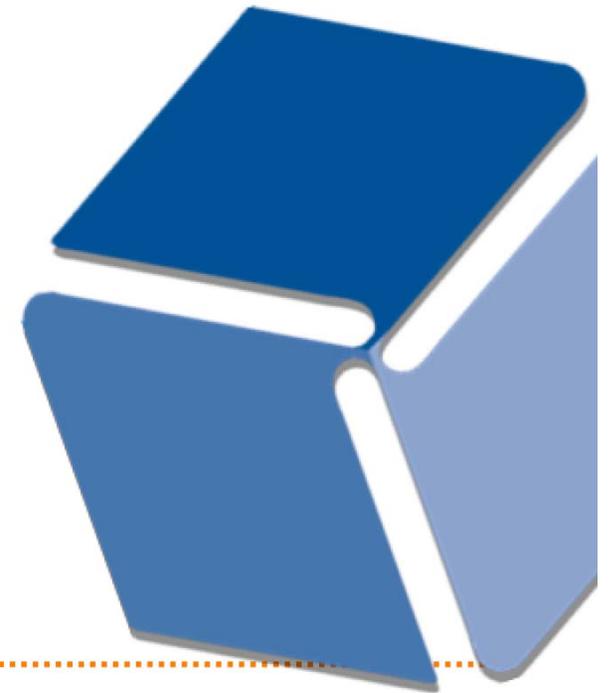


# Strategies for Improving Education Attainment in Virginia



Presented to the  
Council on Virginia's Future  
December 8, 2009  
Richmond, Virginia



**NCHEMS**

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



# Outline

- Why Education Matters
- The Attainment Gap
- Background: Finances and Productivity
- Long-term Strategic Options





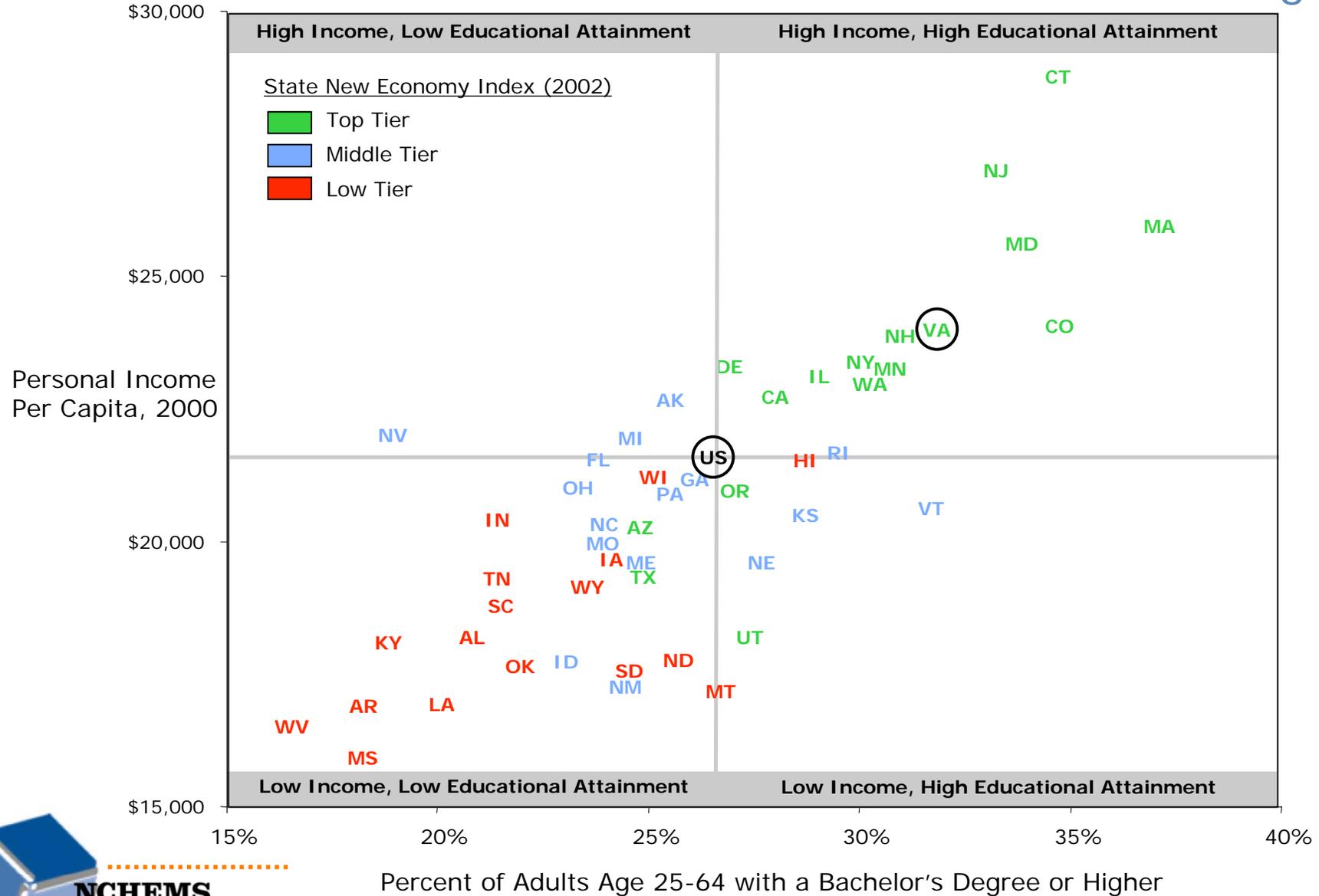
# WHY EDUCATION MATTERS



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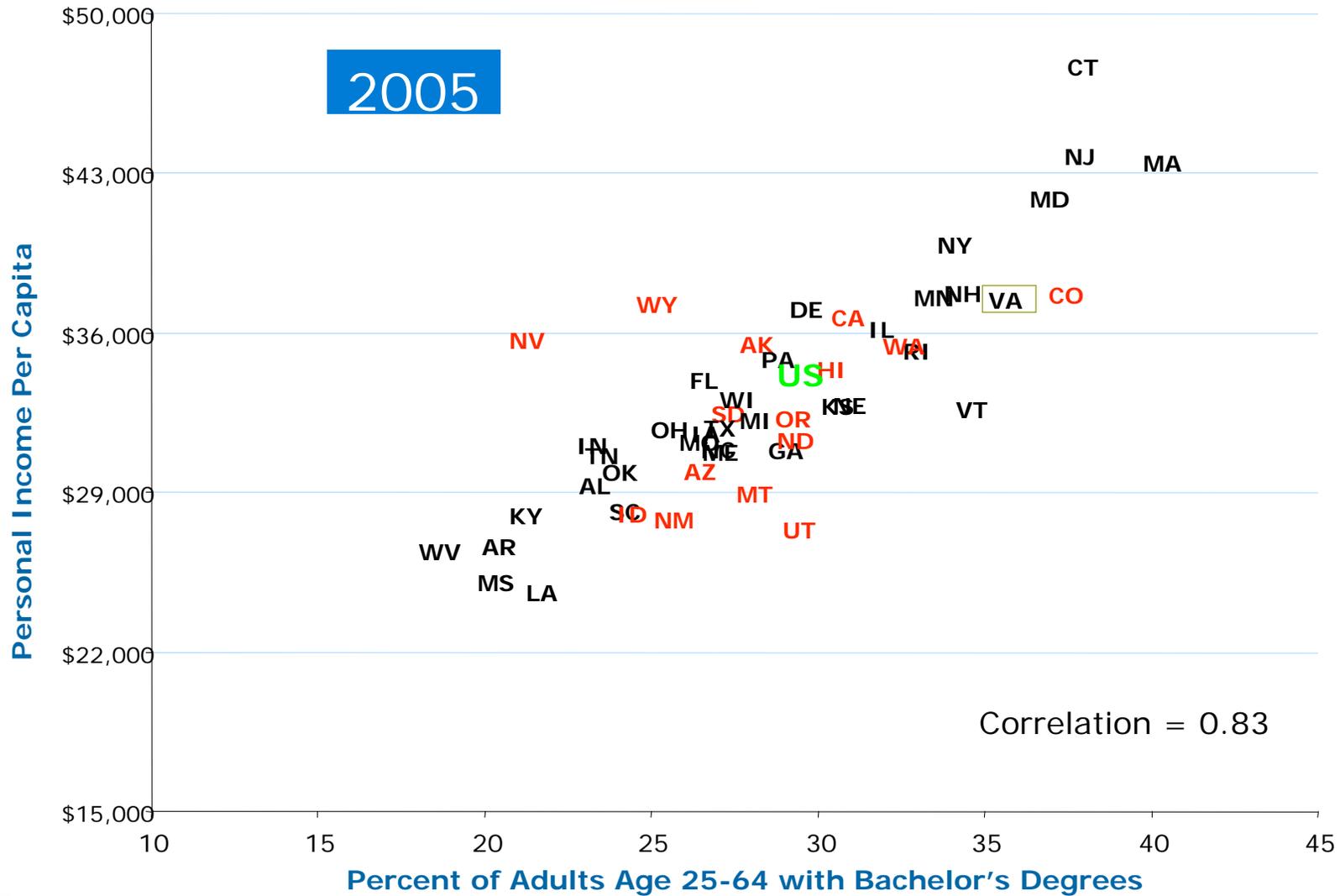
slide 3

# Relationship Between Educational Attainment, Personal Income, and Economic Strength



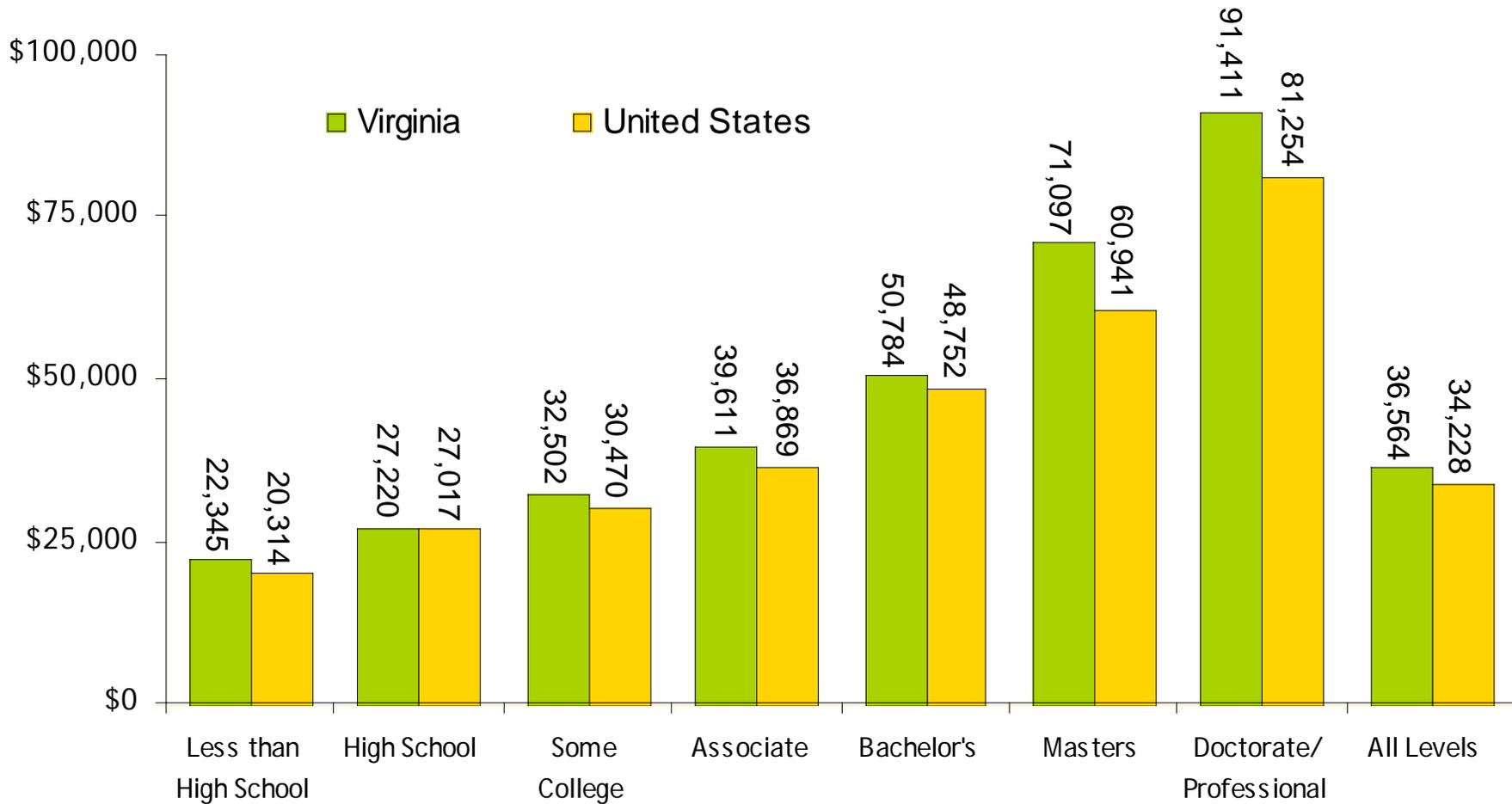


# Educational Attainment and Income



Source: U.S. Census Bureau, Decennial Census' and American Community Survey

# Median Earnings by Degree Level, 2006



Note: Earnings based on persons age 18-64 reporting positive wages working 35+ hours per week. Earnings adjusted to July 2006 dollars.

Source: U.S. Census Bureau, 2006 ACS PUMS File



# Increasing Levels of Educational Attainment Lead to Improved Societal Outcomes

- Increased levels of workforce participation
- Decreased rates of incarceration
- Improved health outcomes
- Reduced participation in Medicaid and higher net fiscal contributions
- Greater participation in artistic, cultural, and civic pursuits



# The Attainment Gap



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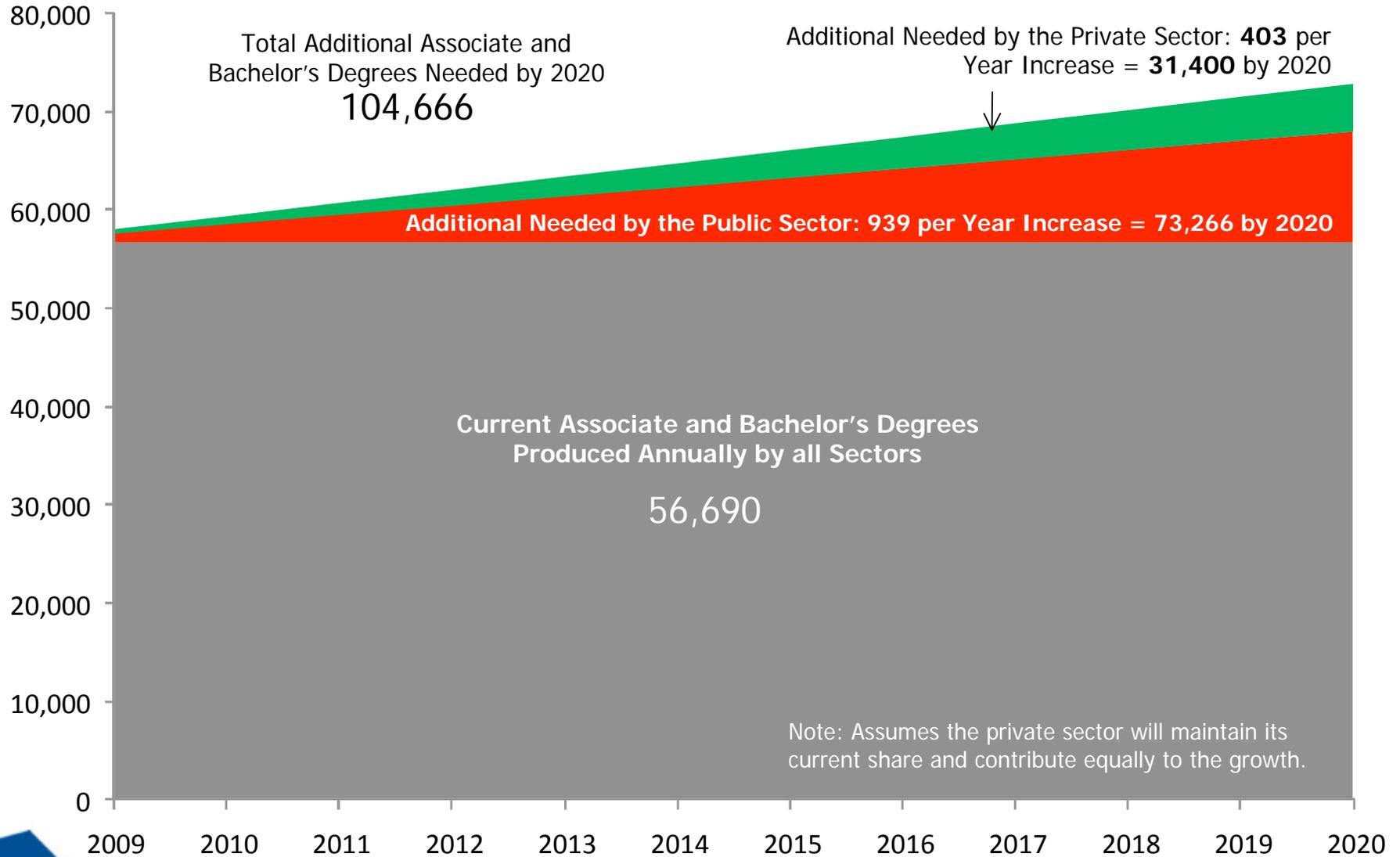
slide 9

## Educational Attainment Levels Lagging in Virginia and the U.S., 2006

	Adults with at Least an Associate Degree (per 100 Adults)		
	Age 45 to 54	Age 25 to 34	Percent Change in Cohort Attainment Rate
Canada	43.2	54.8	26.9%
Japan	39.3	54.1	37.7%
Korea	19.2	53.0	176.0%
New Zealand	38.1	43.6	14.4%
Ireland	24.0	42.2	75.8%
Virginia	42.9	41.6	-3.0%
United States	39.6	39.2	-1.0%

Source: Organization for Economic Cooperation and Development (OECD), *Education at a Glance 2008*. Virginia data from the National Center for Higher Education Management Systems (NCHEMS).

# Additional Degree Production Needed for Virginia to Match Best Performing Countries in Educational Attainment by 2020



## Closing the Workforce Gap

• Job openings created by industry growth to 2018 that require a college degree (estimate revised by Dr. Churma from original 239,239 figure)	25,375
• Add two years at projected growth rates	50,075
• Growth in demand for college degrees due to retirements	180,718
• Growth in demand for college degrees due to changing degree requirements, at 0.58% per year (source: 2000 census and 2007 ACS)	295,403
• Total demand for additional degree holders	776,571
• Degree production at current annual rate (56,900)	680,280
• Projected gap between degree production and workforce demand	96,291
• Additional degrees needed to reach the level of best performing countries	104,666
• Difference (needed reduction in net migration of college-degreed workers to ensure job openings for all Virginia graduates – about a 3.9% reduction)	8,375



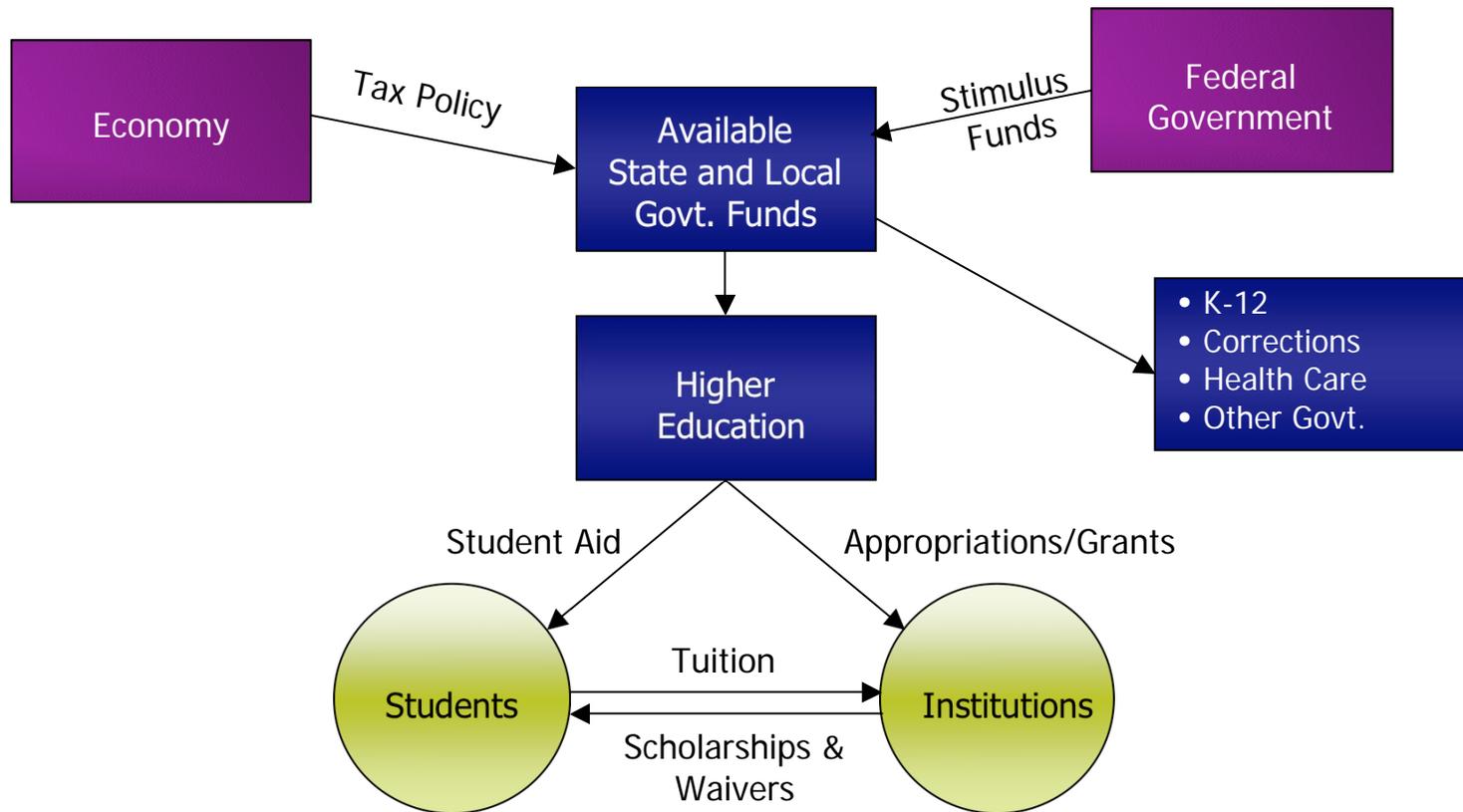
# Background: Finances & Productivity



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slide 13

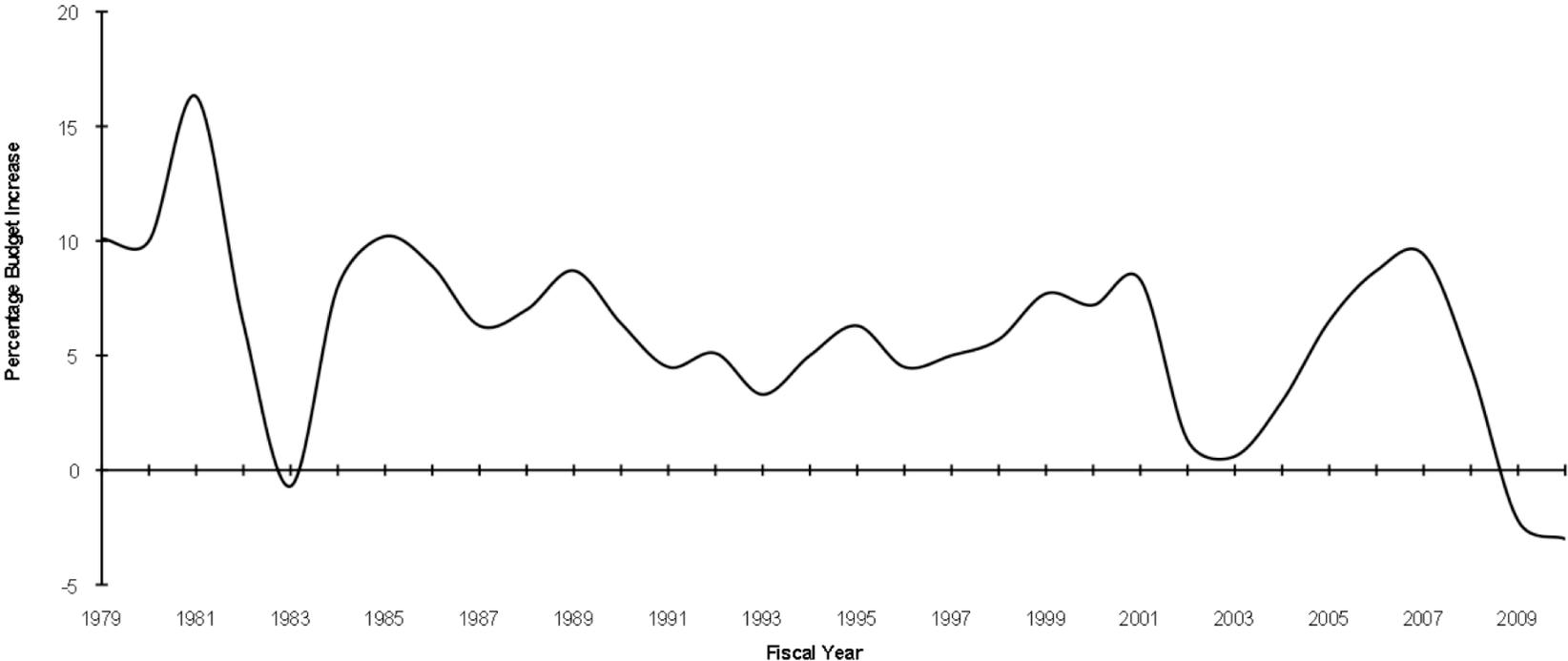
# The Flow of Funds - State





# Expenditures

**Annual Percentage Budget Increases, Fiscal 1979 to Fiscal 2010**



*\*32-year historical average rate of growth is 5.9 percent*

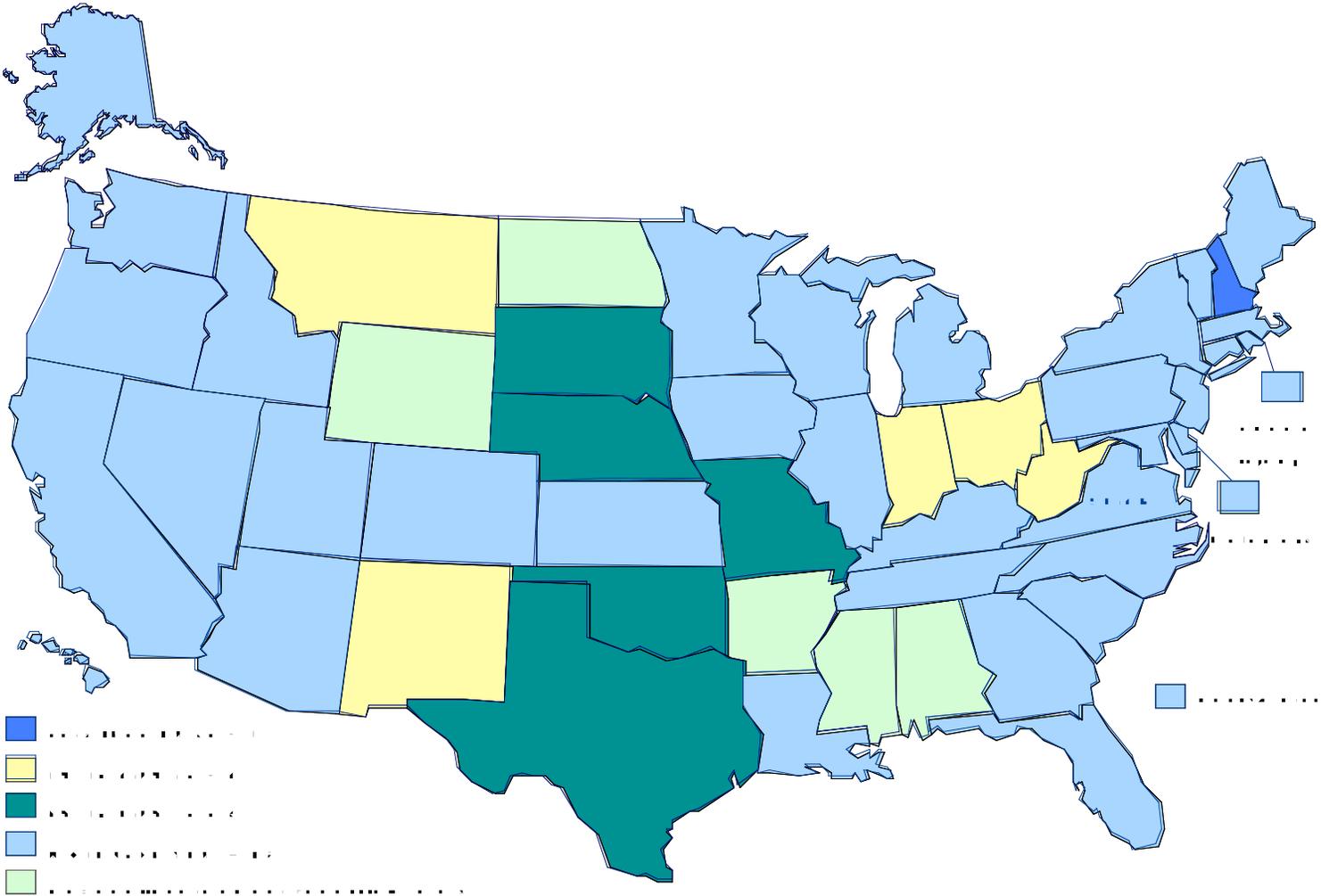
*\*\*\*Fiscal 10 numbers are recommended*

*\*\*Fiscal 09 numbers are estimated*

*Source: NASBO June 2009 Fiscal Survey of States*



# FY 2010 Highest Budget Gaps as a Percentage of General Fund Budget



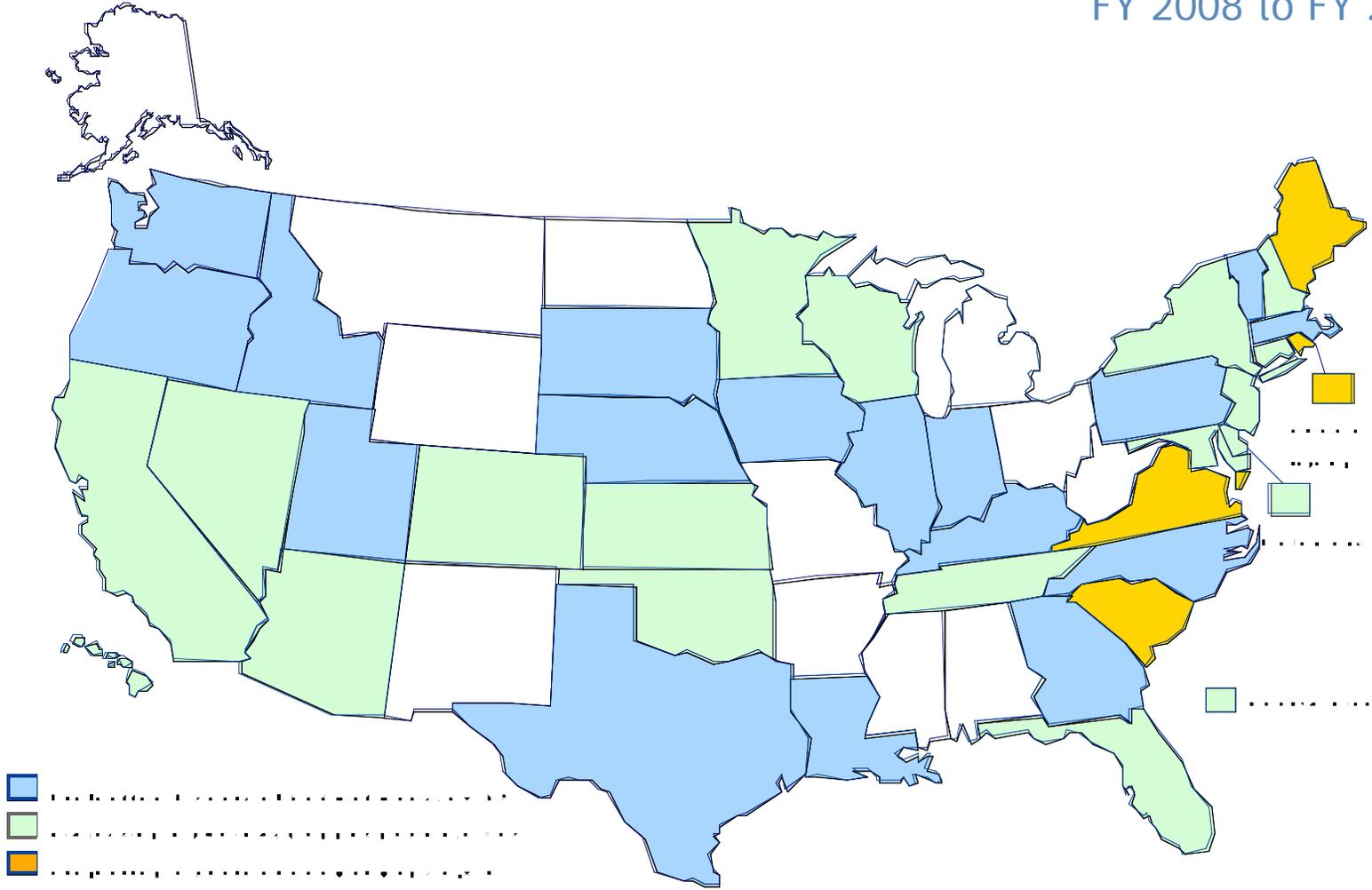
Source: NCSL survey of state legislative fiscal offices, April, June, and July 2009.





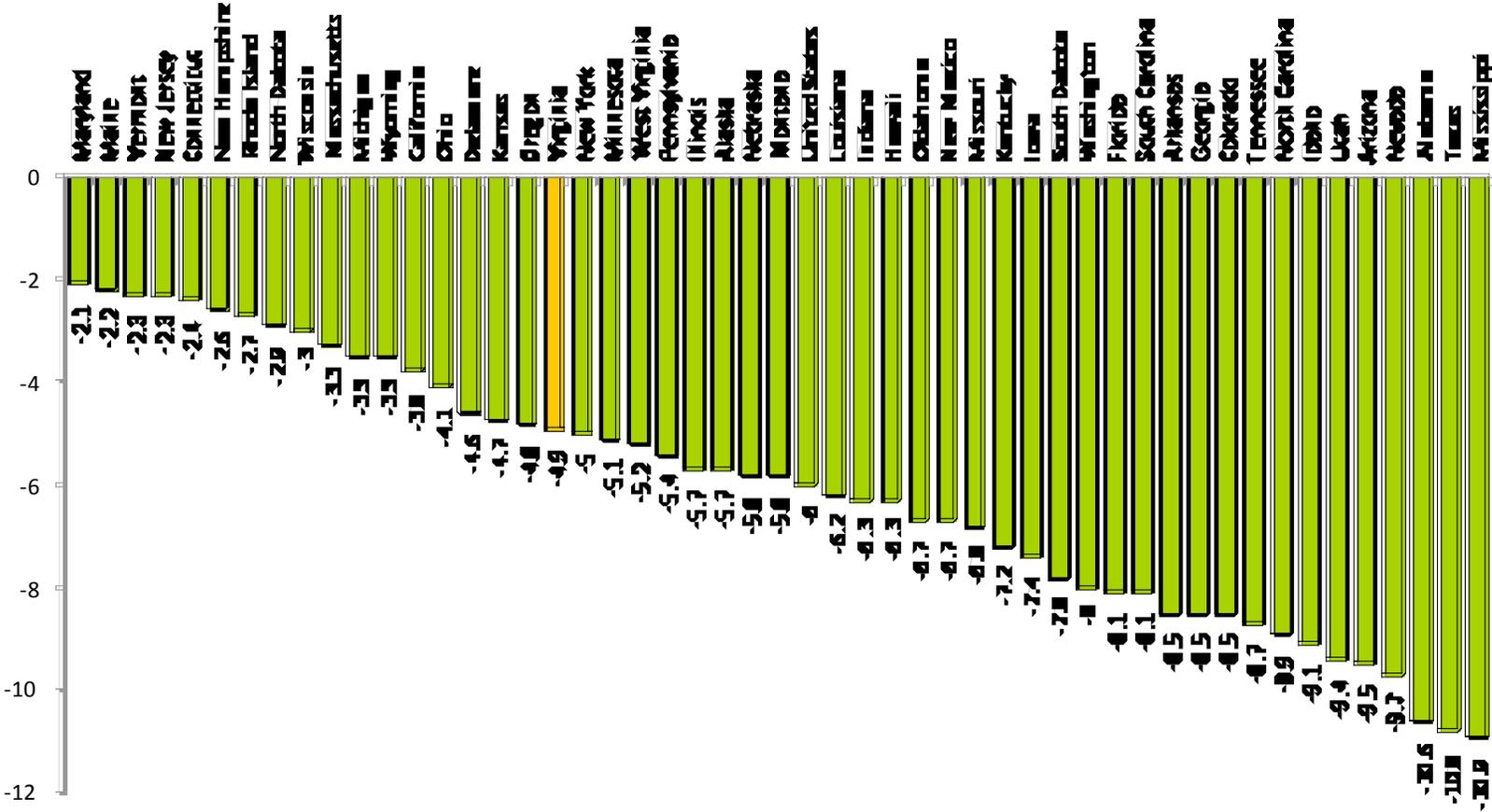
# Projected Budget Gaps

FY 2008 to FY 2012

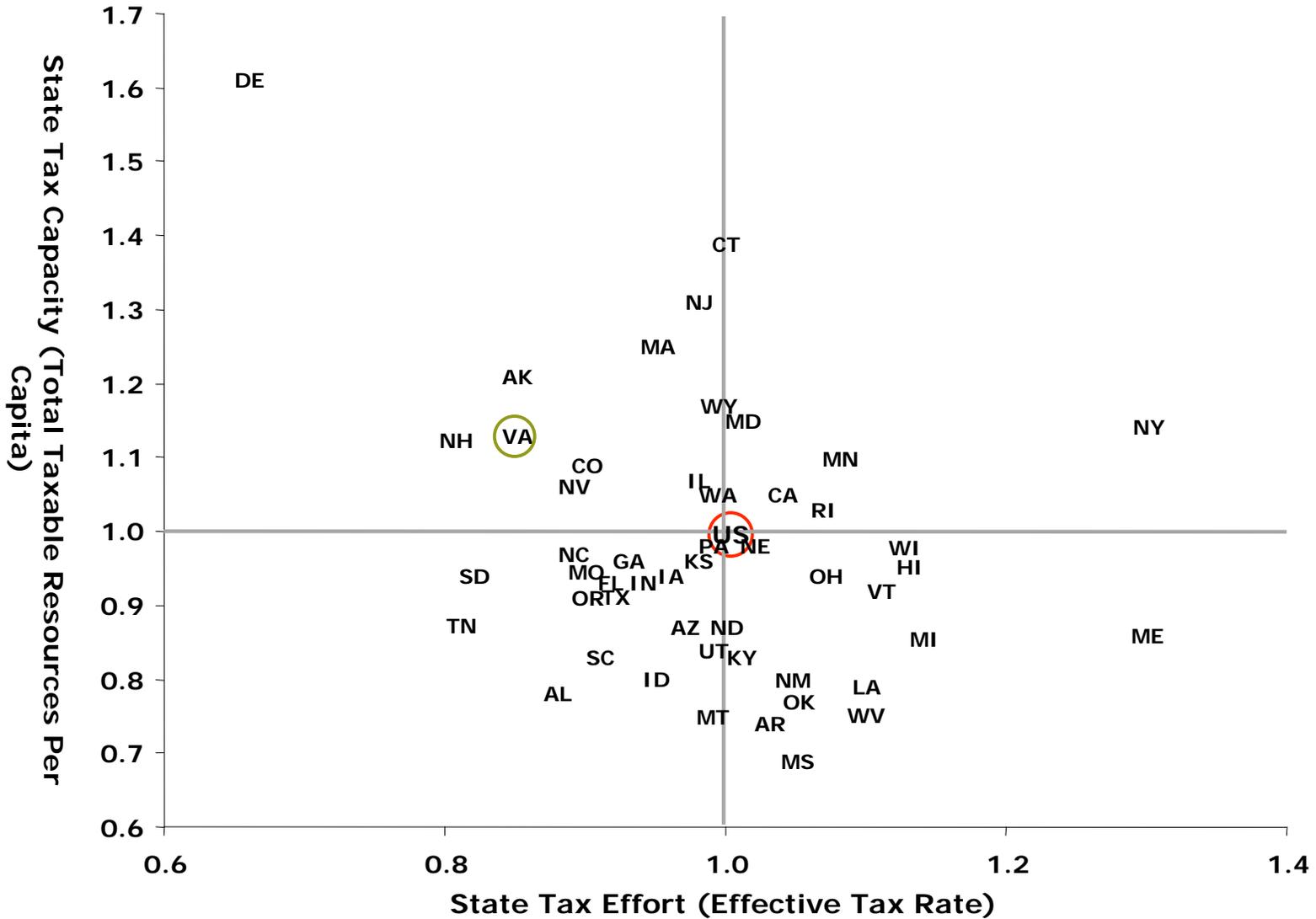


Source: NCSL survey of state legislative fiscal offices, various years.  
\*Includes Puerto Rico

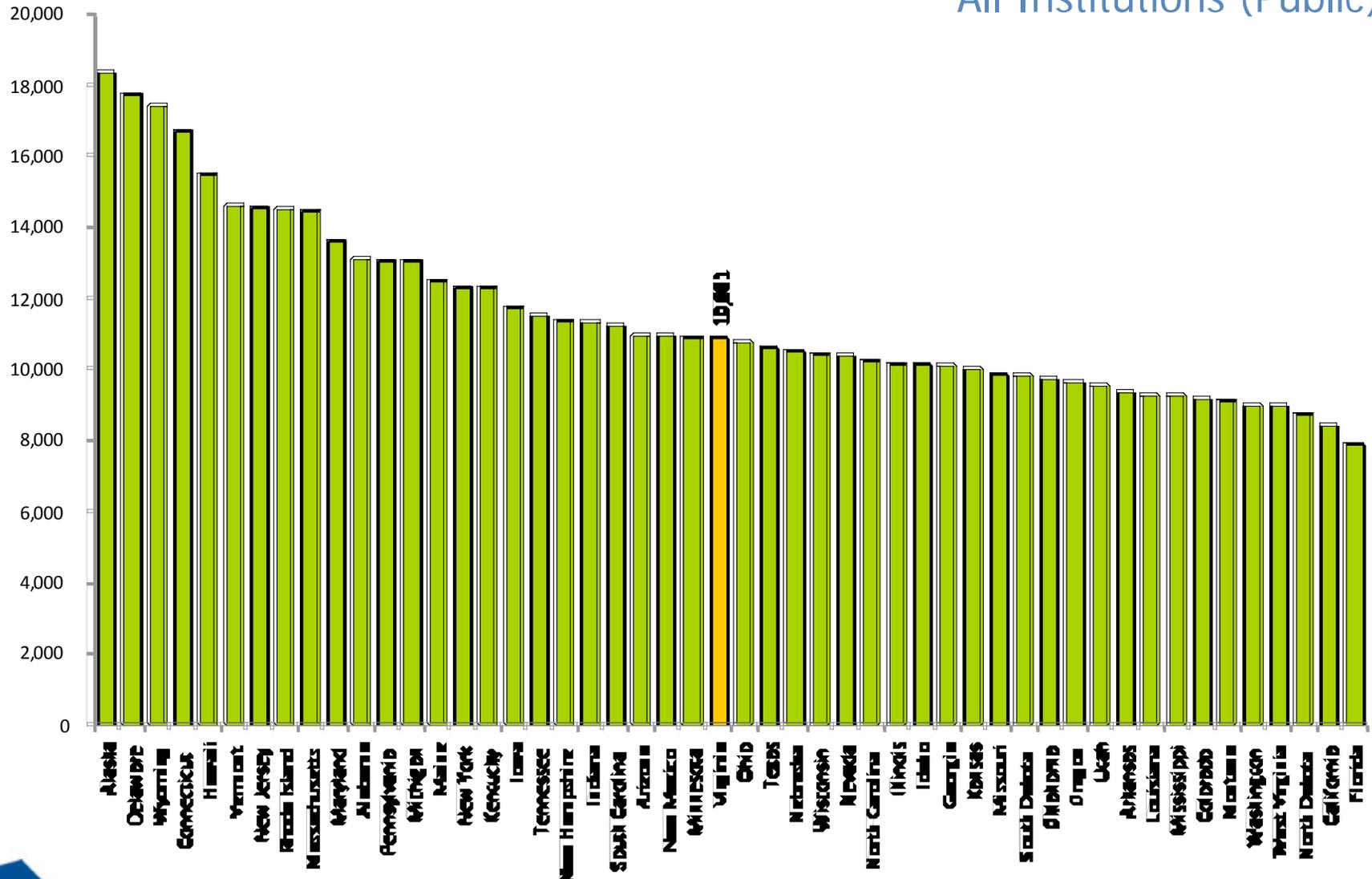
# Projected State & Local Budget Surplus (Gap) as a Percent of Revenues, 2016



# State Tax Capacity and Effort - Indexed to U.S. Average

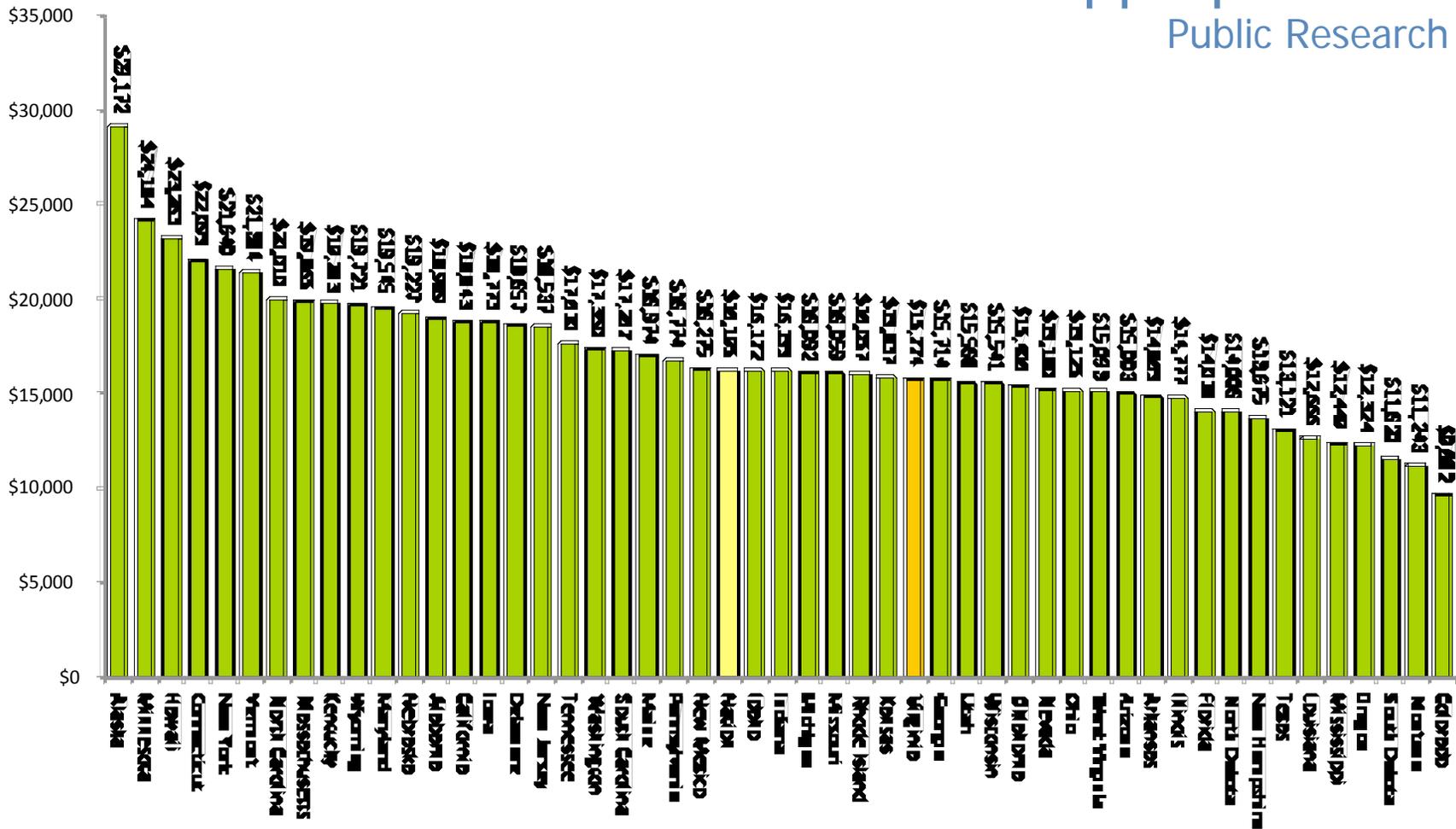


# State/Local Funding plus Tuition Revenue per FTE Student All Institutions (Public)



# Revenues Per Student from Net Tuition, State, & Local Appropriations

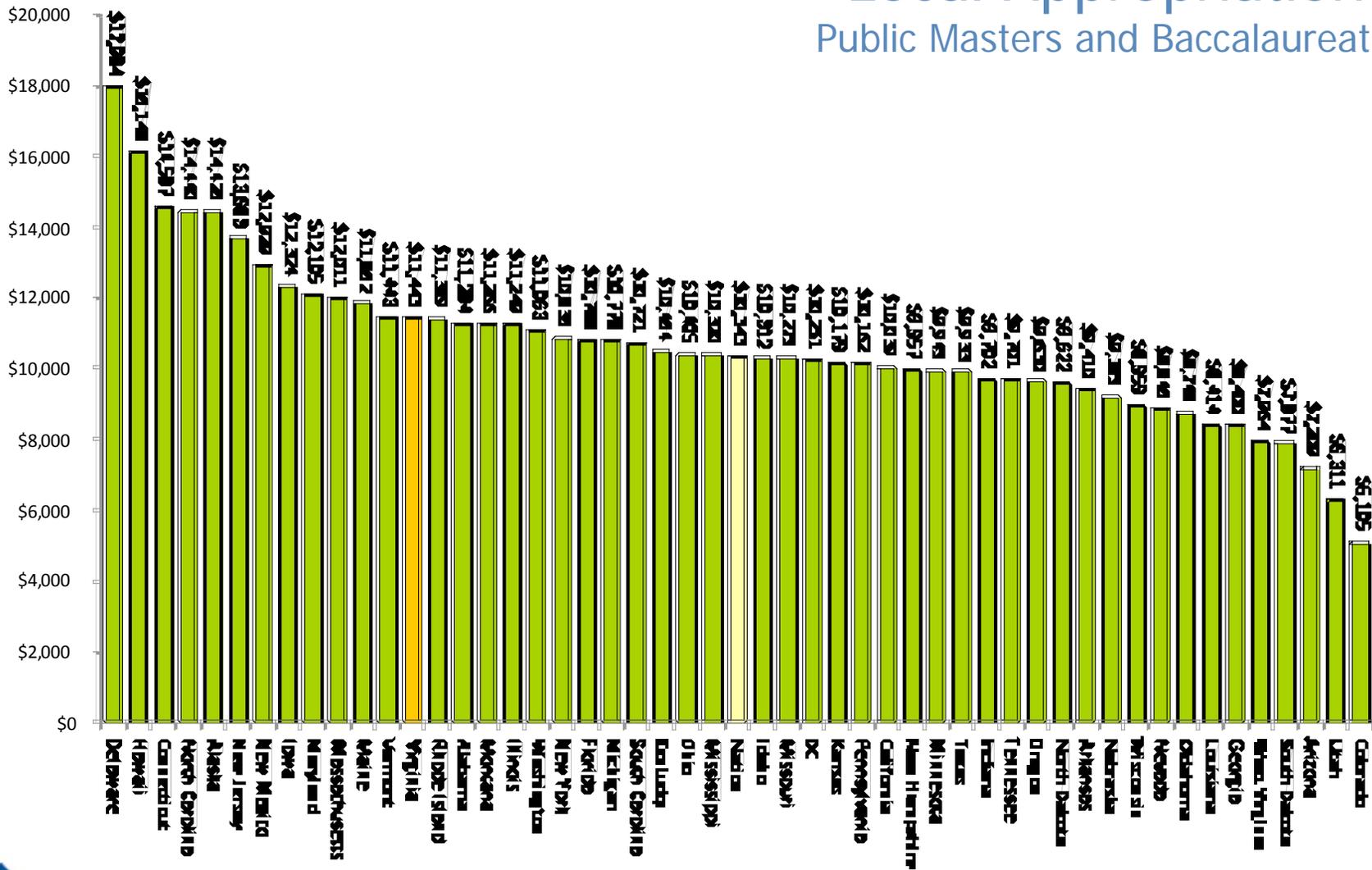
Public Research



Sources: NCES, IPEDS 2006-07 Finance Files; f0607\_f1a and f0607\_f2 Final Release Data Files.  
 NCES, IPEDS 2007-08 Institutional Characteristics File; hd2007 Final Release Data File.  
 NCES; IPEDS 2006-07 Enrollment Files; ef2006a, effy2007, and efia2007 Final Release Data Files.

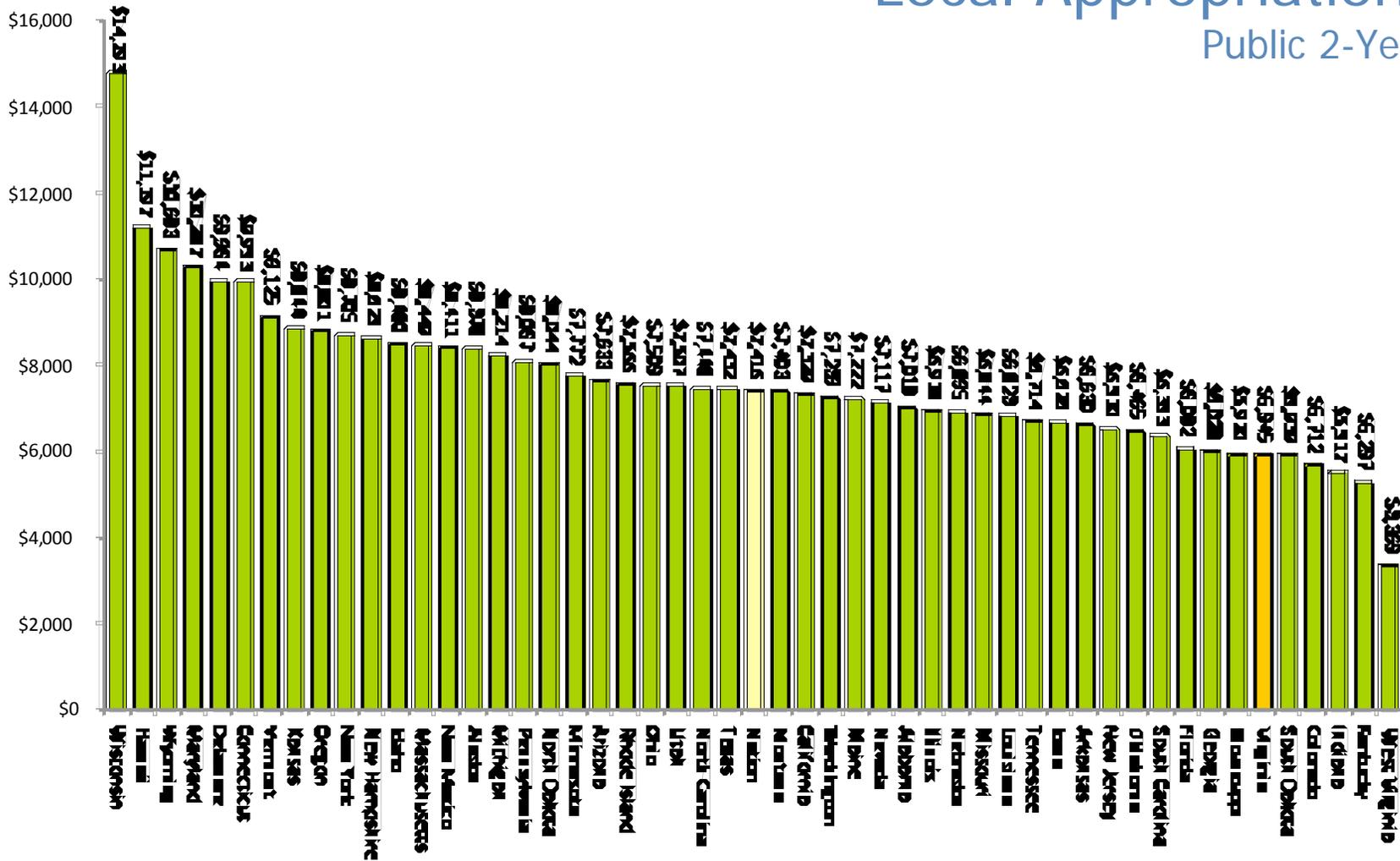
# Revenues Per Student from Net Tuition, State, & Local Appropriations

## Public Masters and Baccalaureate

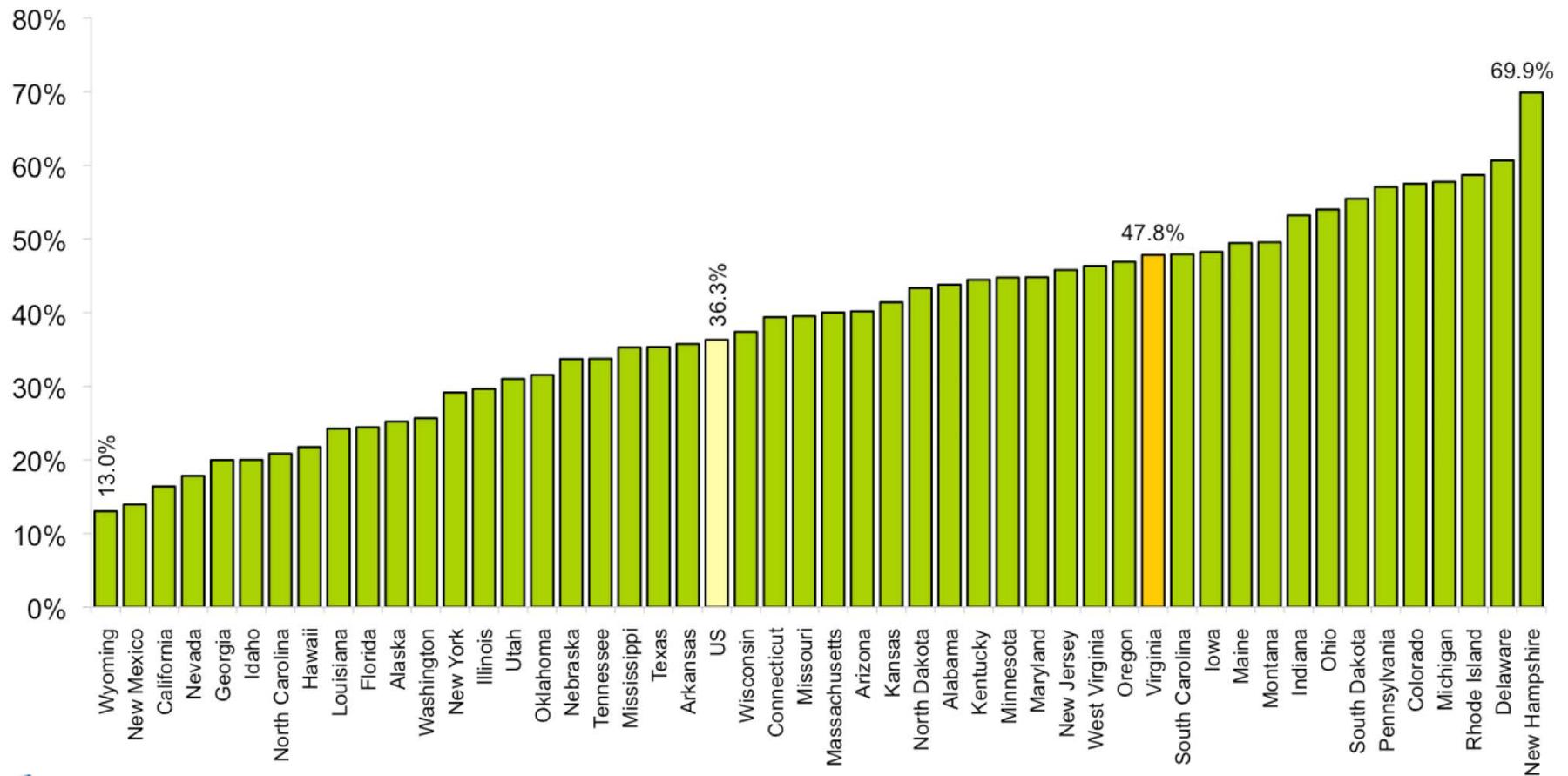


# Revenues Per Student from Net Tuition, State, & Local Appropriations

Public 2-Year



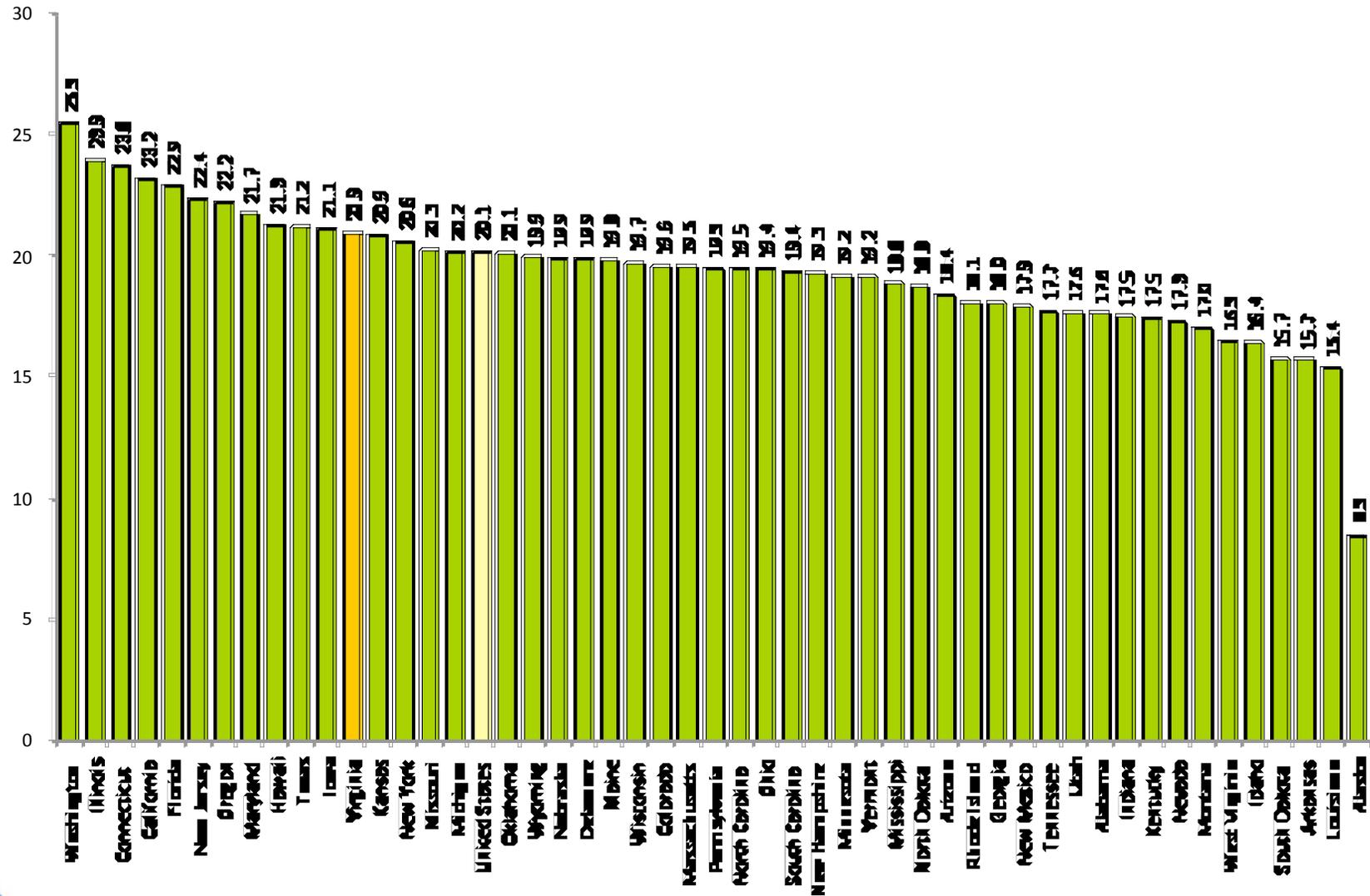
# Net Tuition as a Percent of Public Higher Education Total Educational Revenue by State, FY 2008



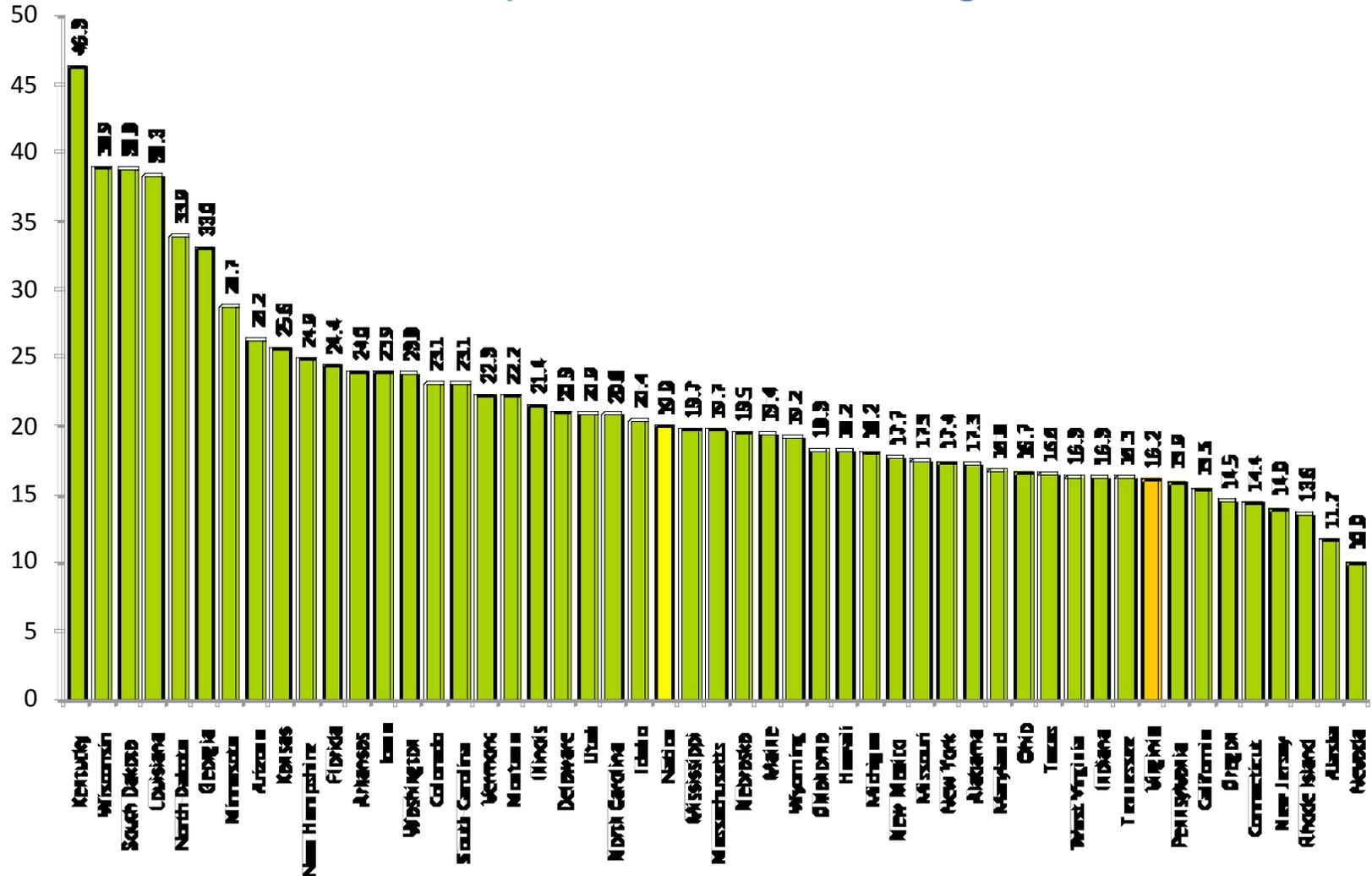
Note: Dollars adjusted by 2008 HECA, Cost of Living Adjustment, and Enrollment Mix

Source: SHEEO SHEF

## Bachelor's Degrees Awarded per 100 FTE Students Public 4-Year Institutions (2006-07)

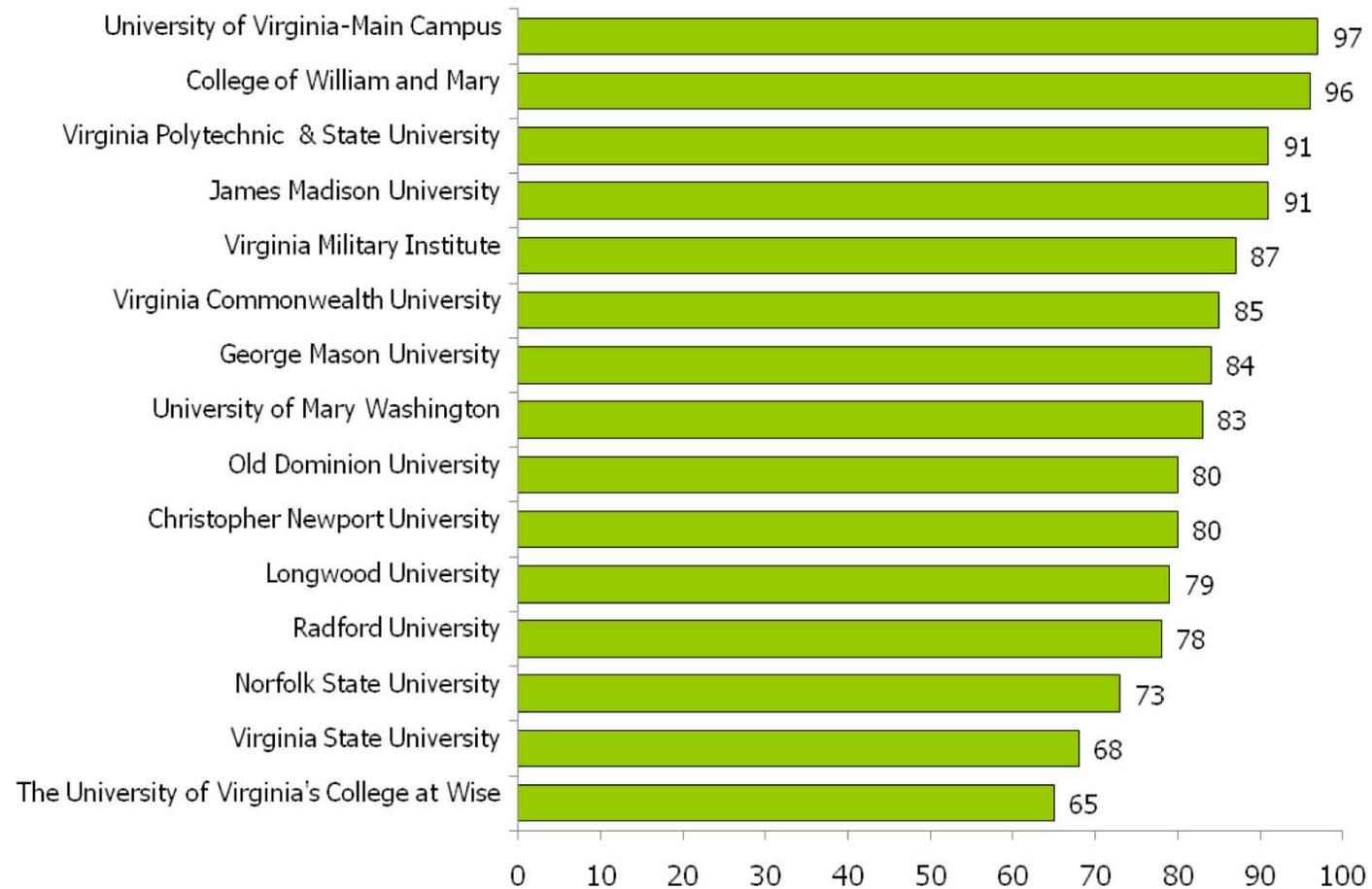


# Public Associate Colleges - Total Credentials Awarded (Less than Bachelors) per 100 FTE Undergraduates, 2006-07

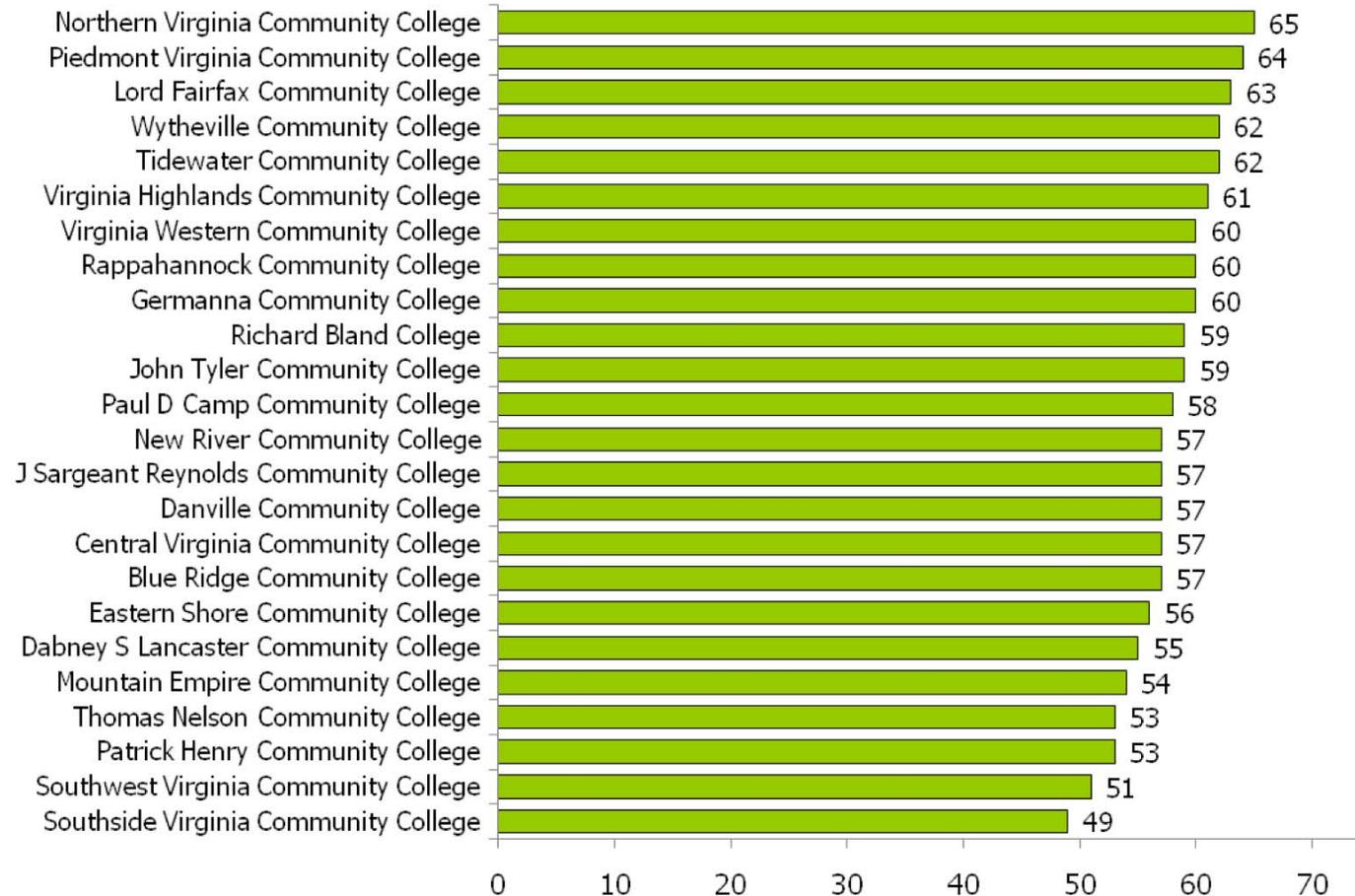


Sources: NCES, IPEDS 2006-07 Completions File; c2007\_a Early Release Data File Downloaded 04-28-08; NCES, IPEDS 2006-07 Instructional Activity File; efa2007 Final Release Data File; NCES, IPEDS 2006-07 Unduplicated Headcount File; effy2007 Final Release Data File.; NCES, IPEDS Fall 2006 Enrollment File; ef2006a Final Release Data File.

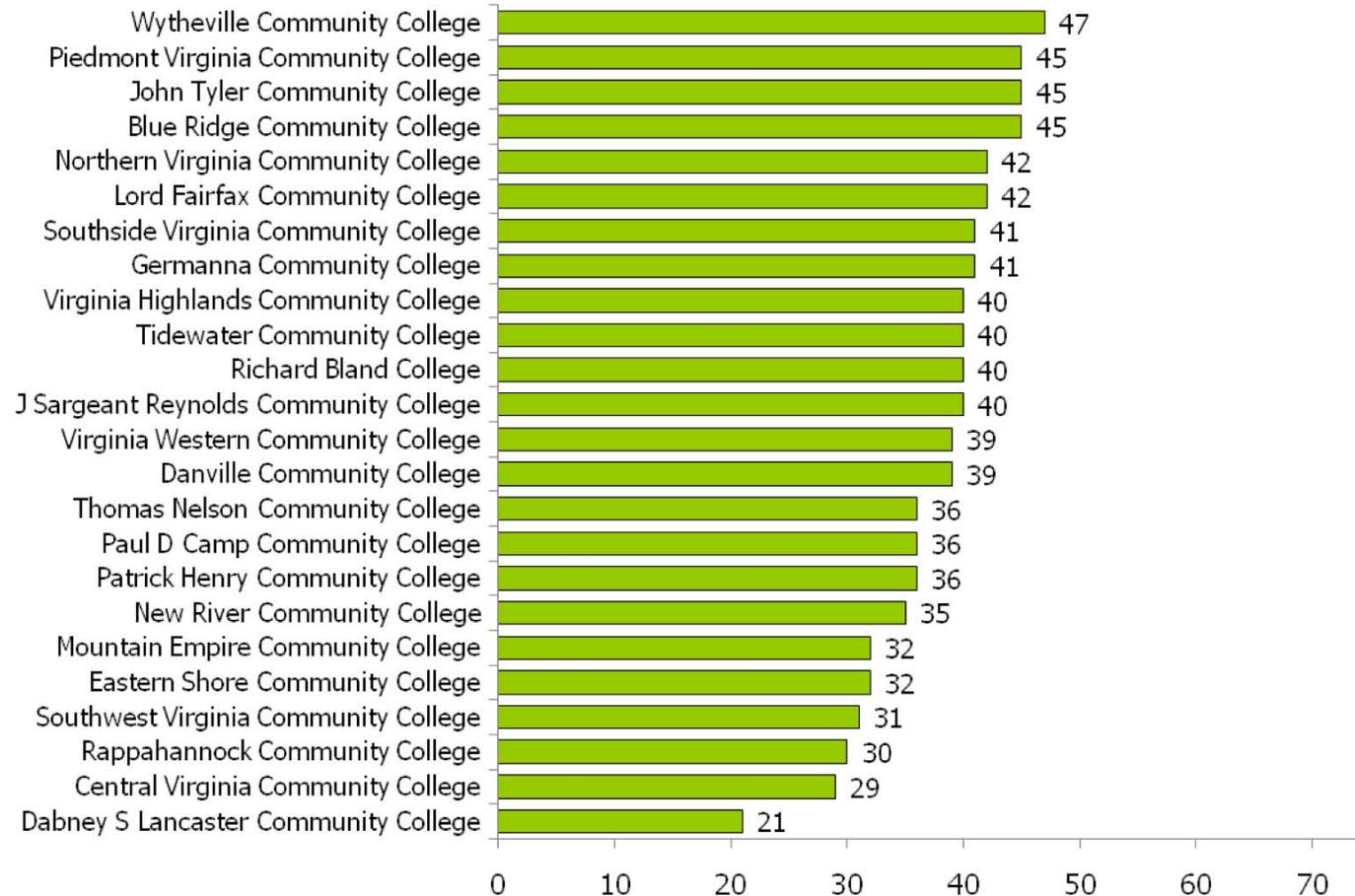
# Retention Rates, Full-time Students, Virginia 4-Year Institutions, 2008



# Retention Rates, Full-time Students, Virginia 2-Year Institutions, 2008

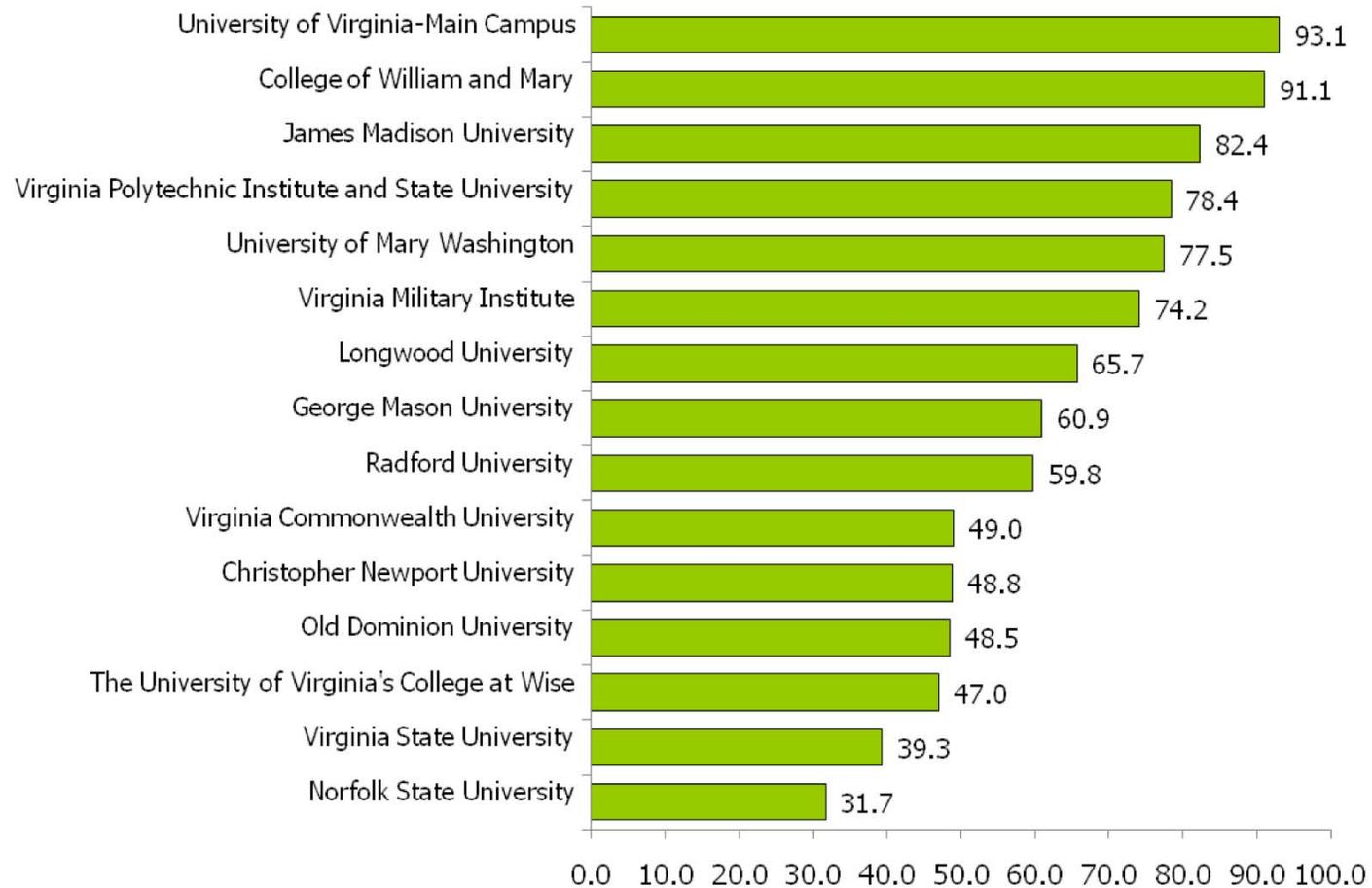


# Retention Rates, Part-time Students, Virginia 2-Year Institutions, 2008



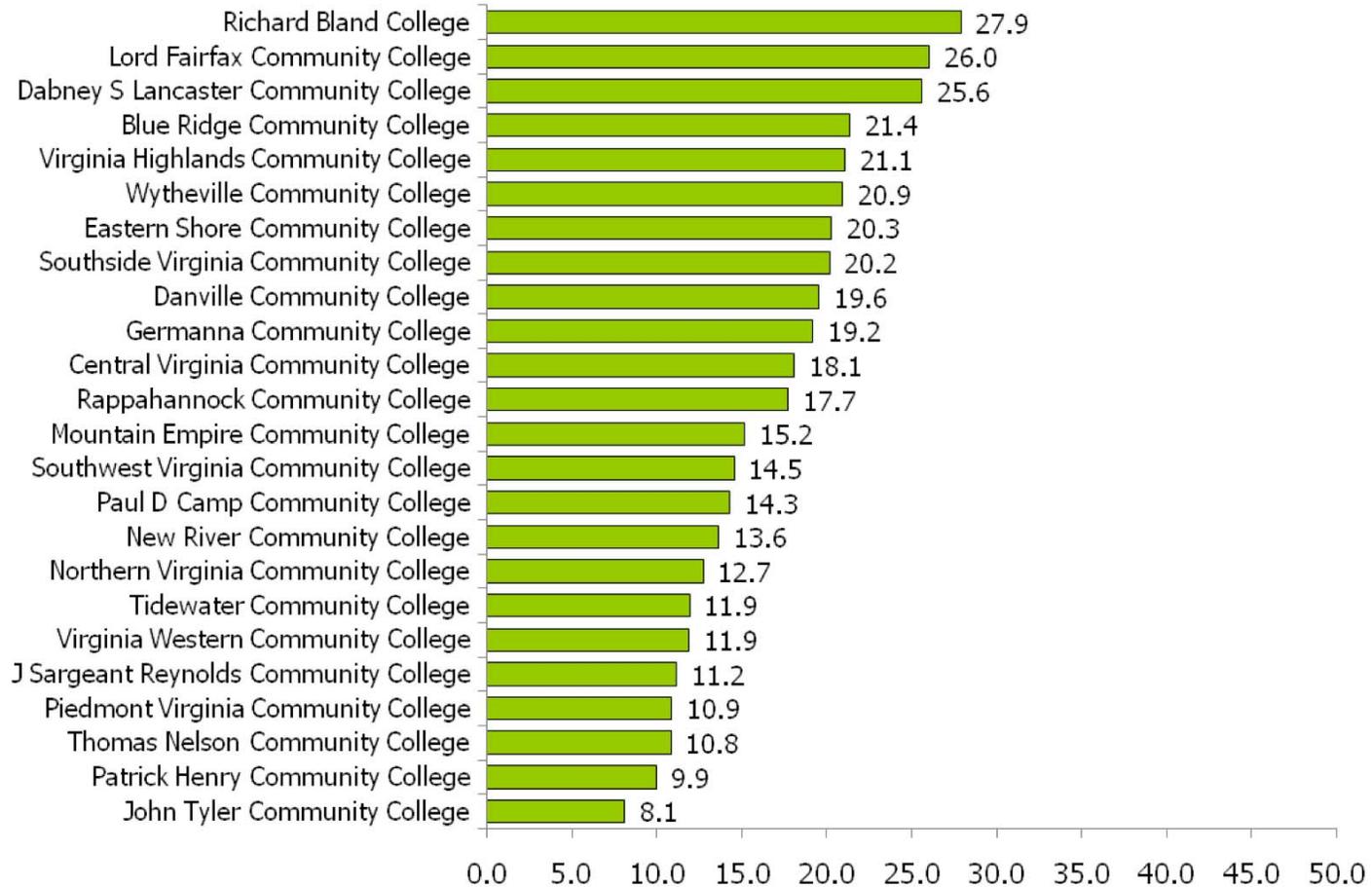
# Graduation Rates, Virginia 4-Year Institutions, 2008

Completers within 150% of Normal Time



# Graduation Rates, Virginia 2-Year Institutions, 2008

Completers within 150% of Normal Time



# Summary Spending Statistics Virginia Public Institutions

Median Within Category, 2006

	Public Research	Public Masters	Public CC	Public BA
Total spending, all functions/FTE student	\$27,643	\$16,569	\$8,807	\$18,264
Spending for education and related costs only	\$13,483	\$10,097	\$7,615	\$9,983
% of E&R costs going for instruction	67%	56%	54%	45%
% of E&R costs going to student services	5%	8%	8%	10%
% of E&R costs going to shared admin/support/maintenance	29%	38%	40%	44%
Student share of E&R	55%	44%	33%	36%
Spending for E&R/Degree	\$50,655	\$40,539	\$55,425	\$62,612
Spending for E&R for all completions	\$50,366	\$40,404	\$38,751	\$62,612



# Long-Term Strategic Options



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## Long-Term Options

- Long-term options are based on:
  - The data
  - Observations of best practices and effective or promising initiatives elsewhere
  - Options are not based on detailed assessments, policy audits, or planning efforts
- The bottom line: Virginia's system of higher education is among the best in the country but there are opportunities for improvement
- Growing economic competition and continuing fiscal challenges suggest that Virginia should take the next step and develop a comprehensive, system-wide plan to strengthen educational attainment



# The Overarching Strategies

- Build cost-effective systems
- Increase learning productivity
- Change the academic production function
- Reduce leaks in the pipeline



## Learning Productivity

- Reduces demands students place on costs
- Fewer credits to the degree
  - “excess” credits on average add 25% to cost of BA degree production
- Less student attrition
  - 20% of credits taken on average in public 4-year institutions are taken by students who never complete a degree in any institution
- Streamlined opportunities for learning



## Strategies to Increase Learning Productivity

- Students come to college fully prepared (no remediation)
- Accelerated learning
- Minimize “rework”
- Improve rates of course completion
- Reduce credit hours to degree
- Encourage use of assessment/“test out” options
- Learning in the workplace/credit for experience



## Changing the Academic Production Function

- Create programs of cost-effective size (elimination in some cases, collaboration in others)
- Reengineer curricula
- Reengineer course delivery
- Change composition and deployment of human assets
- Change academic personnel policies to reward teaching



## Reducing Leaks in the Pipeline

- Curricula Alignment
- Financial Aid incentives
- Early-warning systems
- Improved consumer information



## Organizing the Work Ahead

- Confirm attainment goals and set institutional targets
- Develop broad financing strategies to support goals
  - State appropriations
  - Tuition
  - Student aid
  - Productivity enhancement
- Develop performance metrics
  - Outcomes/goal attainment
  - Cost management and productivity
- Conduct policy audit – review regulations and practices to identify those that act as barriers to efficiency and effectiveness