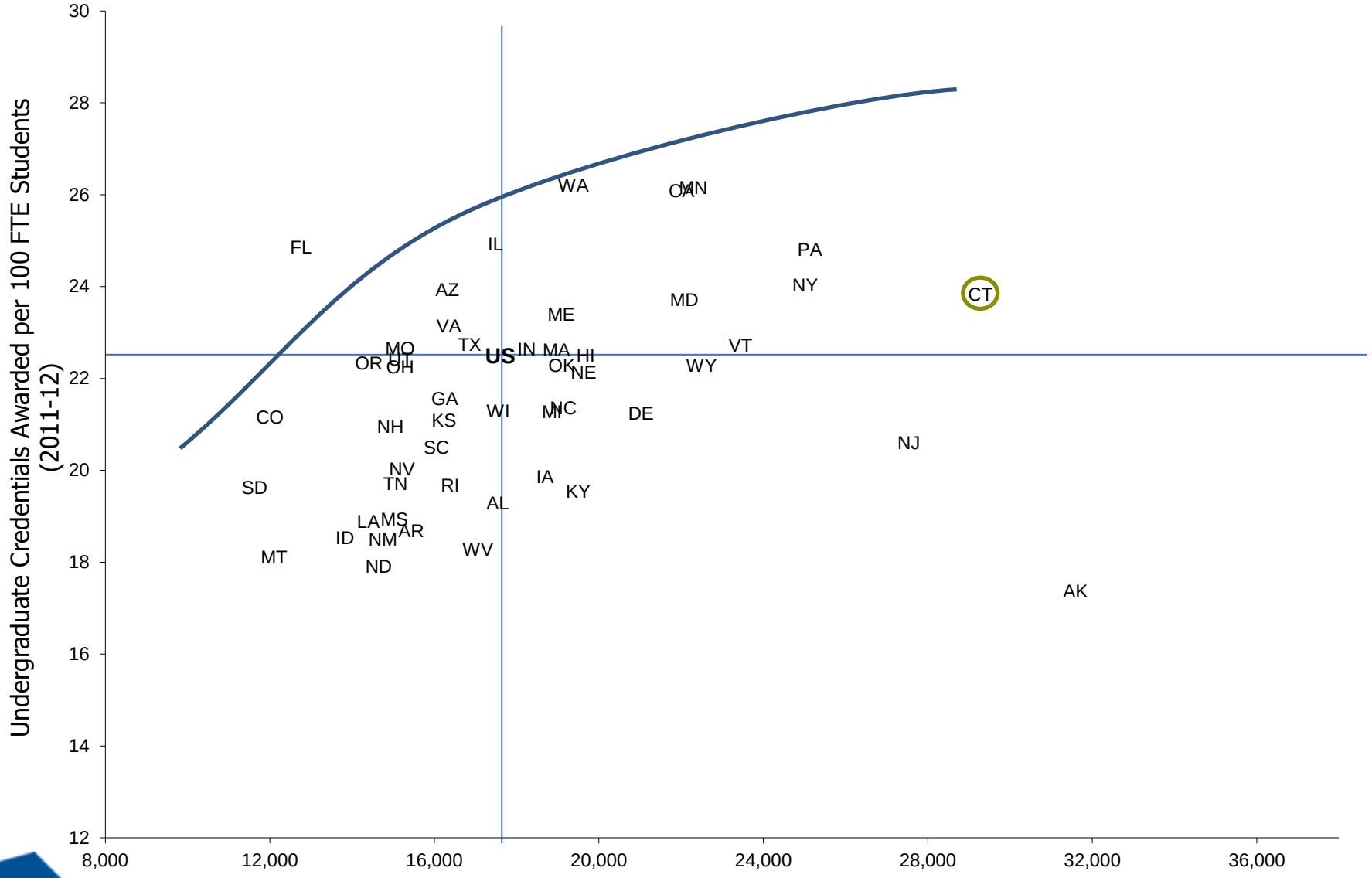
Source: SHEEO SHEF FY 2012

State Tax Capacity & Effort
Indexed to U.S. Average, 2009



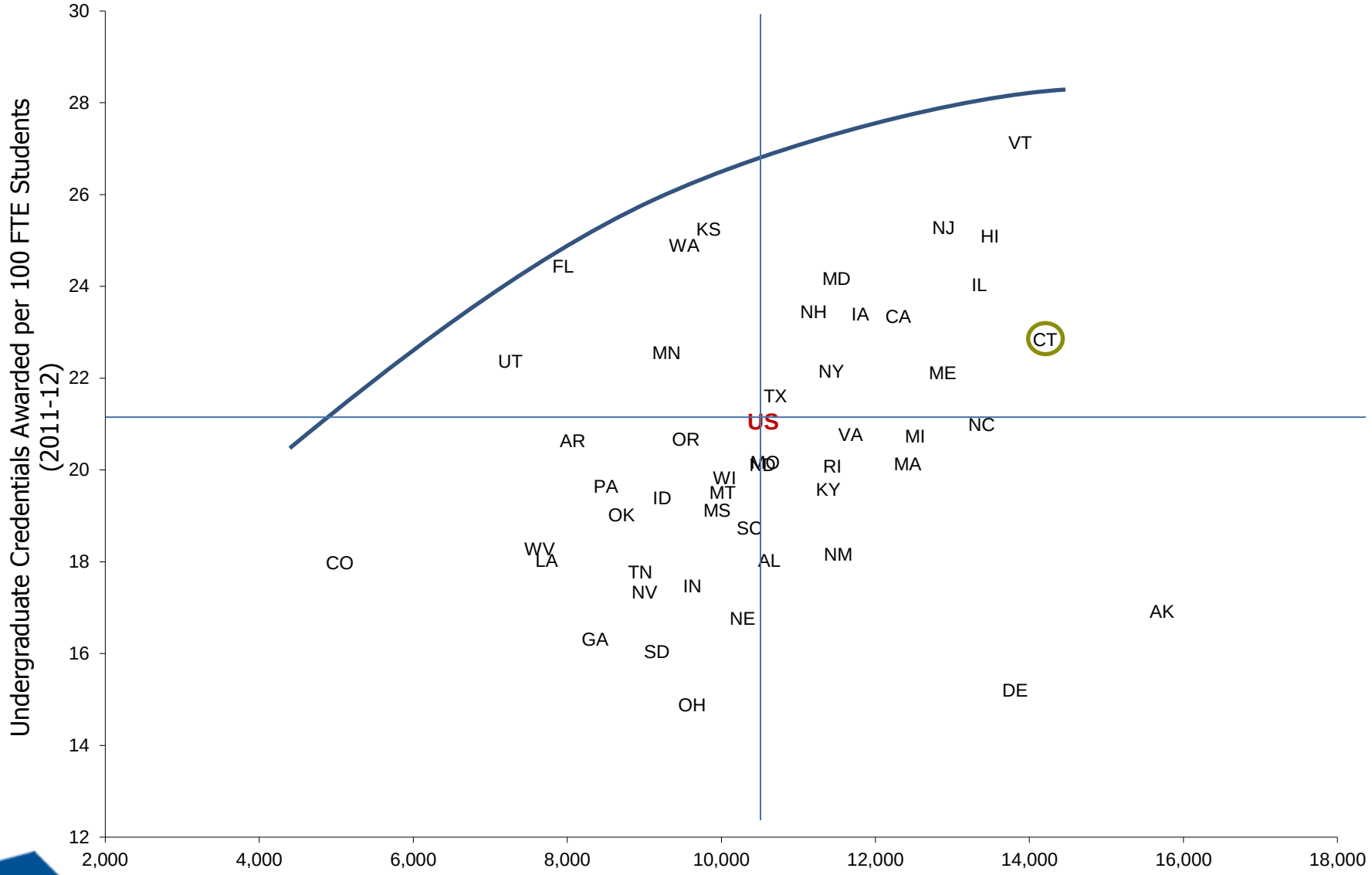
Source: SHEEO

Public Research Institutions: Undergraduate Credentials per 100 FTE Undergraduates and Total Funding per FTE Student



Sources: NCES, IPEDS Completions, Finance, and Enrollments Surveys.

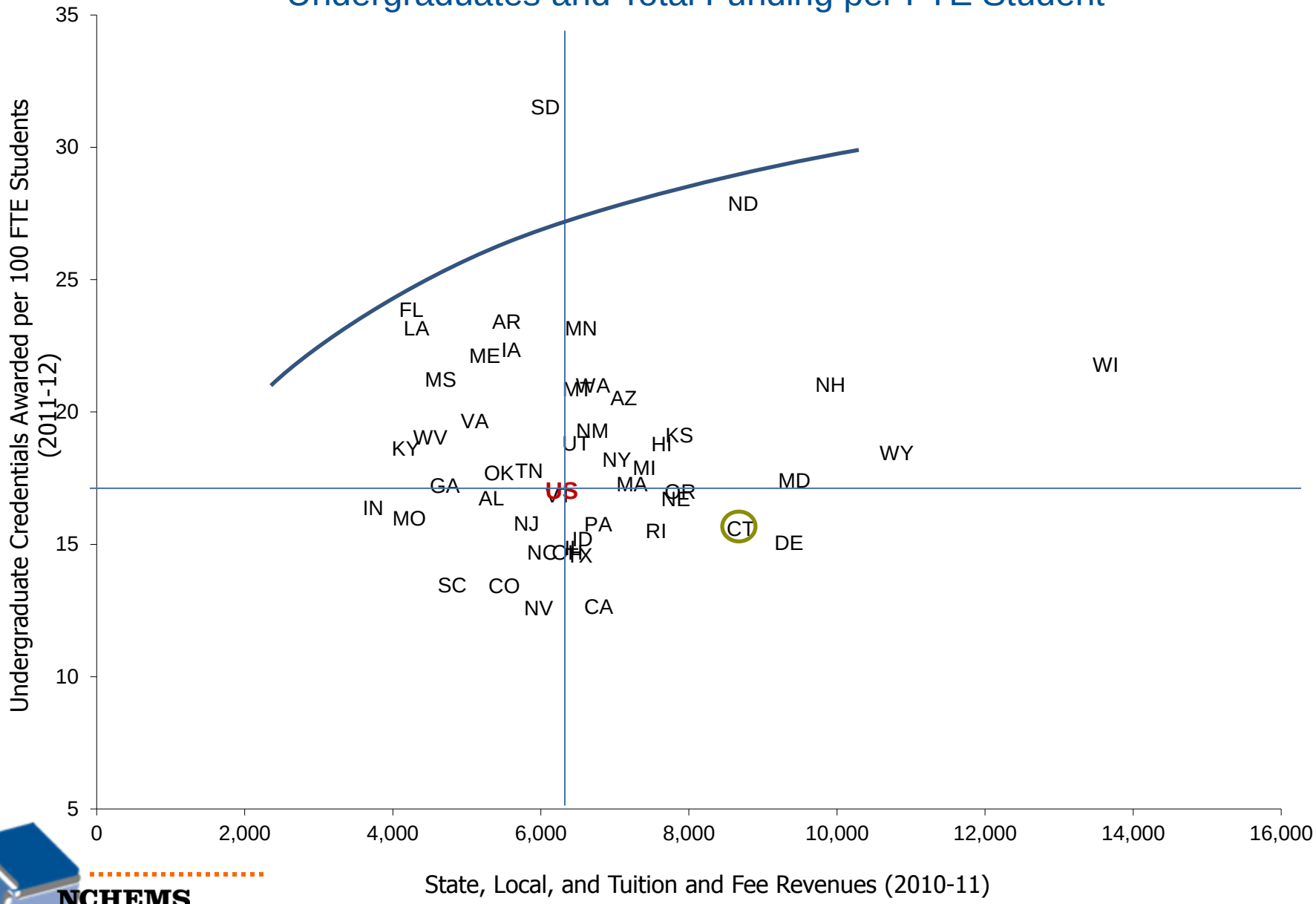
Public Bachelors and Masters Institutions: Undergraduate Credentials per 100 FTE Undergraduates and Total Funding per FTE Student



State, Local, and Tuition and Fee Revenues (2010-11)

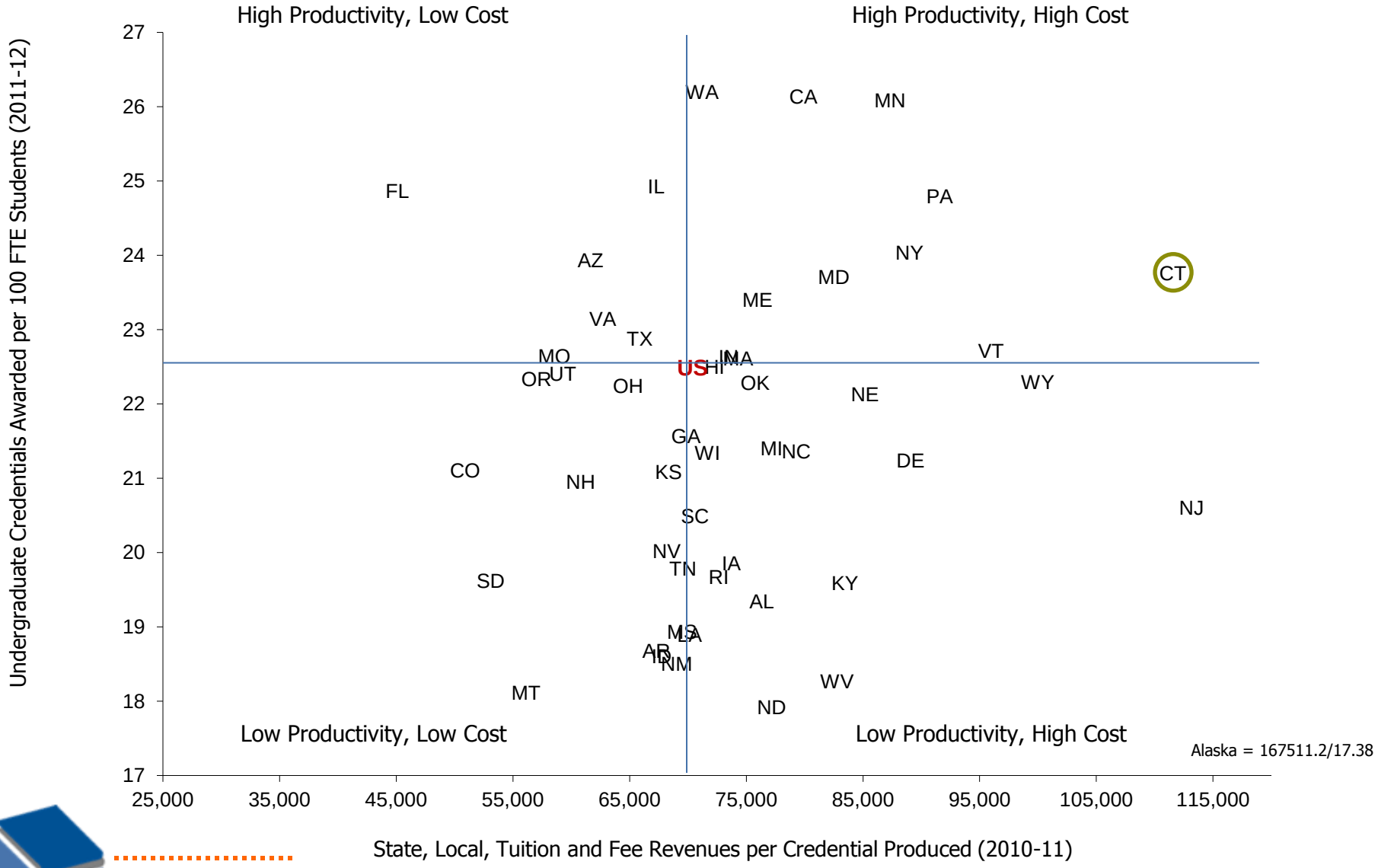
Sources: NCES, IPEDS Completions, Finance, and Enrollments Surveys.

Public Two-Year Institutions: Undergraduate Credentials per 100 FTE Undergraduates and Total Funding per FTE Student



Sources: NCES, IPEDS Completions, Finance, and Enrollments Surveys.

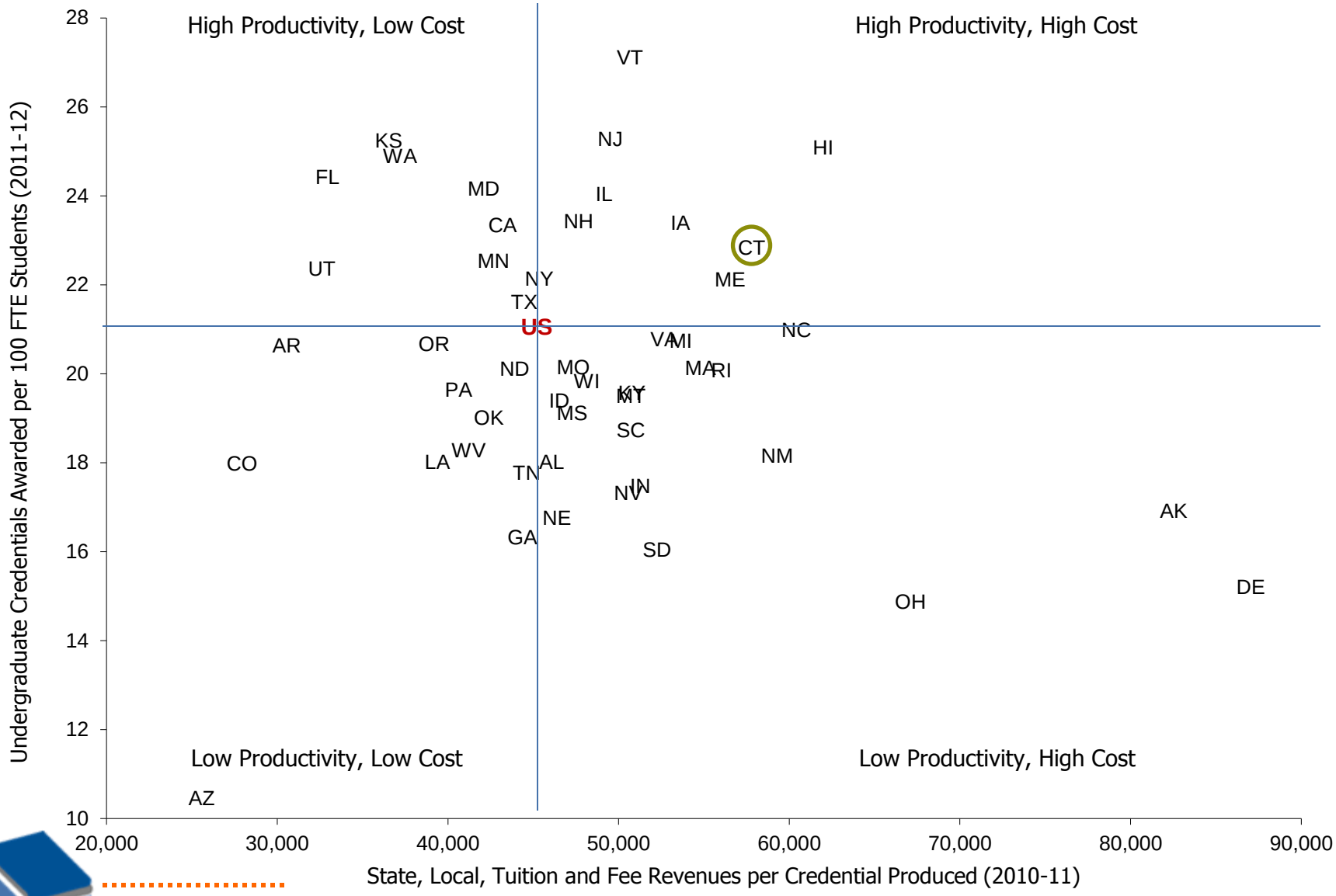
Undergraduate Credential Productivity and Cost per Undergraduate Credential Produced – Public Research Institutions



NCHEMS

Sources: NCES, IPEDS Enrollment, Completions, and Finance Surveys

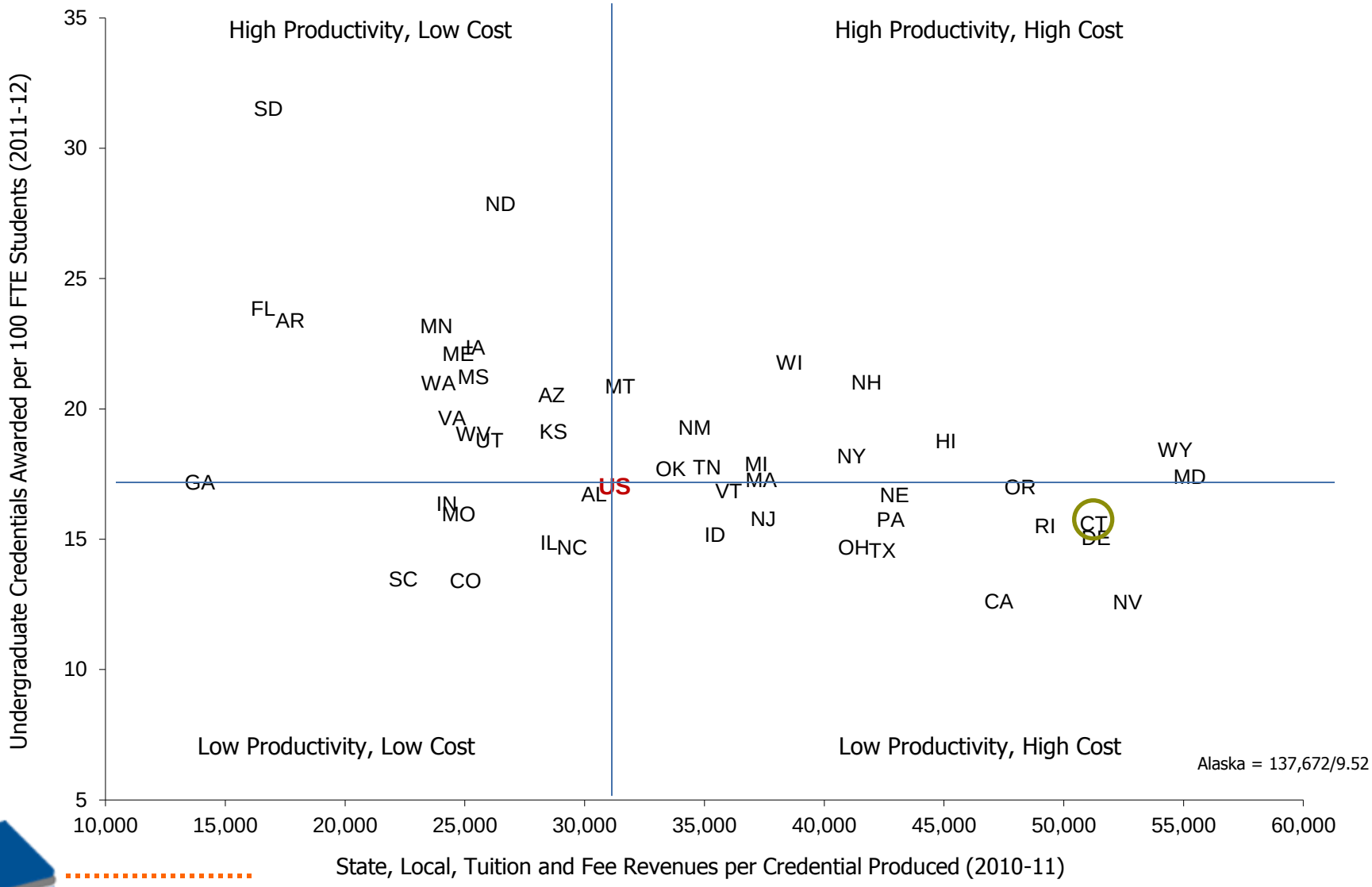
Undergraduate Credential Productivity and Cost per Undergraduate Credential Produced – Public Bachelor's and Master's Institutions



NCHEMS

Sources: NCES, IPEDS Enrollment, Completions, and Finance Surveys

Undergraduate Credential Productivity and Cost per Undergraduate Credential Produced – Public Two-Year Institutions



NCHEMS

Sources: NCES, IPEDS Enrollment, Completions, and Finance Surveys

Possible Goals for Connecticut
Informed by the Data

1.

2.

3.

For More Information Contact:

Dennis P. Jones
Aims McGuinness

NCHEMS
National Center for Higher Education Management Systems

dennis@nchems.org
aims@nchems.org
303-497-0301

http://www.nchems.org/NCHEMSCLASPRConnecticutModel.swf