

Responding to the Imperative to Increase Productivity



presented to
Montana University System Board of Regents
Billings, Montana
September 24, 2009



NCHEMS

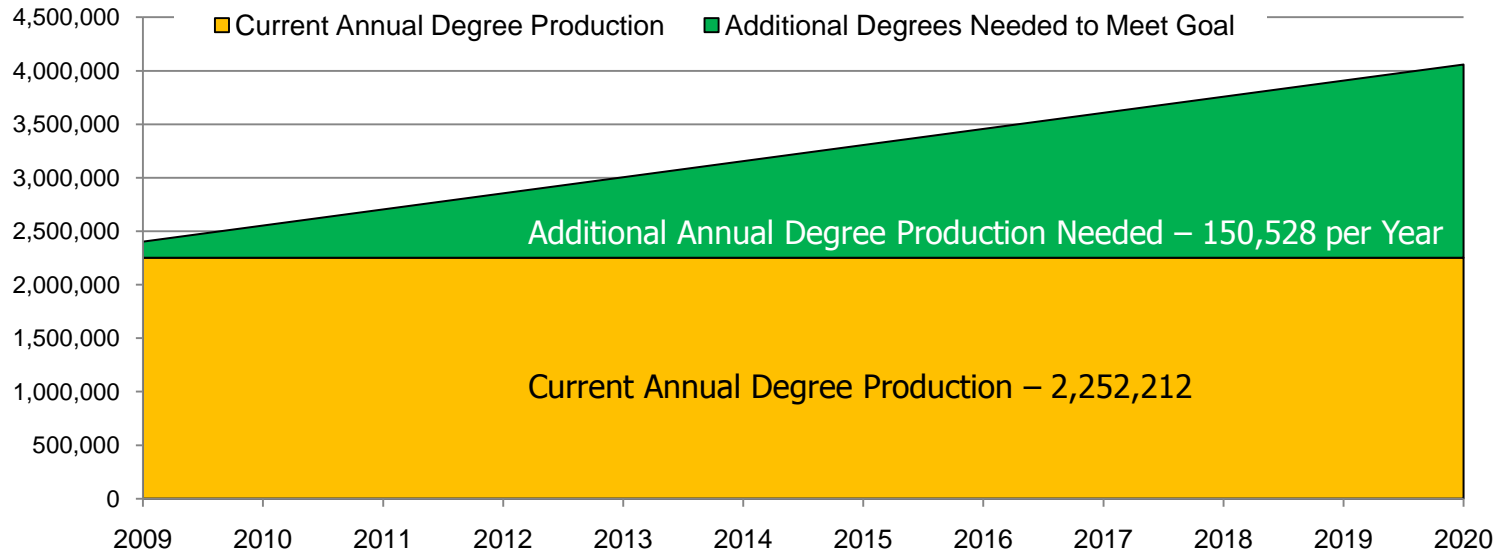
National Center for Higher Education Management Systems
3035 Center Green Drive, Suite 150
Boulder, Colorado 80301

The Expectation

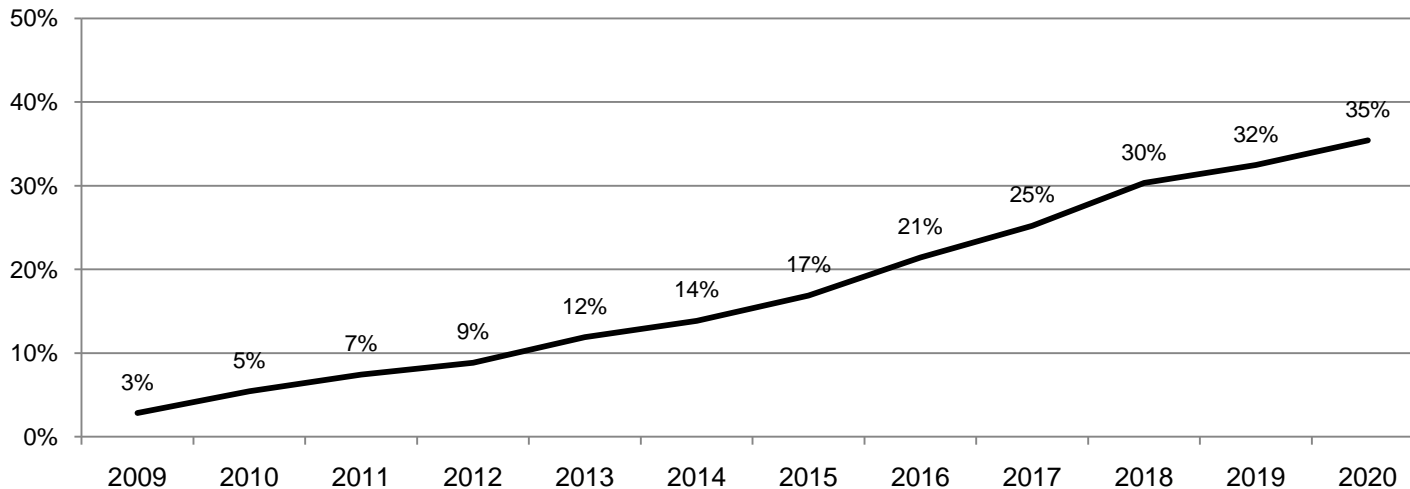
“By 2020, America will once again have the highest proportion of college graduates in the world”

President Barack Obama, February 24, 2009

Associate and Bachelors Degrees Needed to Become the Most Educated Country by 2020



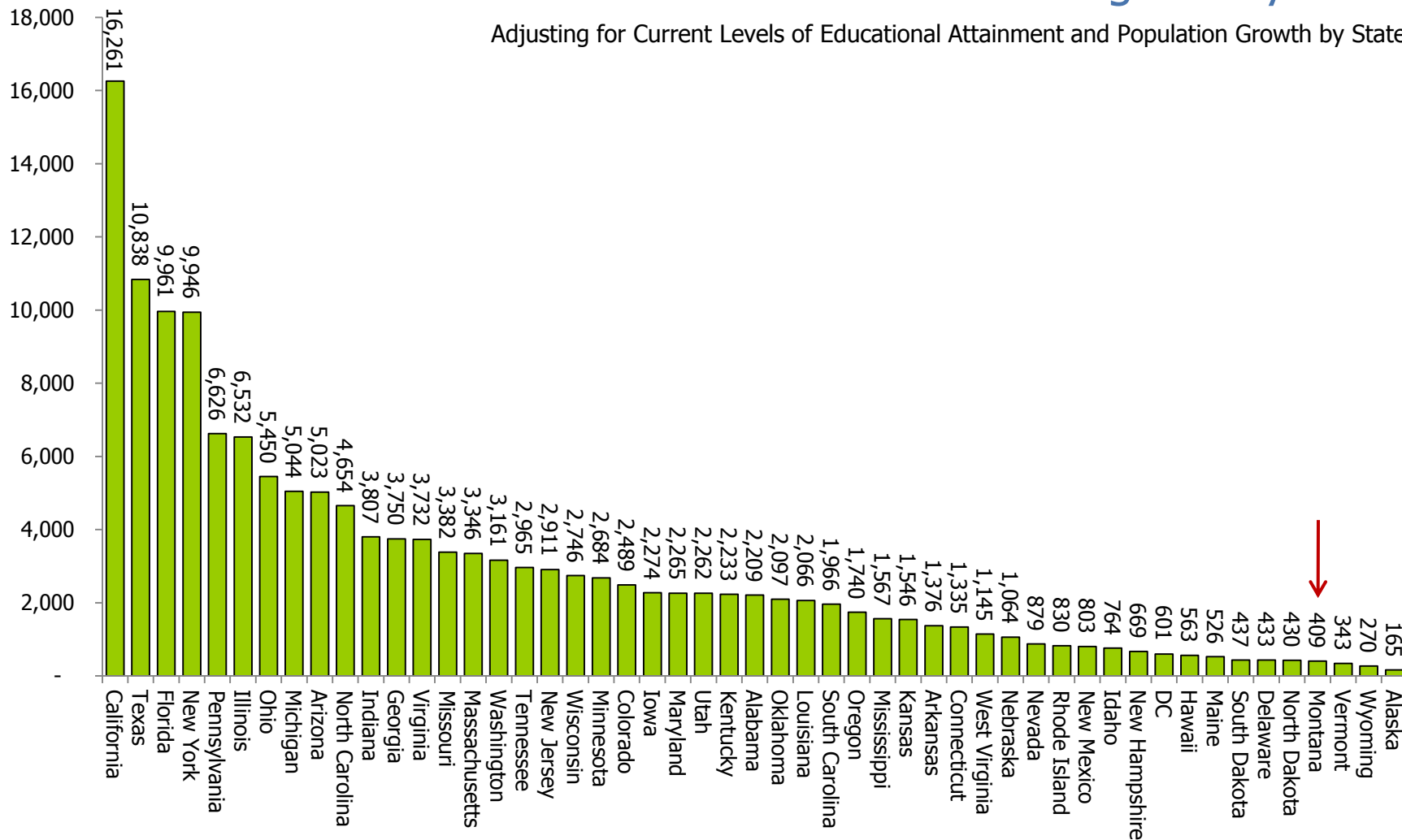
Increase in State and Local Funding at Current Cost per FTE



Note: Assumes private institutions will maintain current share

Annual Increase in Degree Production Required to Meet the Goal – 11.7 Million Additional Degrees by 2020

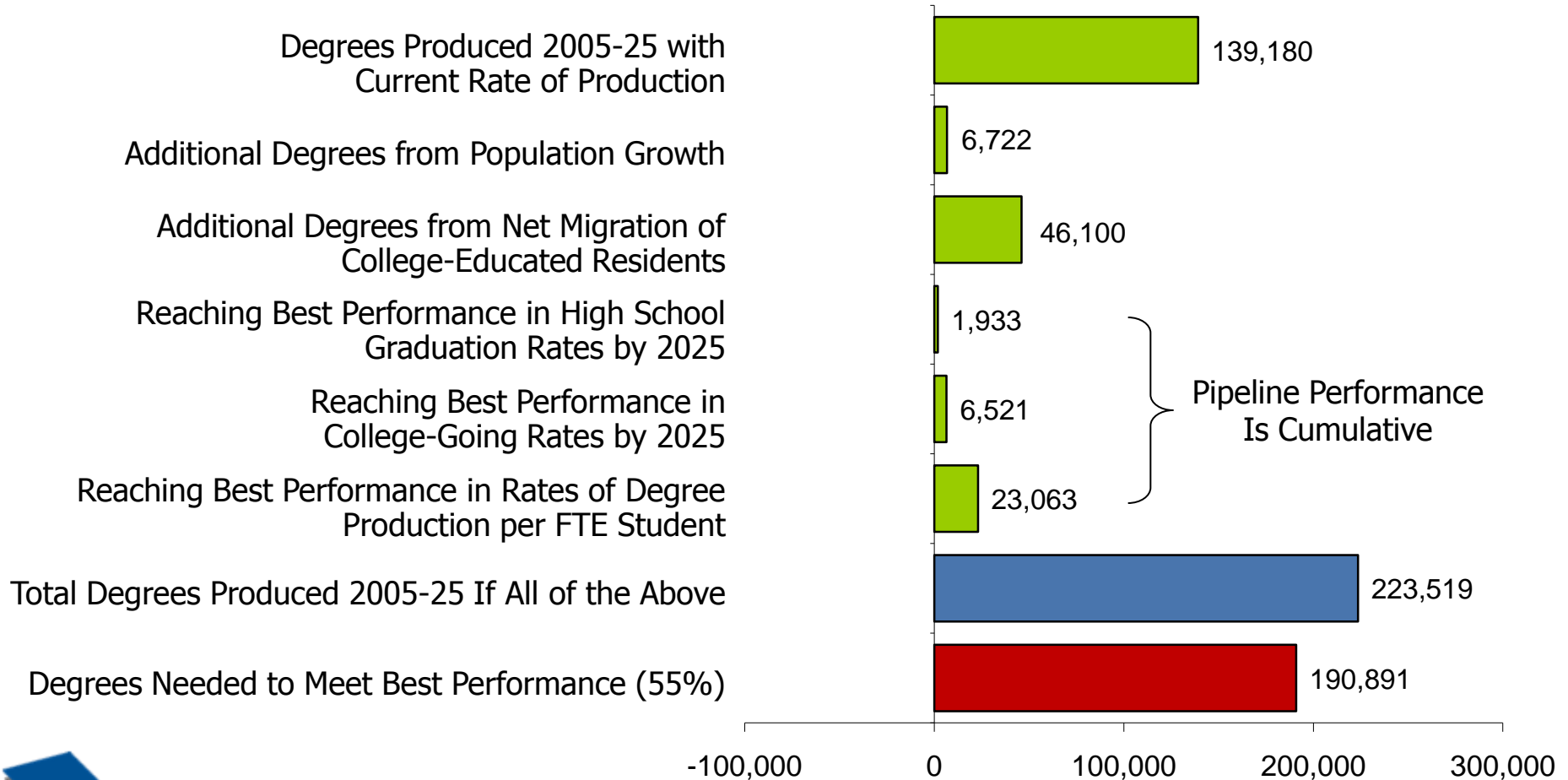
Adjusting for Current Levels of Educational Attainment and Population Growth by State



Note: For Montana this translates into a 5% increase over prior years' numbers every year.

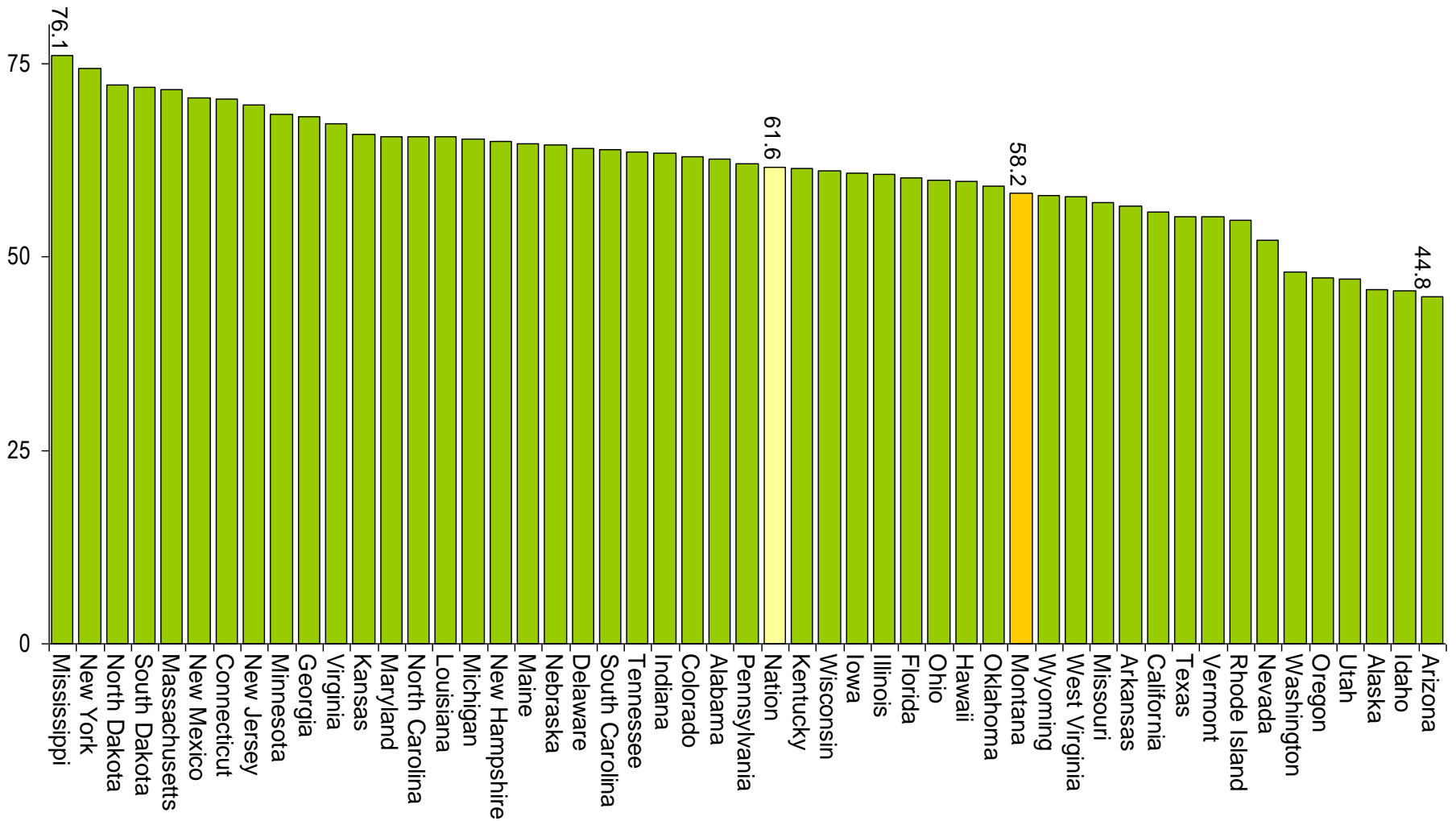
How Can Montana Reach International Competitiveness?

Current Degree Production Combined with Population Growth and Migration and Improved Performance on the Student Pipeline Measures



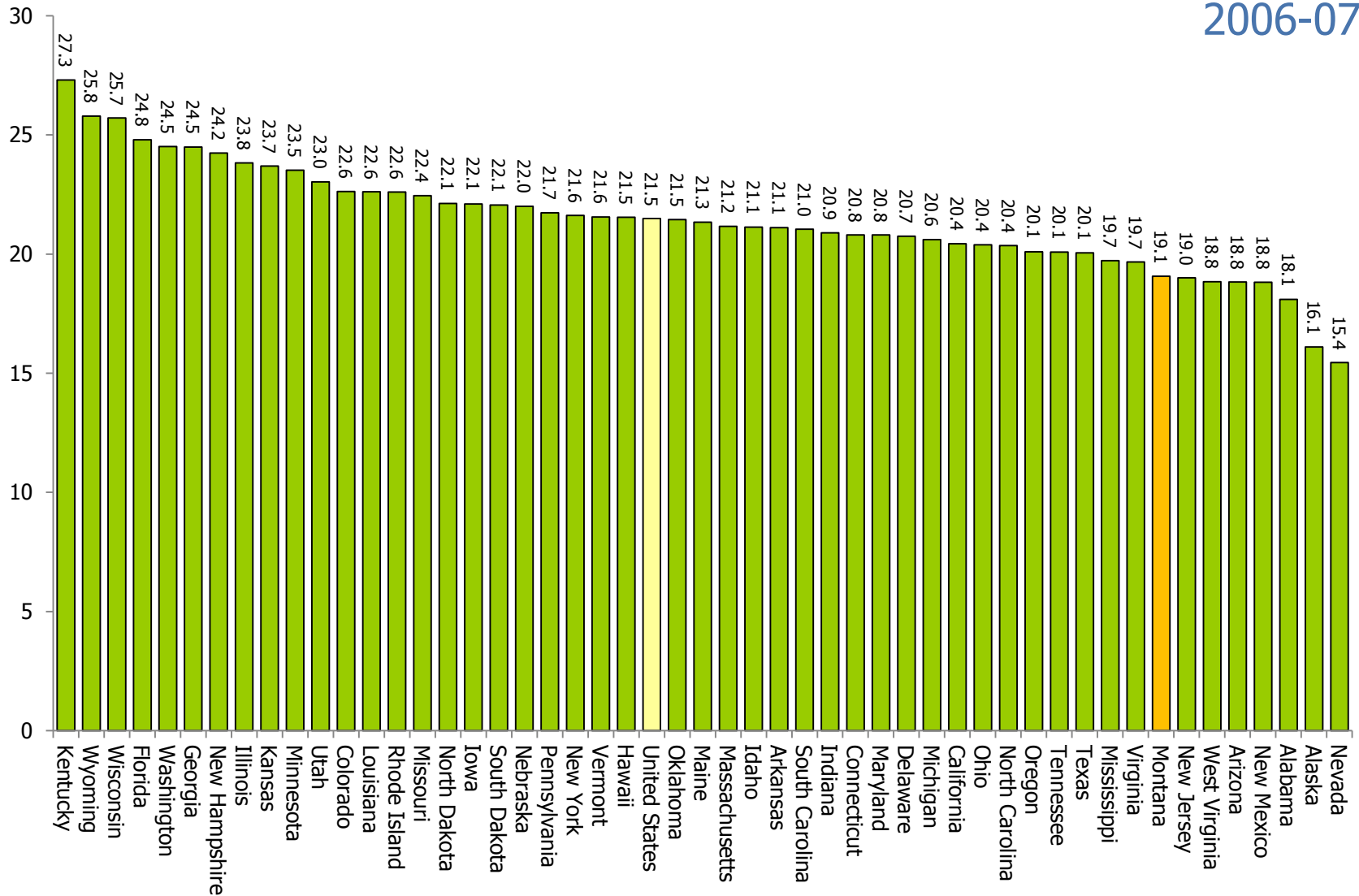
Source: Calculations by NCHEMS

College-Going Rates—First-Time Freshmen Directly Out of High School as a Percent of Recent High School Graduates, 2006



Undergraduate Awards per 100 FTE Undergraduates

2006-07

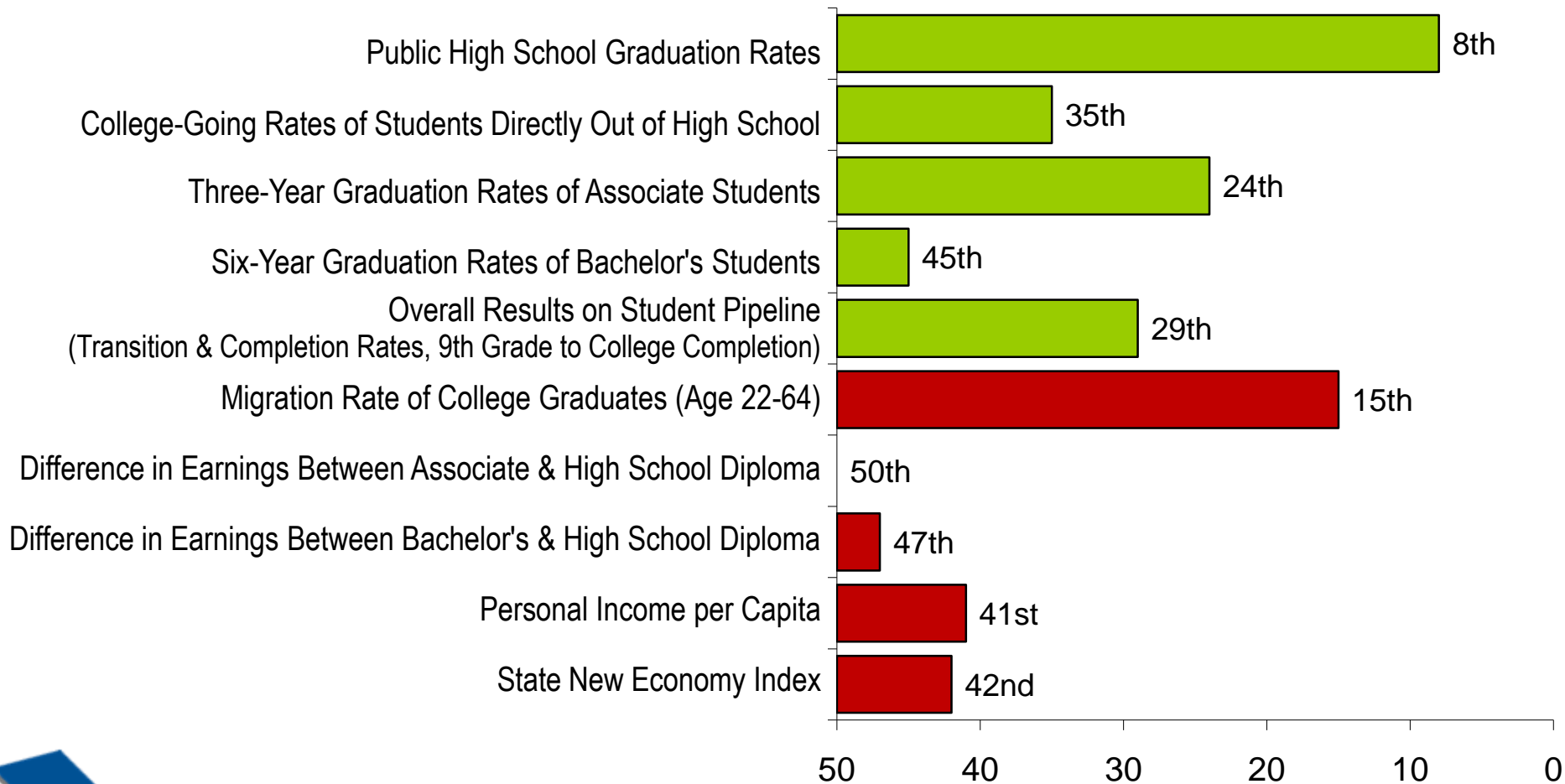


Source: NCES IPEDS Peer Analysis System (<http://www.nces.ed.gov/ipeds/pas/>), IPEDS 2006-07 efi2007 Early Release Enrollment File; NCES IPEDS Peer Analysis System (<http://www.nces.ed.gov/ipeds/pas/>), IPEDS 2005-06 c2006_a Final Release Completions File

Note: Completions reflect 2006-07 total undergraduate degrees (Associate, Bachelors) and certificates (less than 1-year, 1-2 year, 2-4 year) awarded at Title IV degree granting public and private institutions. Enrollments reflect 2006-07 annual FTE undergraduate enrollments at Title IV degree-granting public and private institutions as reported in the IPEDS 2006-07 12-month instructional activity enrollment file. Enrollment data were aggregated from an early release data file and are subject to change.

How Montana Ranks Among Other States on Selected Measures for Education and Economic Development

■ Education Measures
 ■ Economic Development Measures



Source: Tom Mortenson, Postsecondary Opportunity; US Census Bureau, 2006 ACS Public Microdata Sample (PUMS) File, Kauffman Foundation, Regional Economic Information System, Bureau of Economic Analysis, US Department of Commerce

Expectations

- Maintain access – serve an increasing number of students
- Maintain affordability to both students and the state

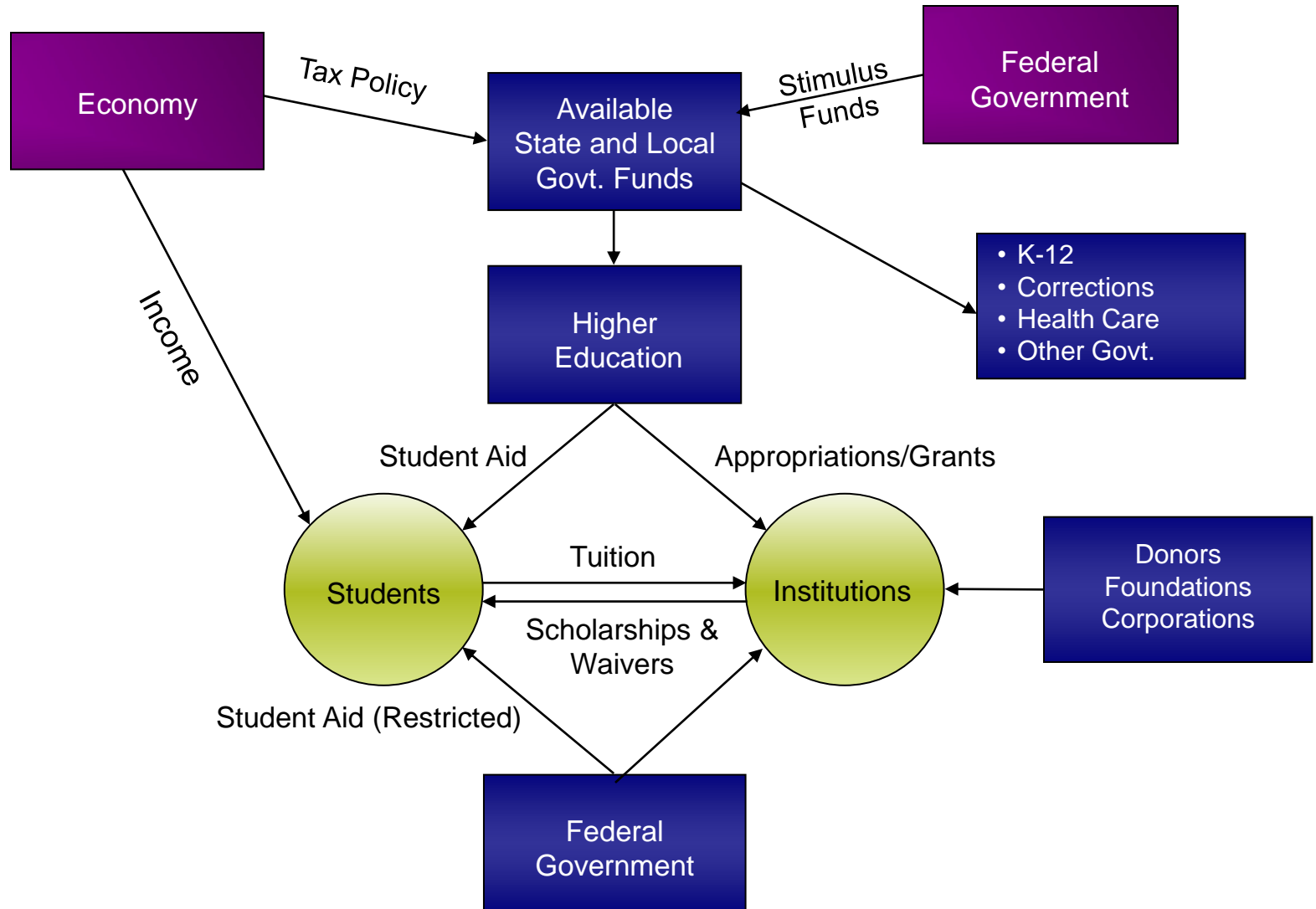


Invest stimulus funds in:

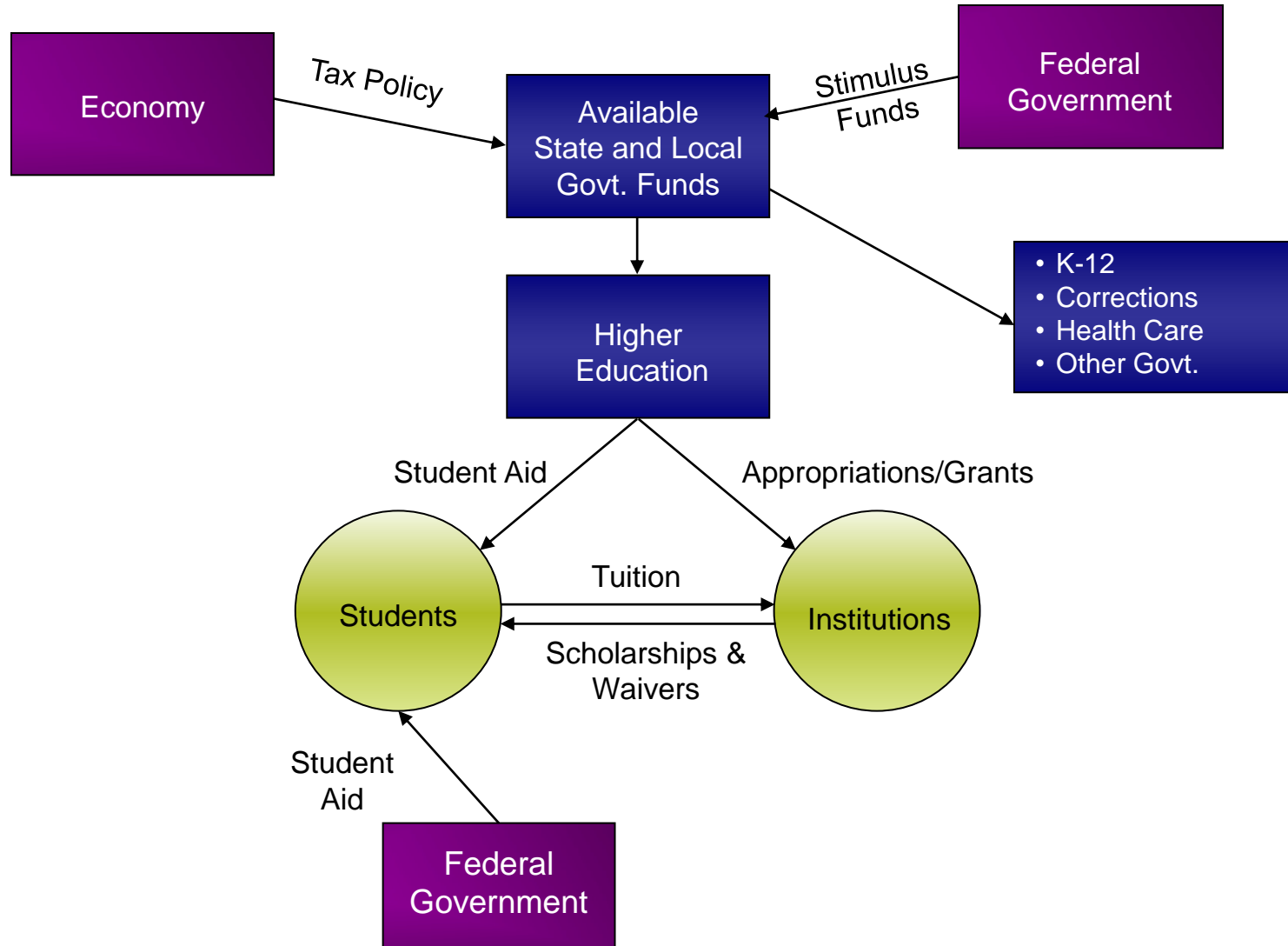
- Developing more cost-effective ways of doing business
- Paying for the transition

THE FISCAL REALITIES

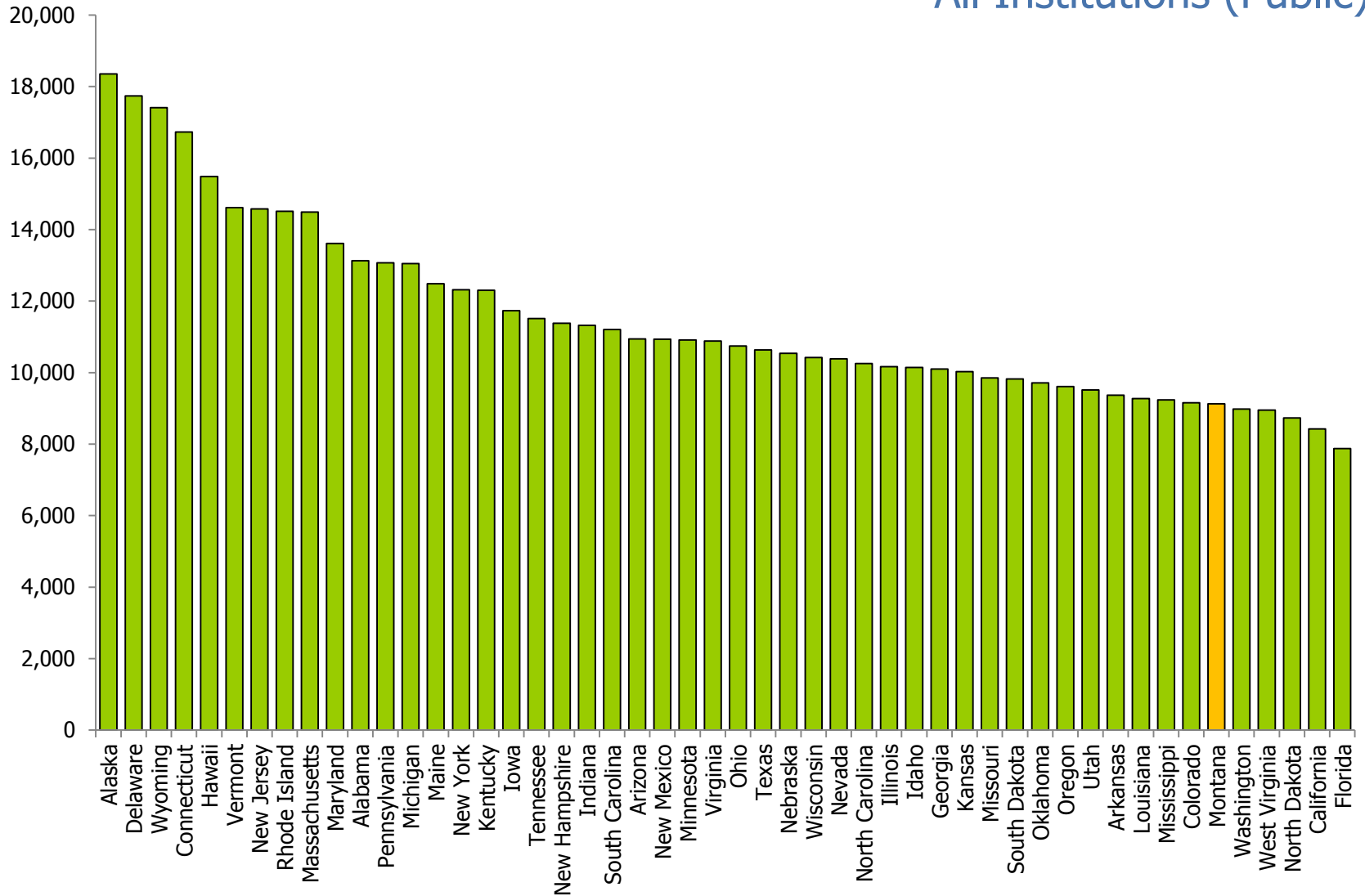
The Flow of Funds



The Flow of Funds - State

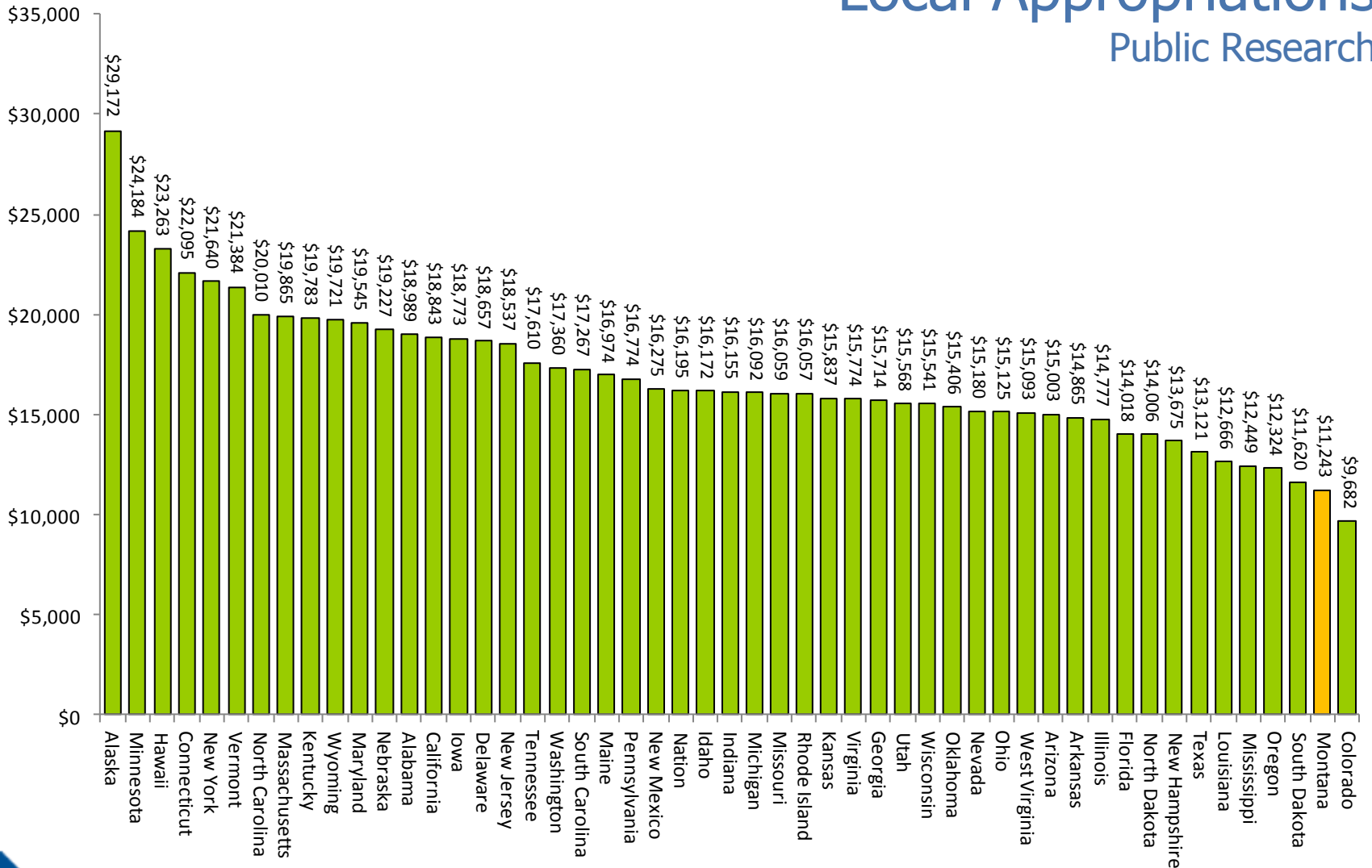


State/Local Funding plus Tuition Revenue per FTE Student All Institutions (Public)



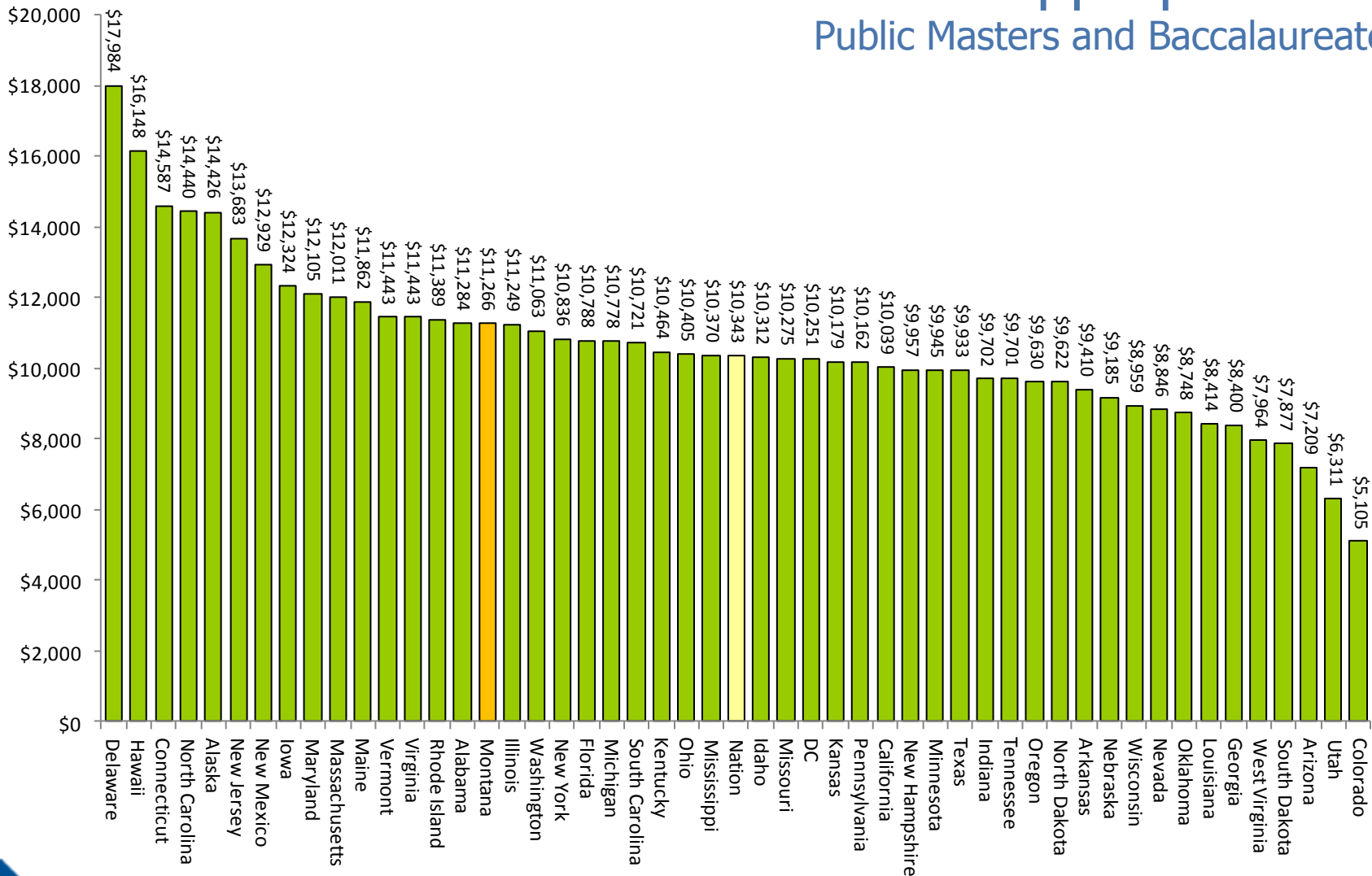
Revenues Per Student from Net Tuition, State, & Local Appropriations

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 efi2007 Final Release Data Files.

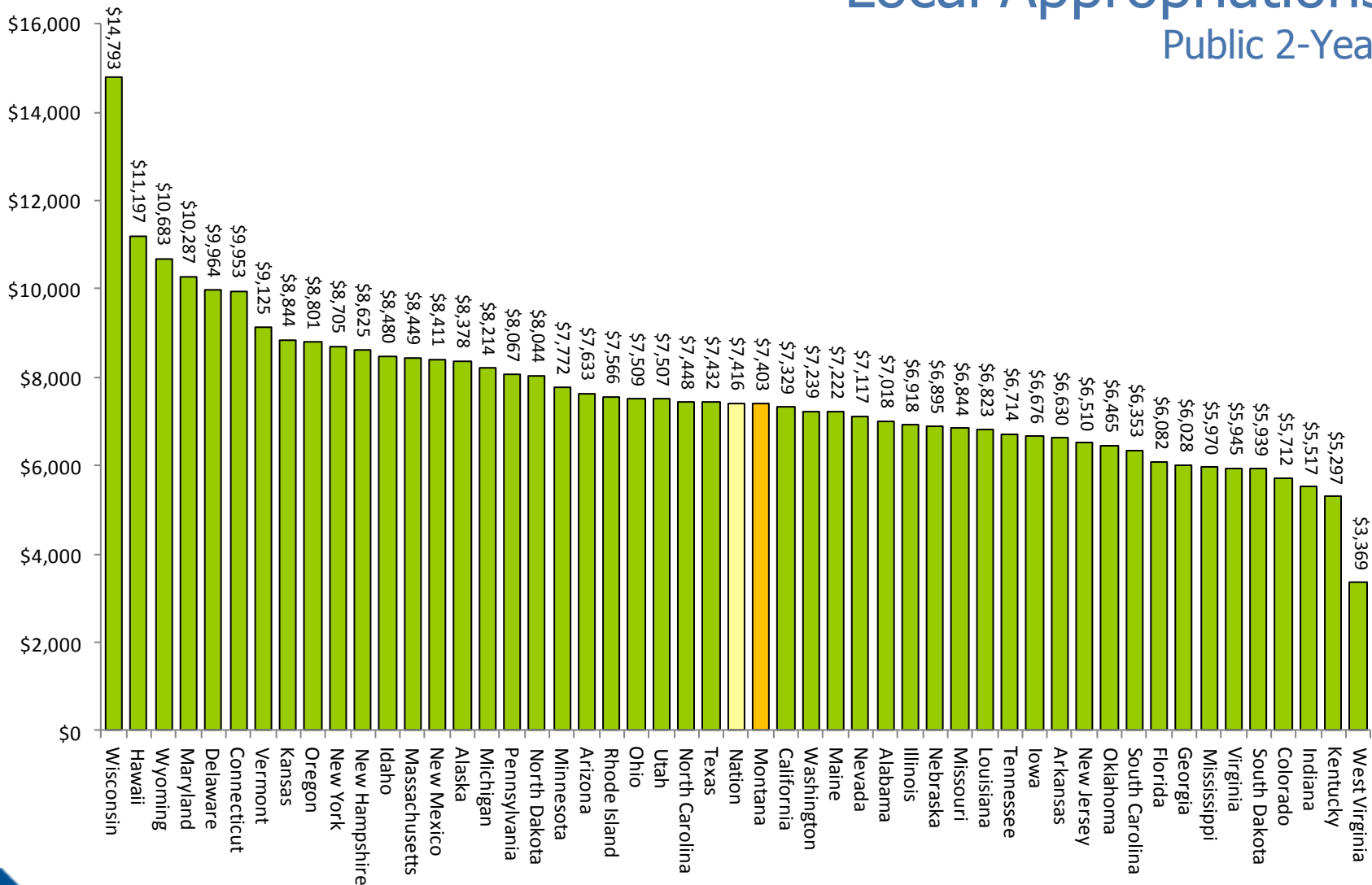
Revenues Per Student from Net Tuition, State, & Local Appropriations Public Masters and Baccalaureate



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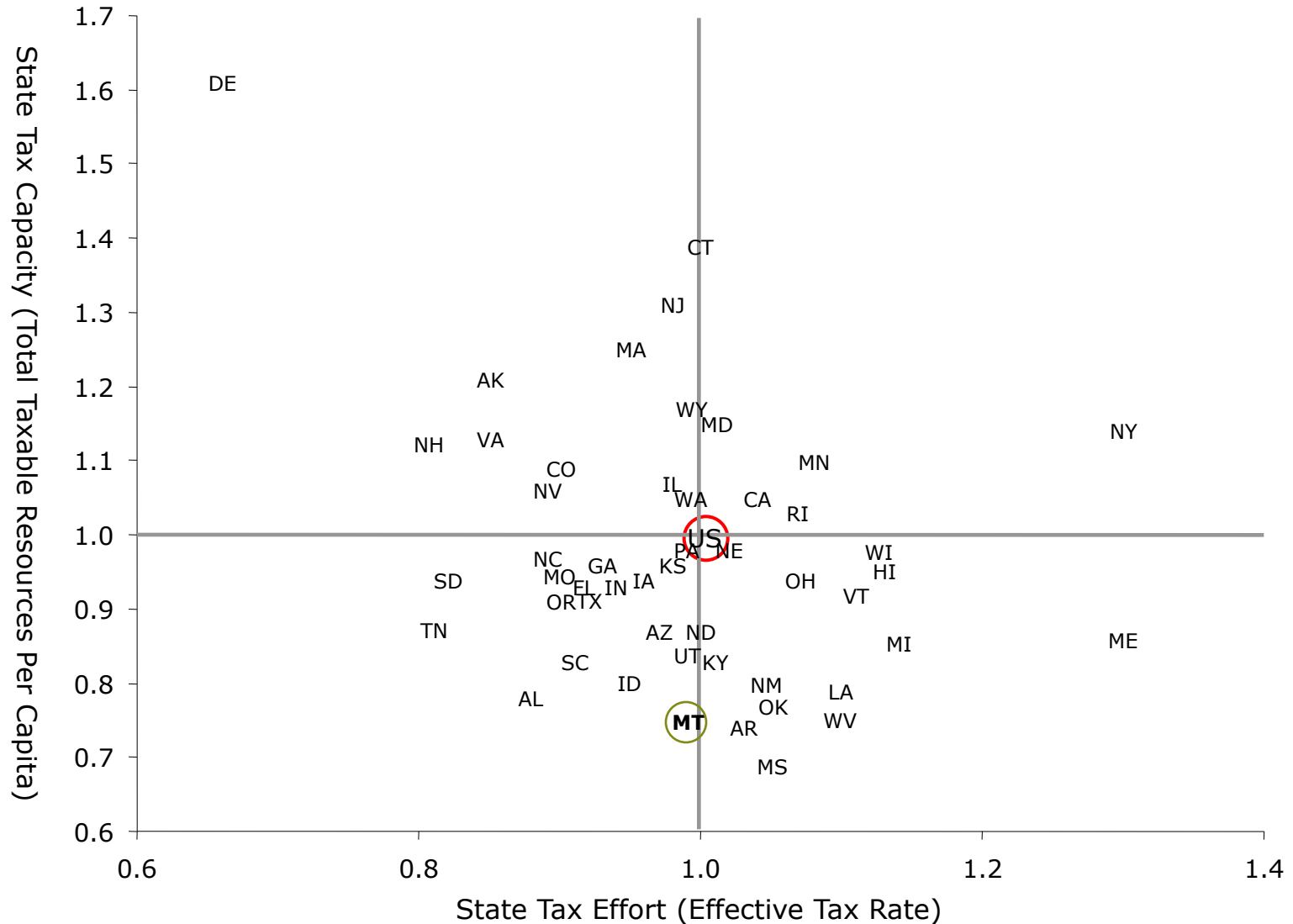
Revenues Per Student from Net Tuition, State, & Local Appropriations

Public 2-Year

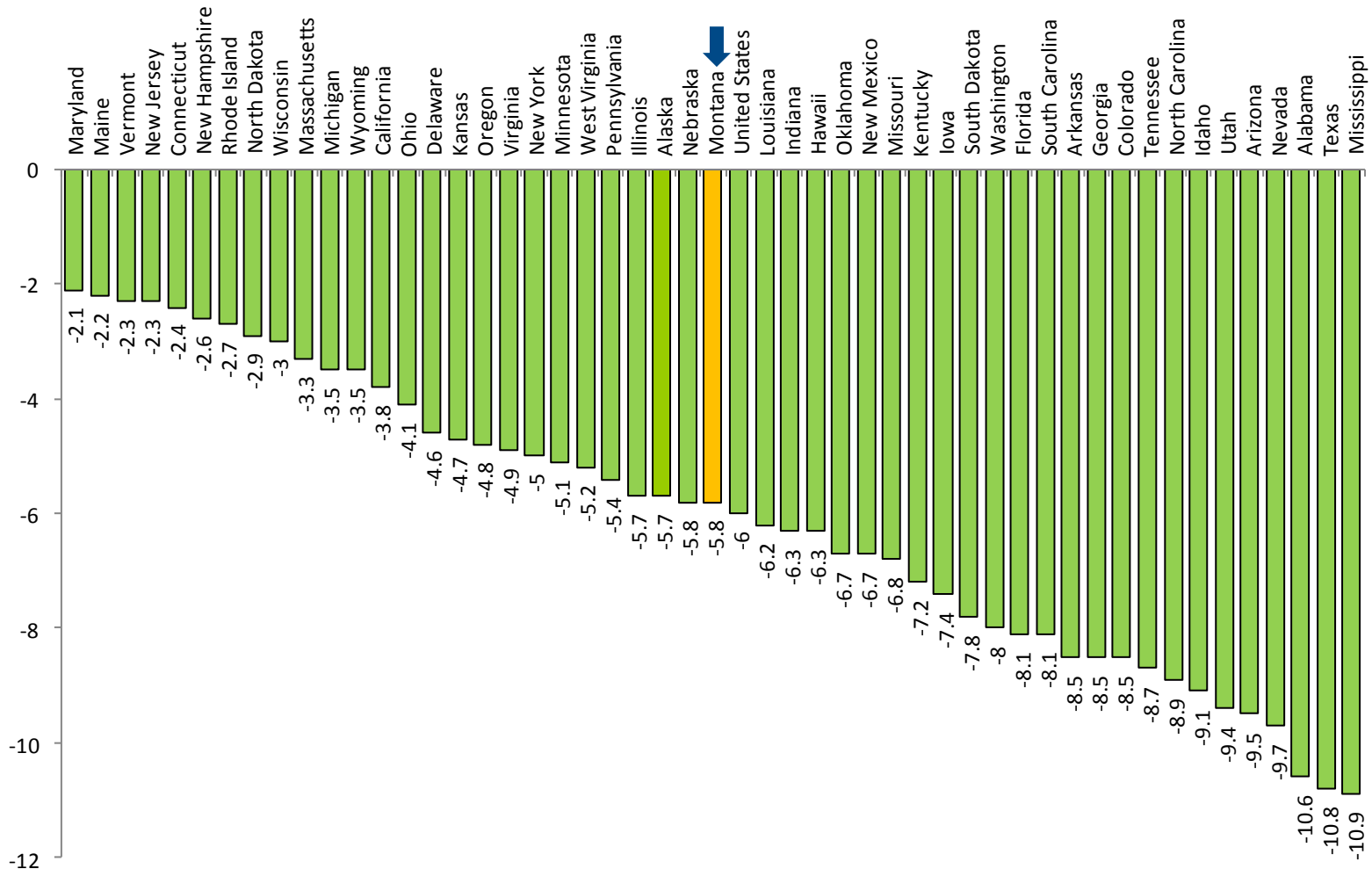


Sources: NCES, IPEDS 2006-07 Finance Files; f0607_f1a and f0607_f2 Final Release Data Files.
 NCES, IPEDS 2007-08 Institutional Characteristics File; hd2007 Final Release Data File.
 NCES, IPEDS 2006-07 Enrollment Files; ef2006a, effy2007, and efi2007 Final Release Data Files.

State Tax Capacity and Effort—Indexed to U.S. Average

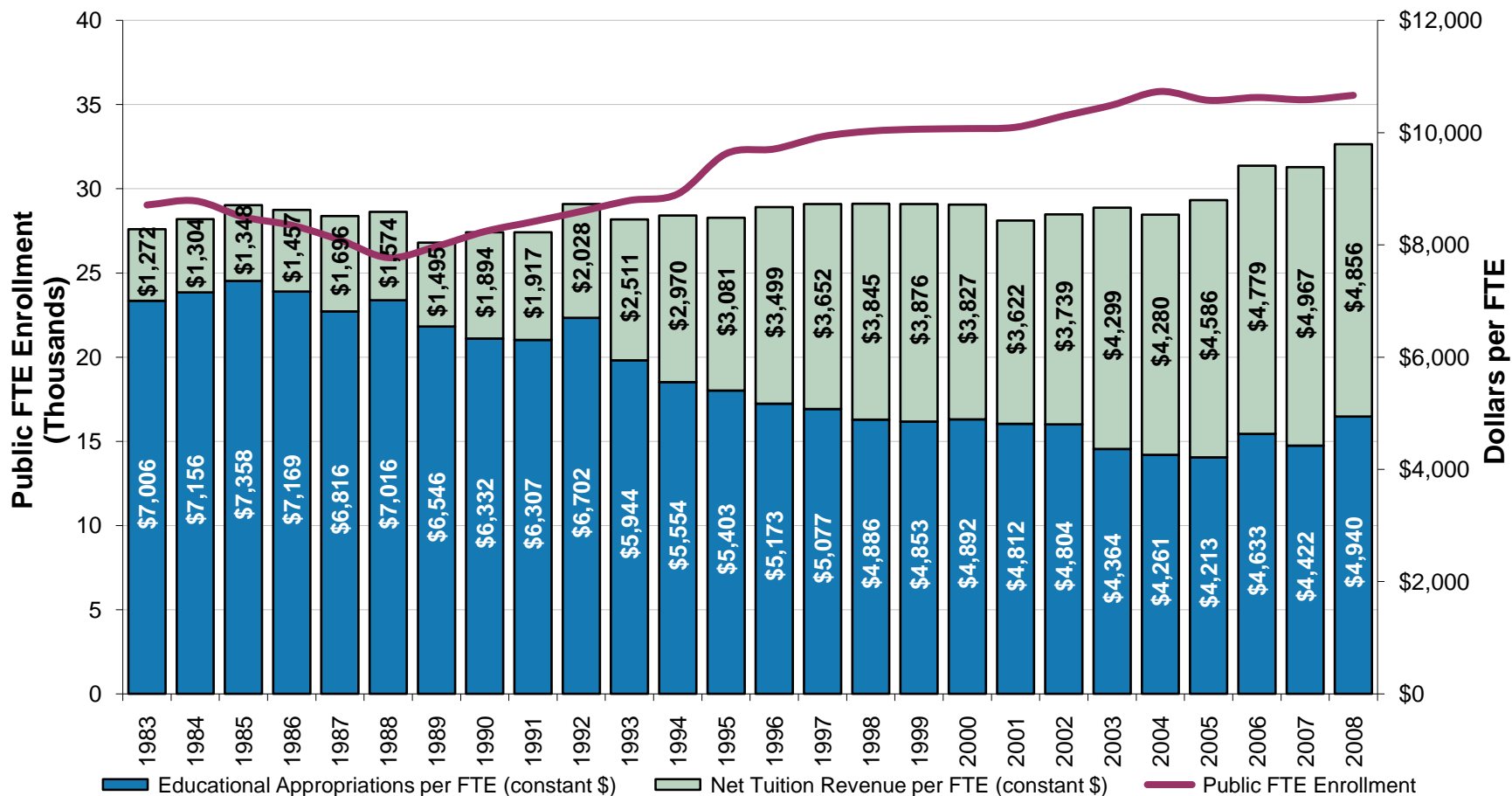


Projected State & Local Budget Surplus (Gap) as a Percent of Revenues, 2016



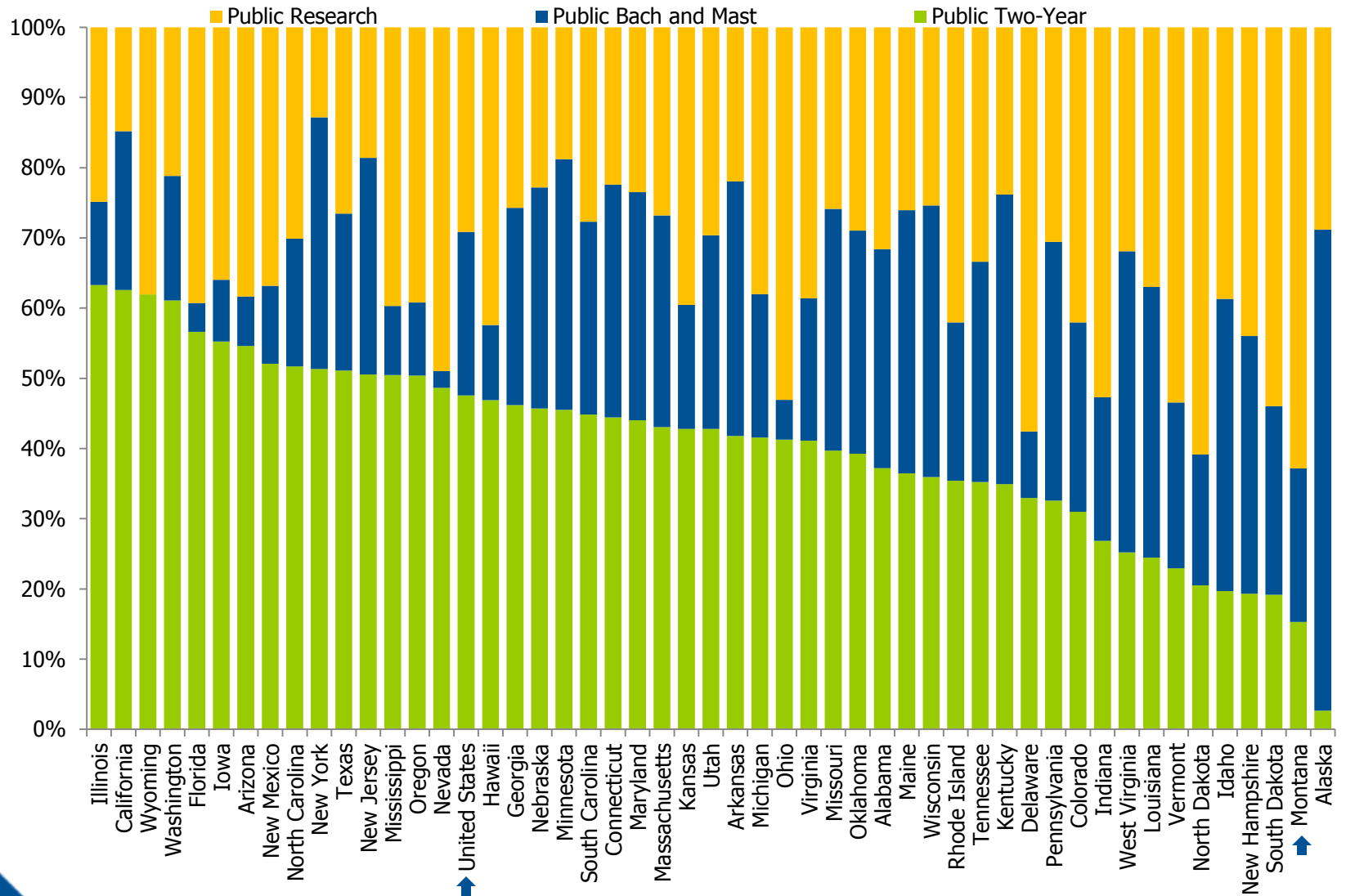
State/Local Funding plus Tuition Revenues per Student (FTE)

Montana Public Institutions, 1983-2008

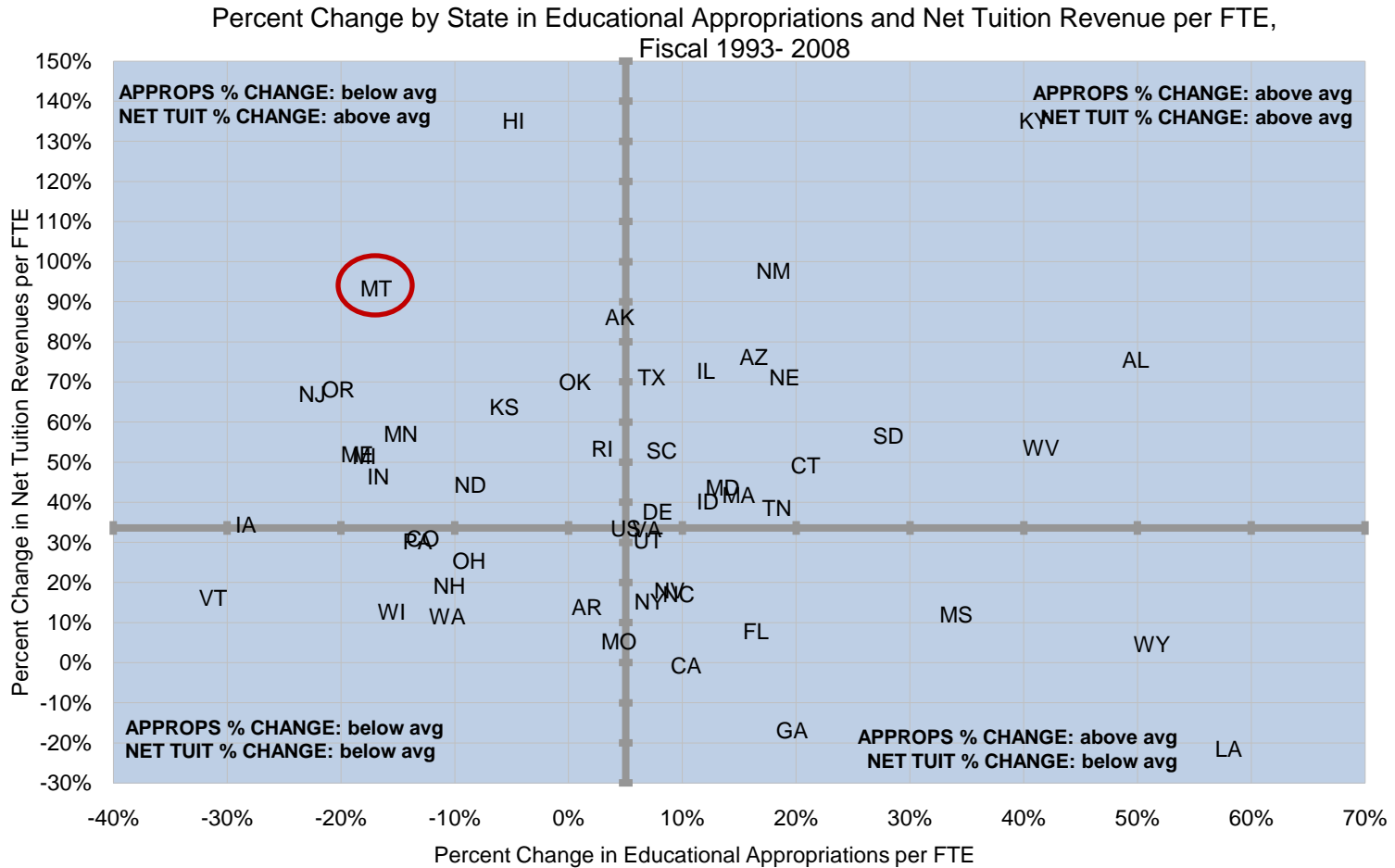


Note: Constant 2008 dollars adjusted by SHEEO Higher Education Cost Adjustment. (HECA) Source: SHEEO SHEF

Undergraduate FTE Enrollment by Sector (2006-07)

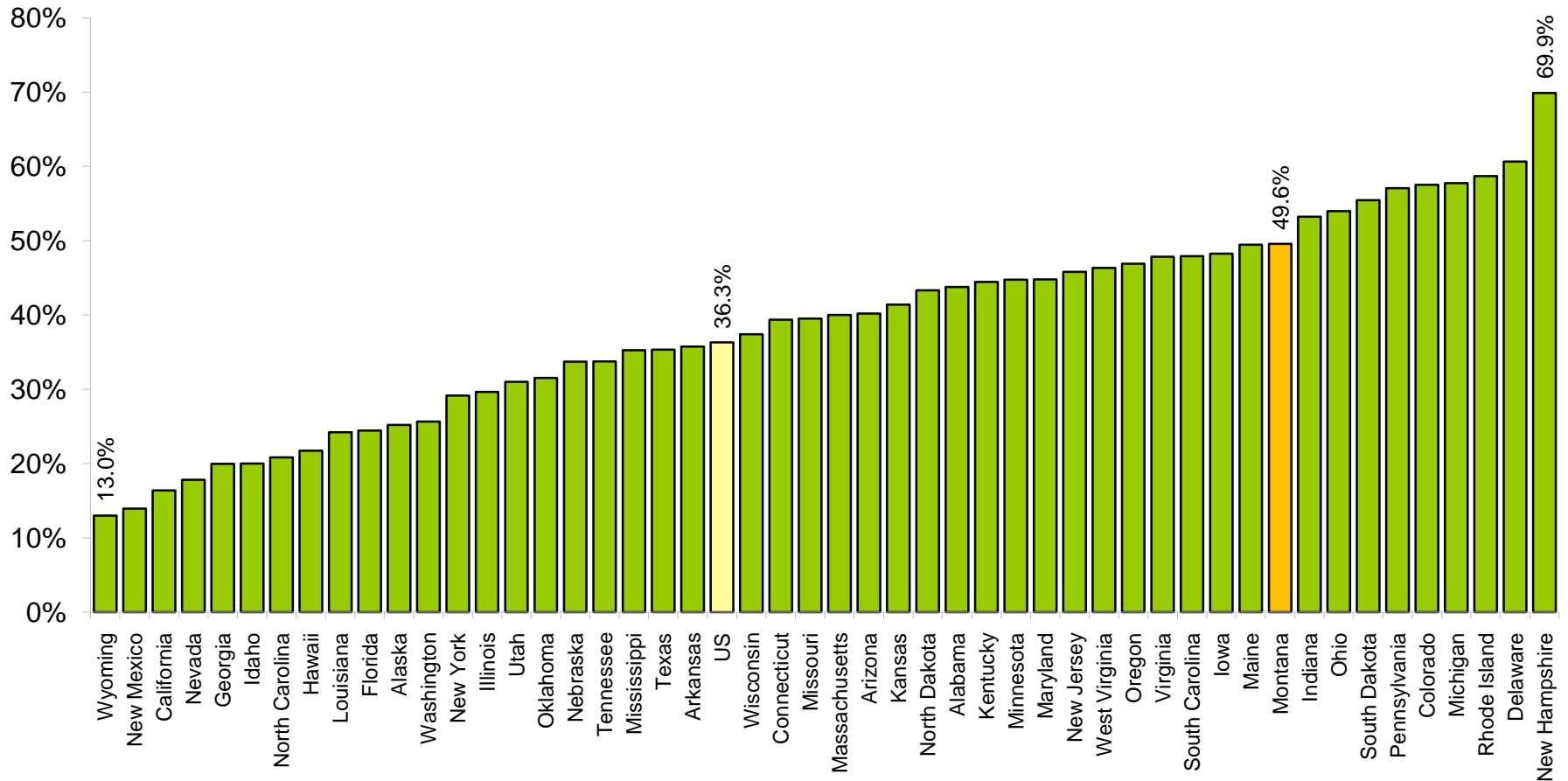


Percent Change by State in Educational Appropriations & Net Tuition Revenue per FTE, FY 1993-2008



Note: Figures are adjusted for inflation, public system enrollment mix, and state cost of living. Funding and FTE data are for public non-medical students only.

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

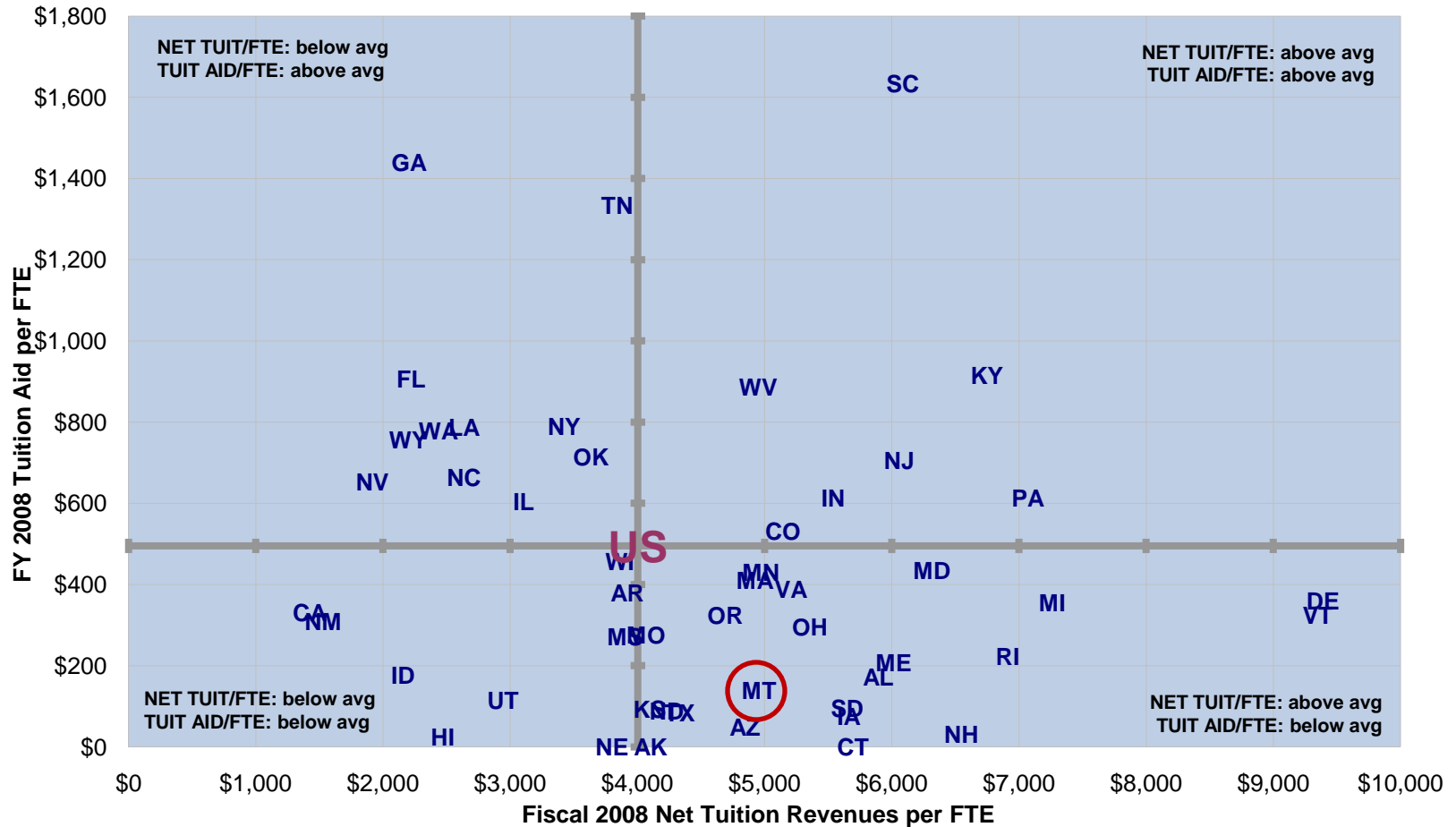


Note: Dollars adjusted by 2008 HECA, Cost of Living Adjustment, and Enrollment Mix

Source: SHEEO SHEF

Net Tuition Revenues per FTE and State-Funded Tuition Aid per FTE by State, FY 2008

(Public Institutions Only)

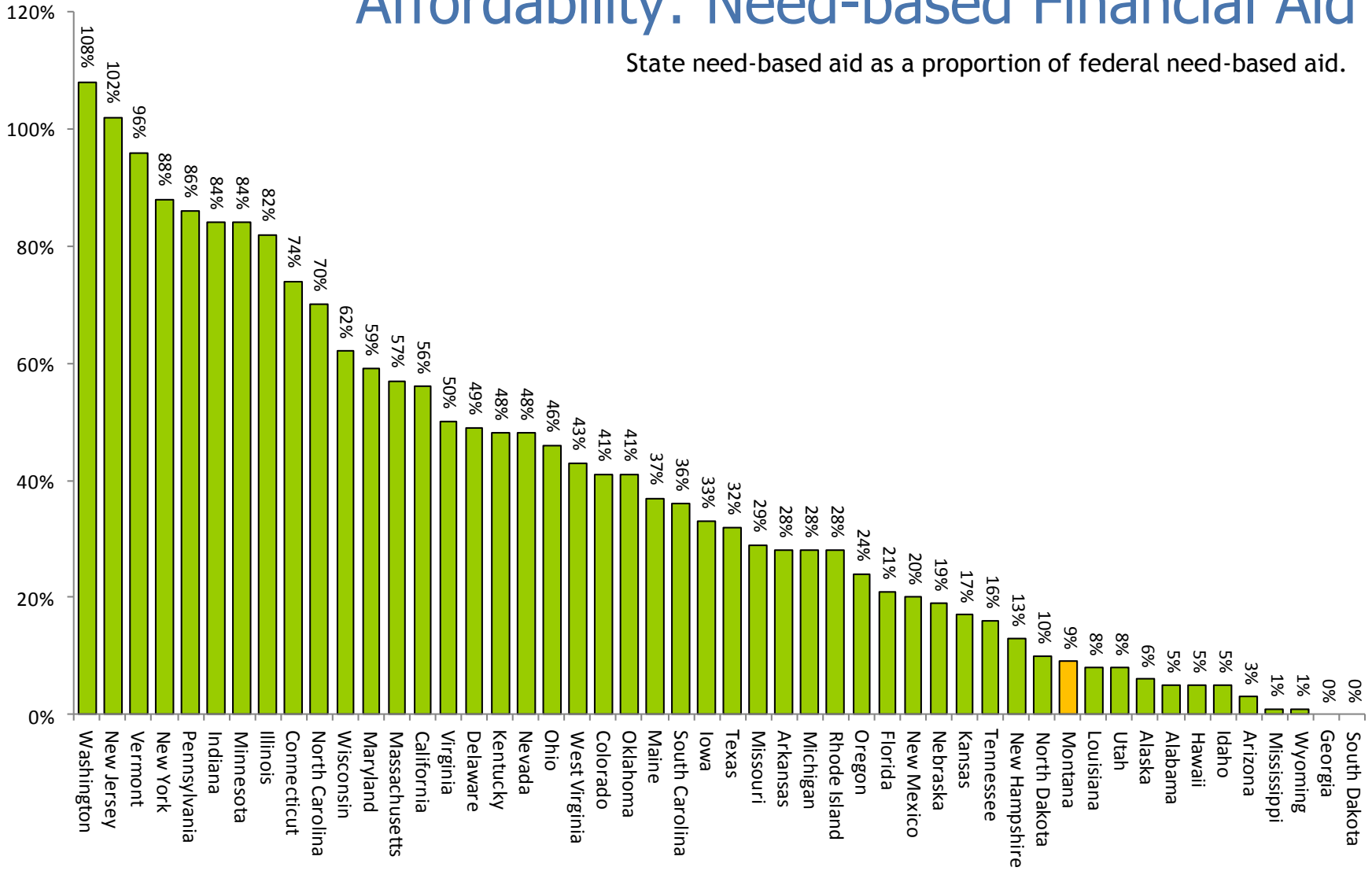


Note: Figures are adjusted for inflation, public system enrollment mix, and state cost of living. Funding and FTE data are for public non-medical students only.

Source: SHEEO SHEF

Affordability: Need-based Financial Aid

State need-based aid as a proportion of federal need-based aid.



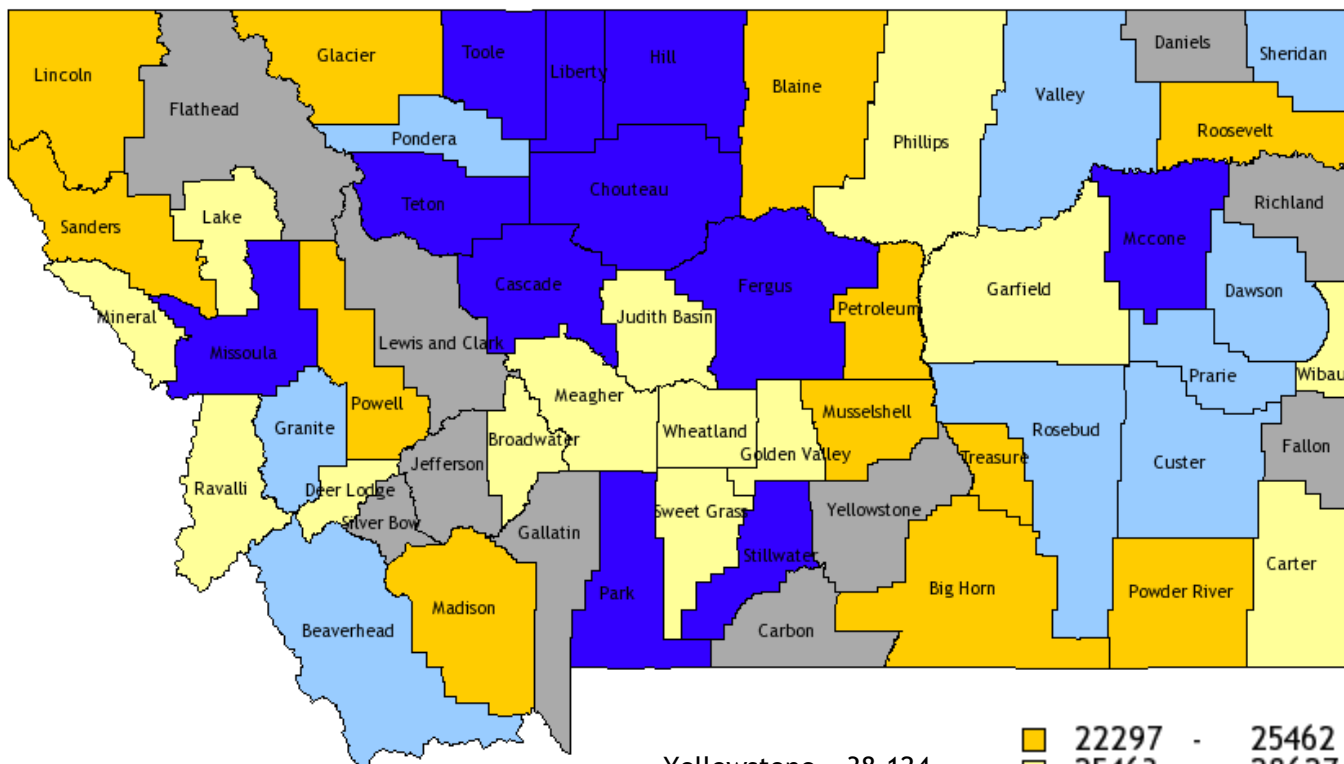
Source: Measuring Up 2008

Measuring Up: Affordability

AFFORDABILITY	Montana		Top States in Previous Years
	Previous Years*	Current Year	
Family Ability to Pay (50%)	2000	2008	
Percent of income (average of all income groups) needed to pay for college expenses minus financial aid:			
at community colleges	20%	23%	13%
at public 4-year colleges/universities	23%	32%	10%
at private 4-year colleges/universities	41%	52%	30%
Strategies for Affordability (40%)	1993	2008	
State investment in need-based financial aid as compared to the federal investment	1%	9%	89%
At lowest-priced colleges, the share of income that the poorest families need to pay for tuition	13%	29%	7%
Reliance on Loans (10%)	1995	2008	
Average loan amount that undergraduate students borrow each year	\$2,839	\$4,611	\$2,619

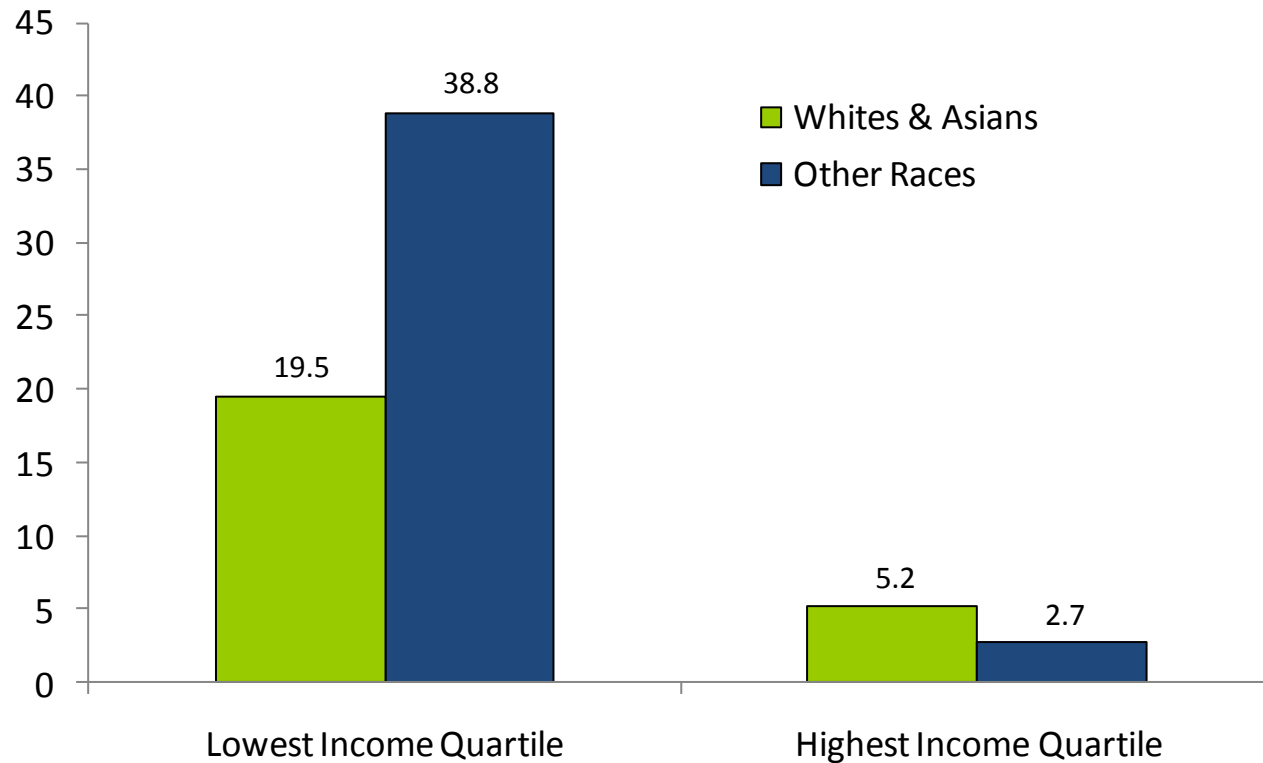
*See the *Technical Guide for Measuring Up 2008*.

Per Capita Personal Income, 2007



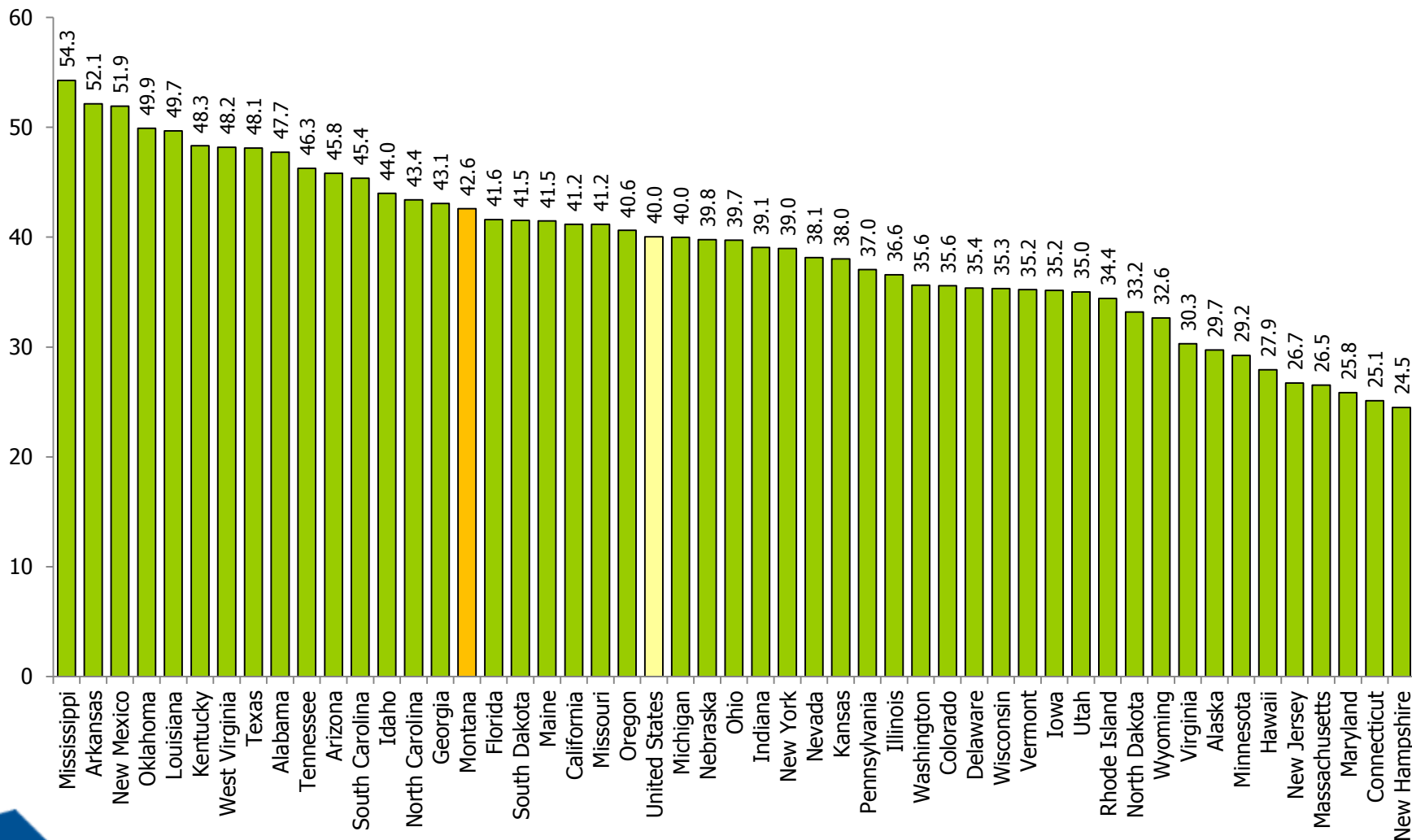
	22297	-	25462
Yellowstone = 38,124	25463	-	28627
Big Horn = 22,297	28628	-	31792
Montana = 33,225	31793	-	34957
	34958	-	38124

Family Incomes of Families with School Age Children

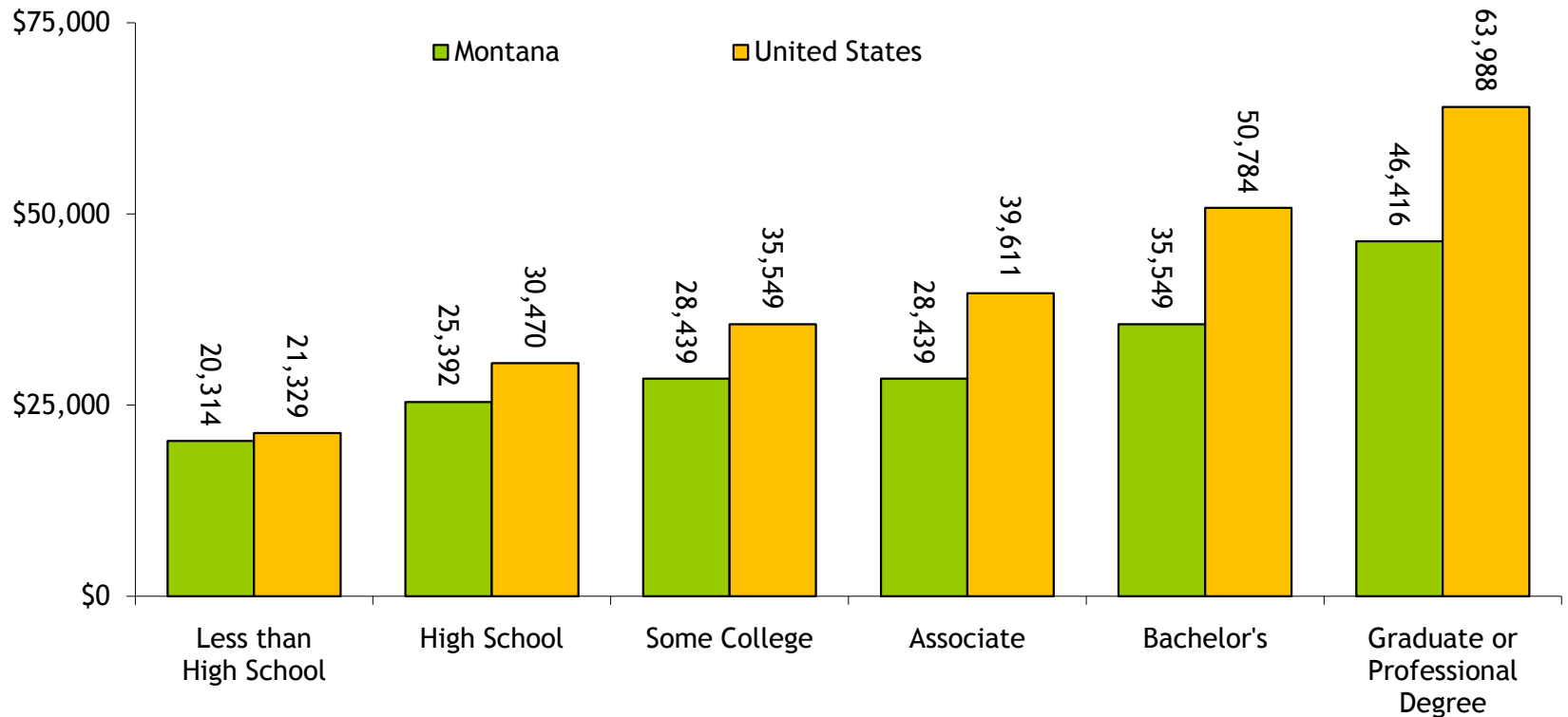


Source: American Community Survey

Percent of Children Ages 0 to 17 Living in Families with Less than a Living Wage (2007)

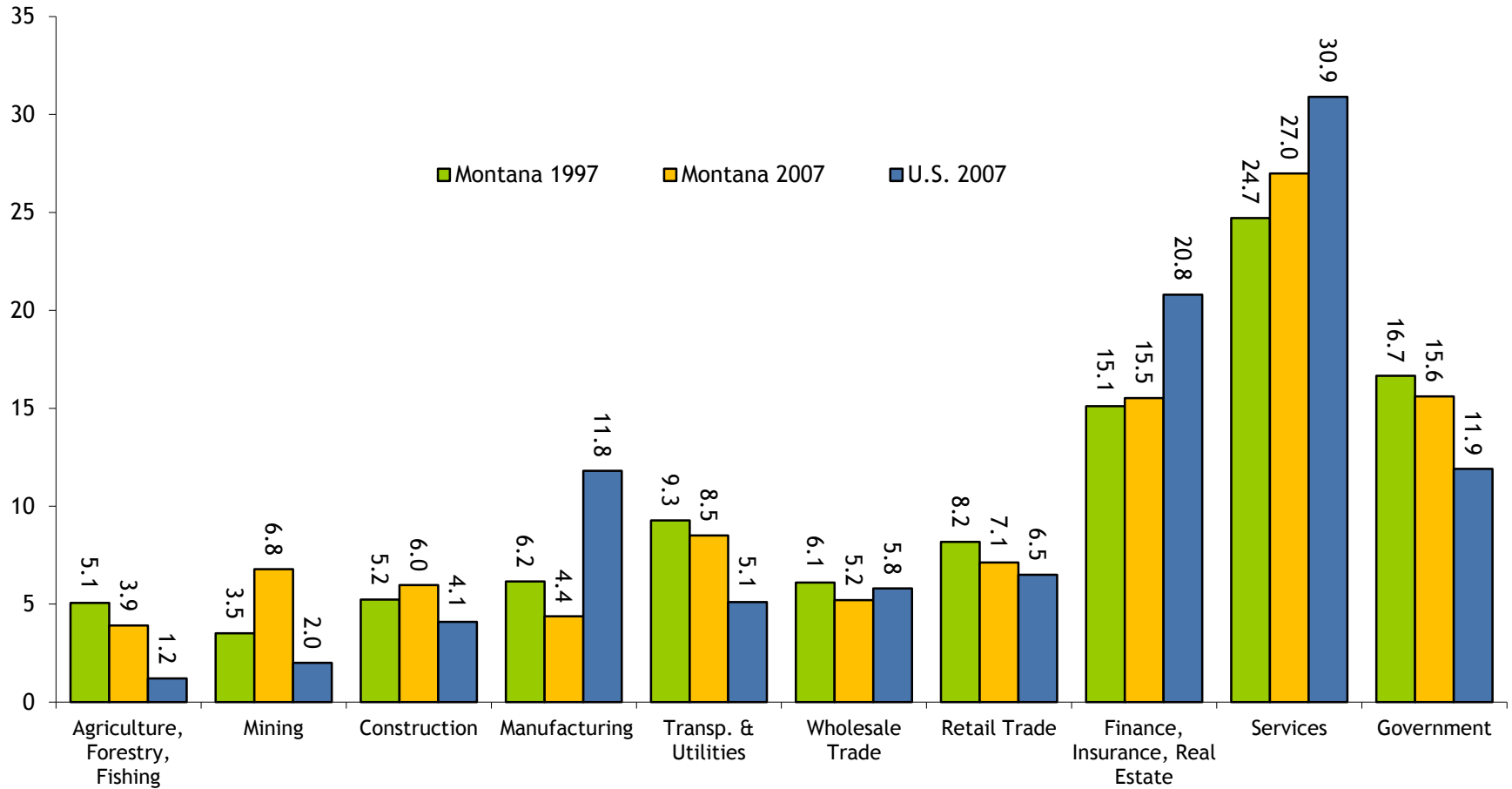


Median Earnings of Population Age 25-64 by Level of Education, 2006



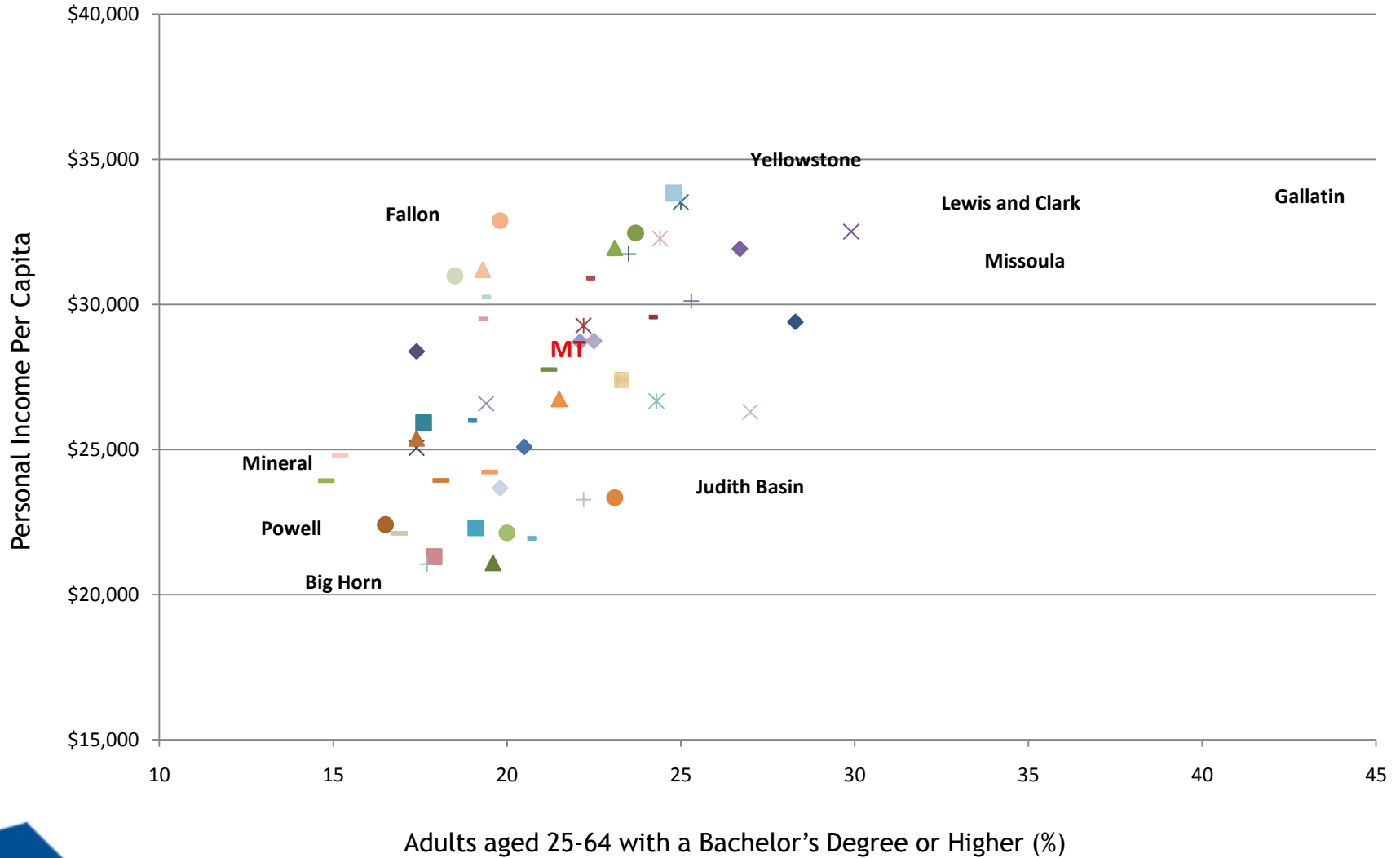
Source: U.S. Census Bureau, 2006 American Community Survey PUMS File

Percent of Total Gross State Product by Industry and Comparison to U.S.



Source: Bureau of Economic Analysis, U.S. Department of Commerce

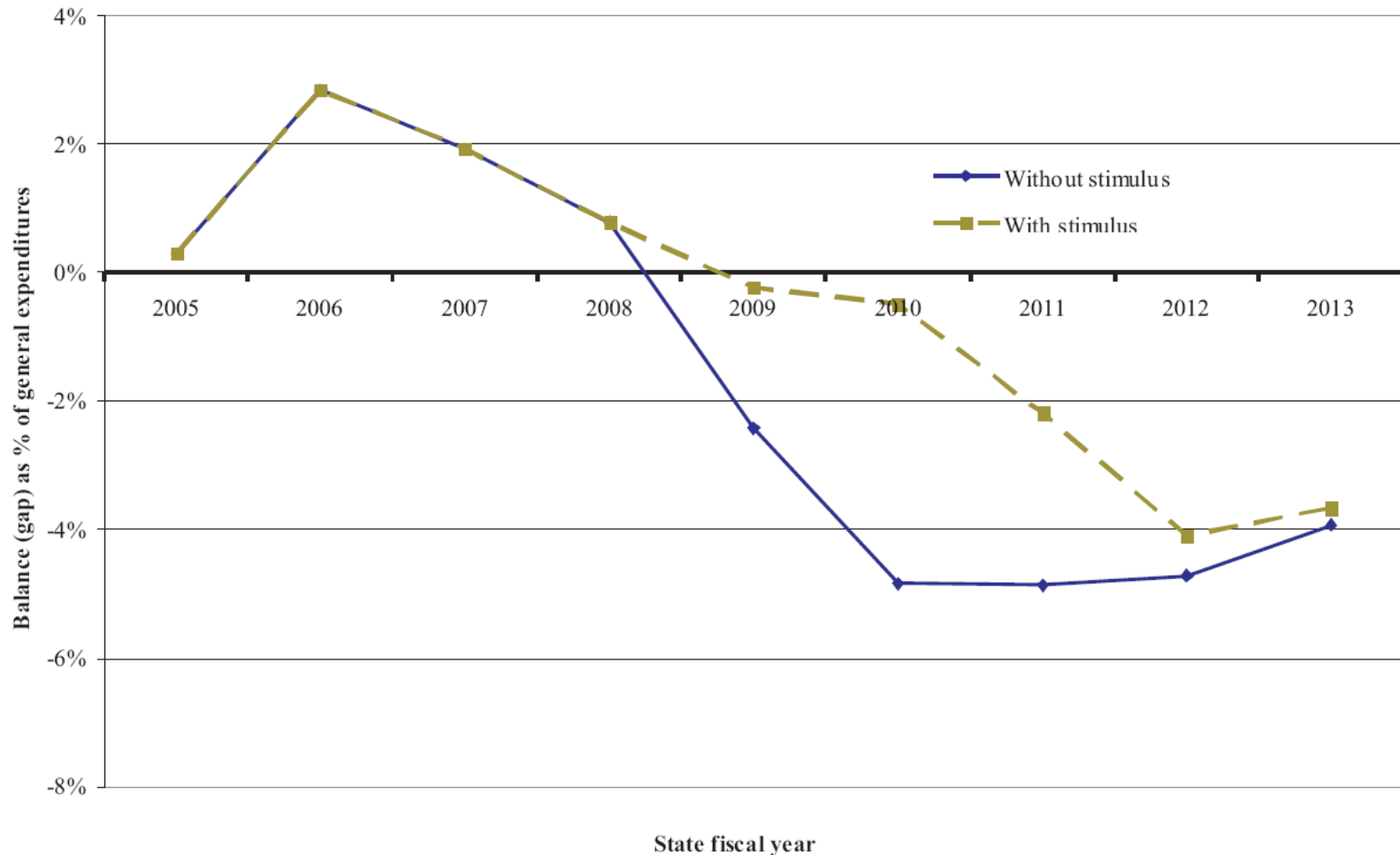
Education Attainment & Personal Income by Montana Counties



Recognize That Economic Recovery
Will Be Slow

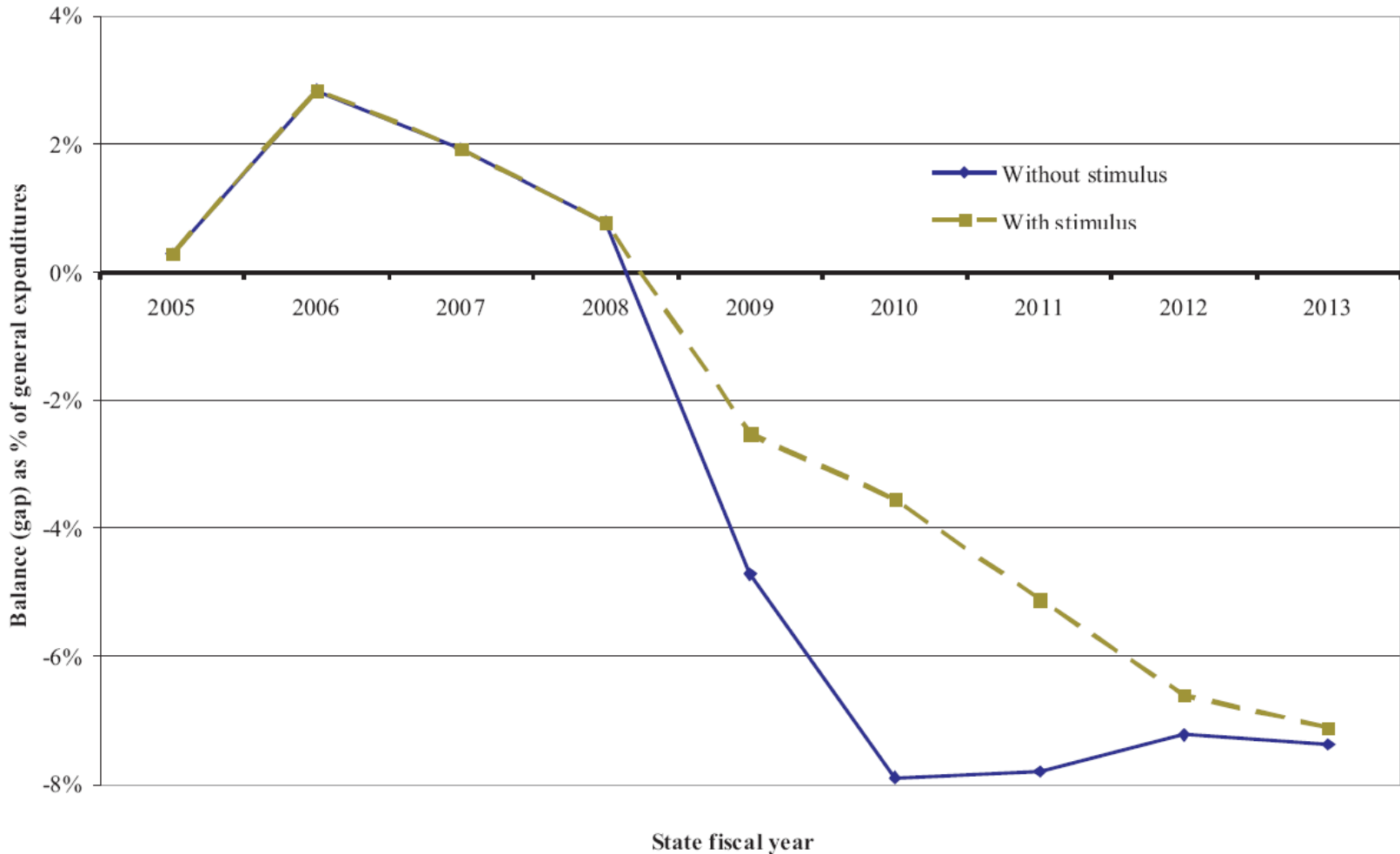
After stimulus wanes, gaps could approximate 4% of spending, or \$70 billion, even under the "Low-Gap" Scenario

"Low-Gap" Scenario:
State General Revenue Minus Expenditures With and Without Federal Stimulus



After stimulus wanes, gaps could approach 7% of spending or \$120 billion under the "High-Gap" scenario

"High-Gap" Scenario:
State General Revenue Minus Expenditures With and Without Federal Stimulus



For most states – and for most public institutions –
the stimulus package is not an answer.

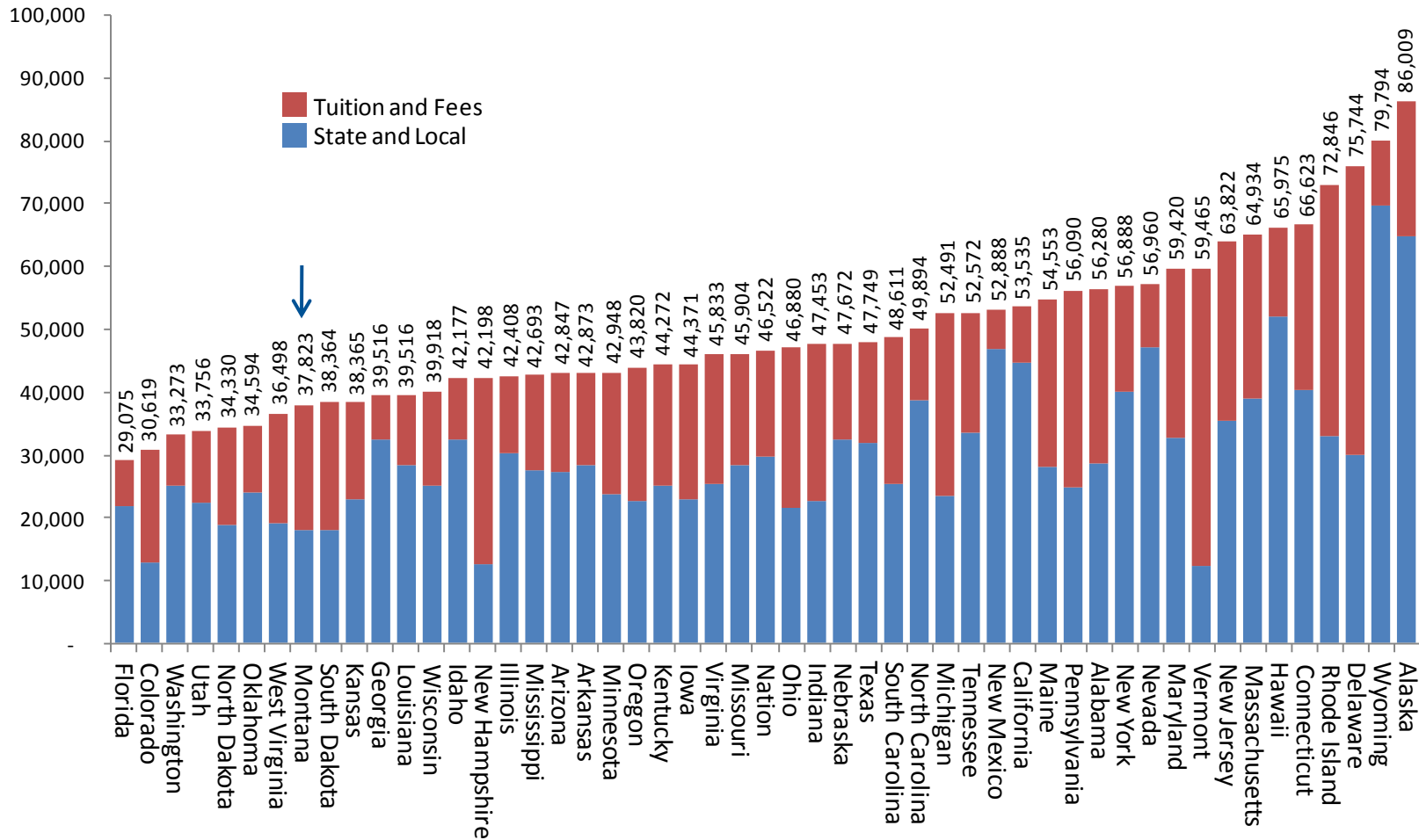
- But it could slow the impact
- And it could buy enough time to adjust to substantially changed circumstances



Adjusting to Changed Circumstances Improving Productivity

Productivity: Total Funding per Degree/Certificate

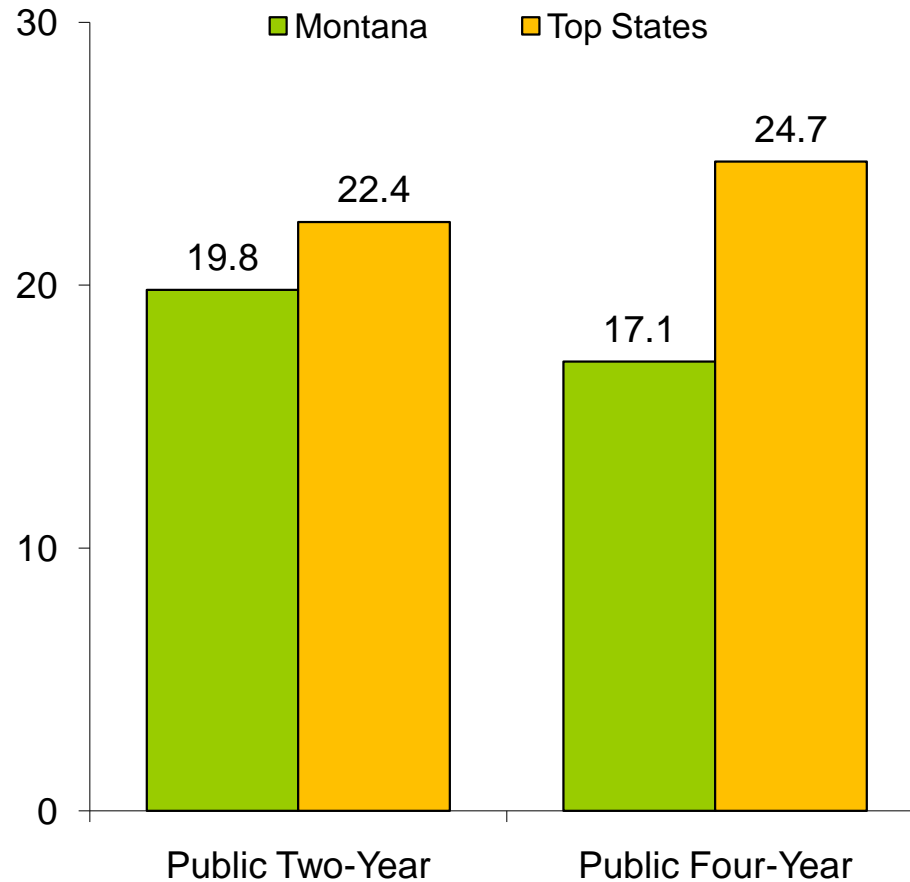
(Weighted*, 2006-2007)



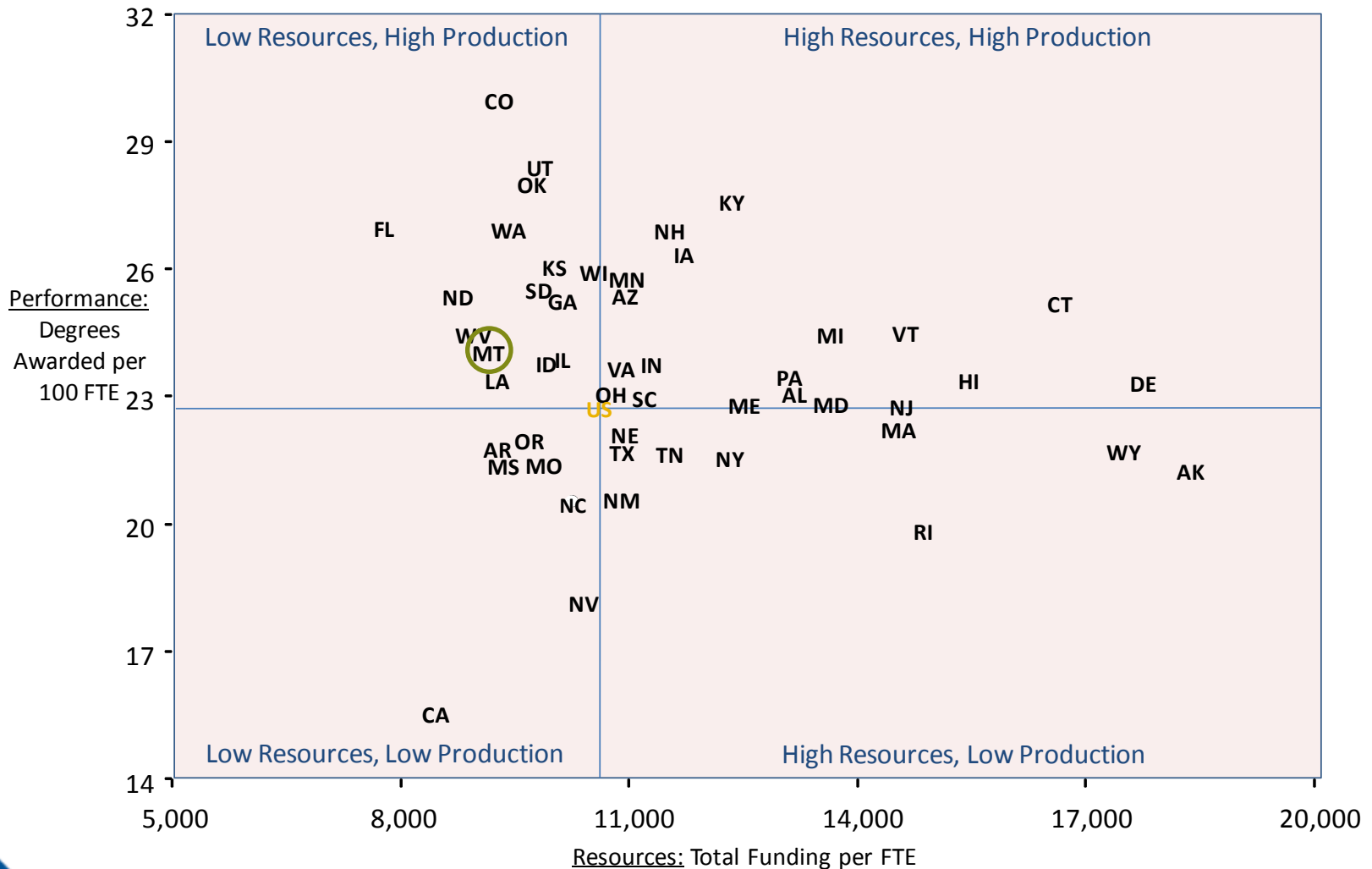
Sources: SHEEO State Higher Education Finance Survey 2008; NCES, IPEDS Completions Survey; U.S. Census Bureau, American Community Survey (Public Use Microdata Samples)

*Adjusted for value of degrees in the state employment market (median earnings by degree type and level)

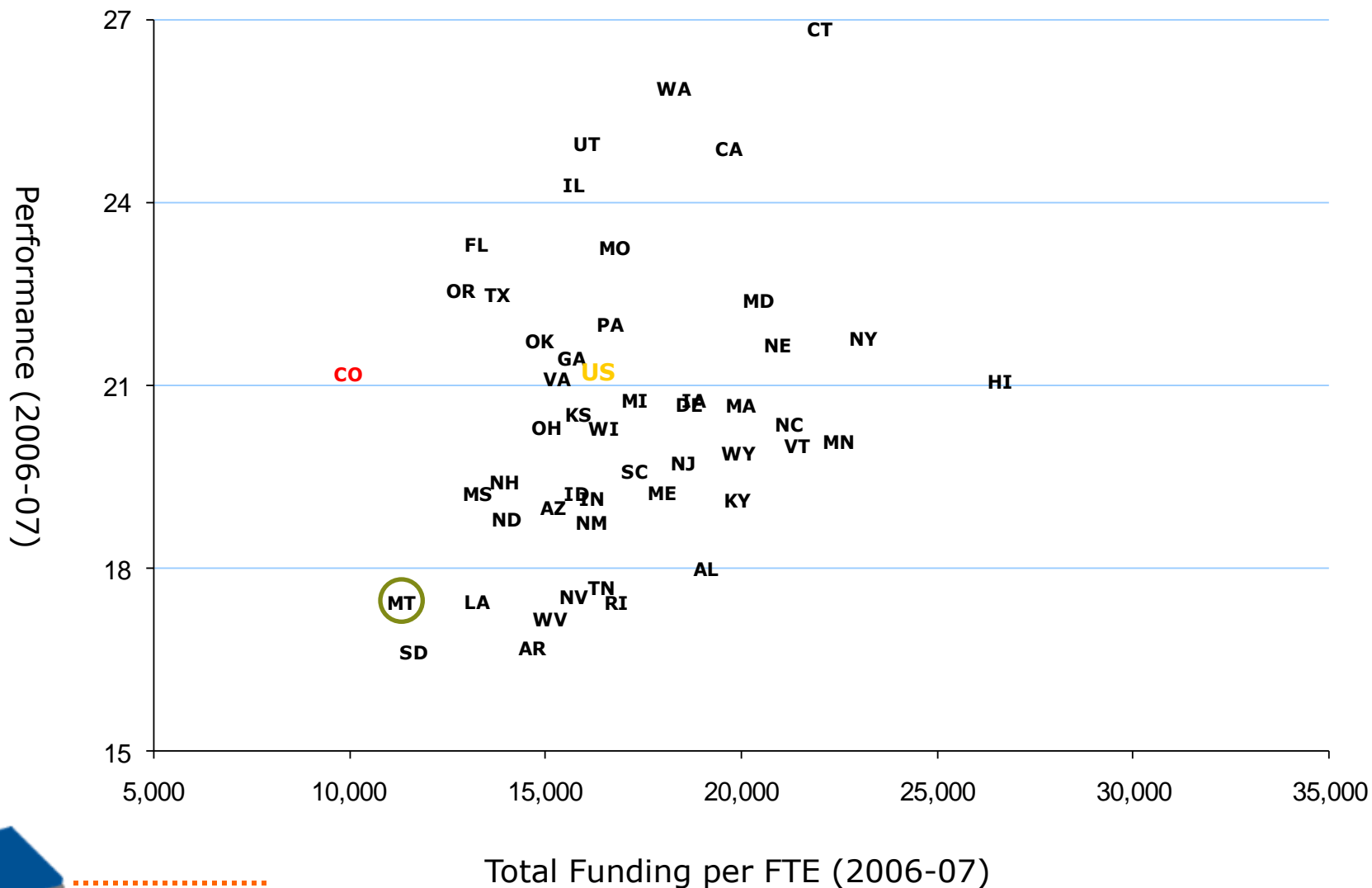
Undergraduate Degrees Awarded Per 100 Full-Time Equivalent Students



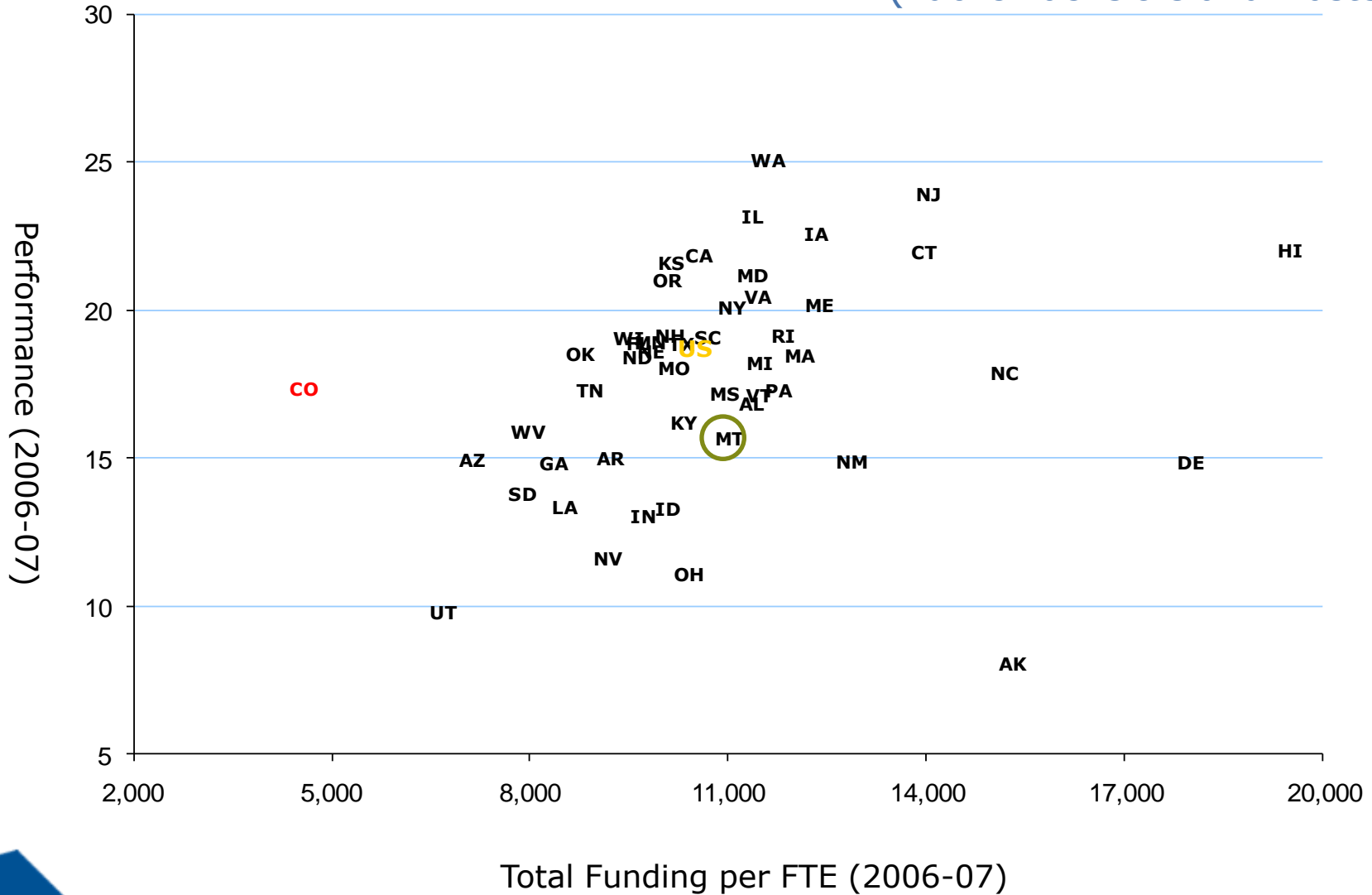
Degrees & Certificates awarded per FTE vs. Total Funding per FTE (2006-2007)



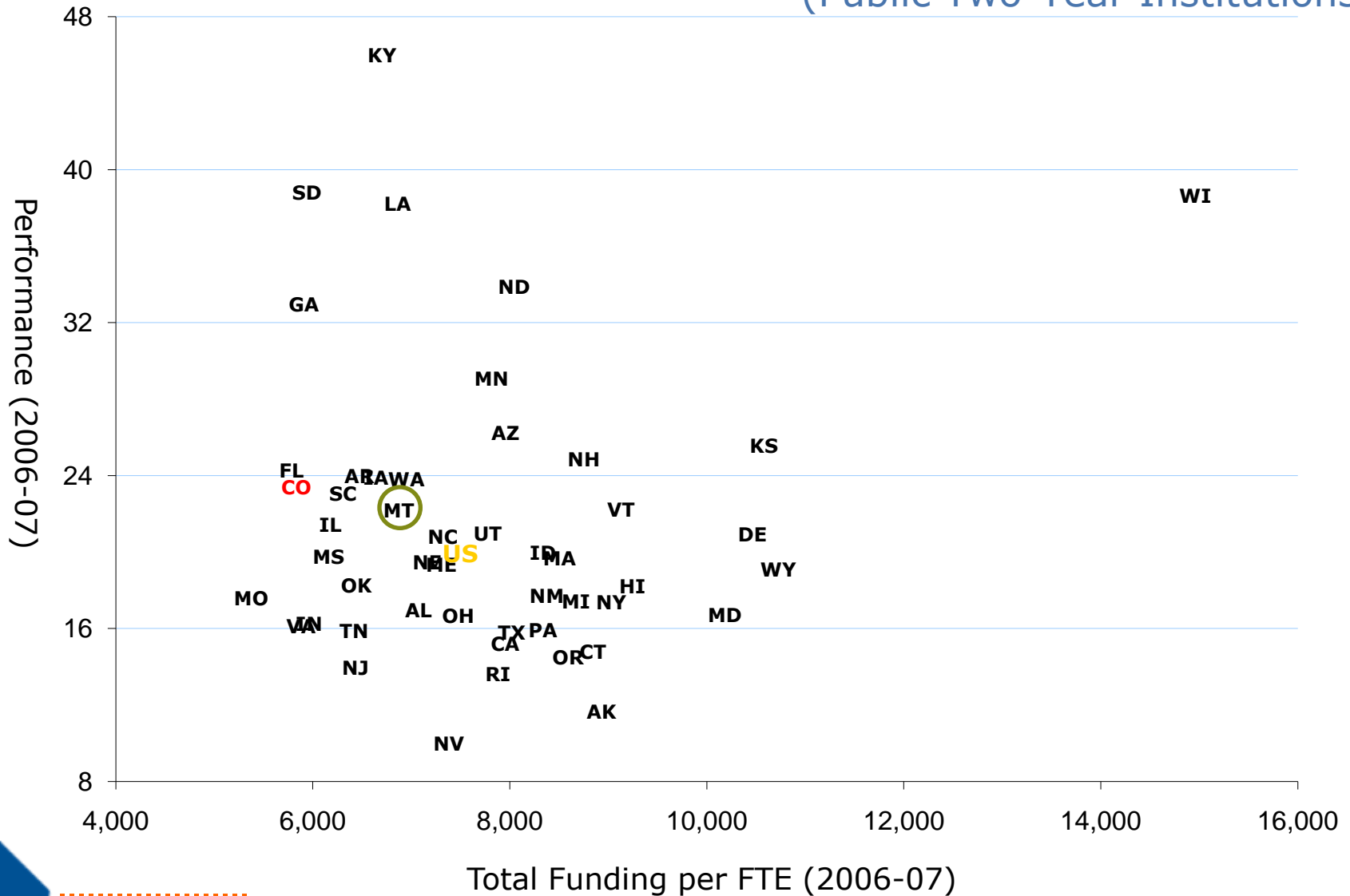
Performance Relative to Funding: Bachelors Degrees Awarded per 100 FTE Undergraduates (Public Research Institutions)



Performance Relative to Funding: Bachelors Degrees Awarded per 100 FTE Undergraduates (Public Bachelors and Masters)



Performance Relative to Funding: All Credentials Awarded per 100 FTE Undergraduates (Public Two-Year Institutions)



Some Practical Steps

- State/System Level
- Campus Level

State/System Level

The Overarching Strategies

- Build cost-effective systems
- Change the academic production function
- Reduce demand each student places on the system
- Reduce leaks in the pipeline

Building Cost-Effective Systems

- More appropriate mix of institutions
- Create new types of providers
- Effective collaboration among institutions
- More efficient use of existing resources

Reducing Leaks in the Pipeline

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

Ask the Right Questions

- Are state (strategic planning) goals
 - Clearly stated?
 - Clearly – and frequently – communicated?
 - Accompanied by performance metrics?
 - Measured and widely reported at least annually?
- Is performance considered in the resource allocation process – are resources targeted to priorities/highest payoff relative to goal achievement?
- Is there a coherent financing plan in place? Is there alignment among
 - Allocations to institutions?
 - Tuition?
 - Student aid?

Ask the Right Questions

(continued)

- Are metrics for productivity in place? Is there evidence of improvement?
- What is the evidence that institutions are working collaboratively to achieve state goals?
- Are institutions getting more (or less) focused on core mission? How do you know?

Short-Term Actions

- Be clear about goals & accountability measures
 - Degree production
 - Fiscal Sustainability
 - Institutional spending increases per student limited to CPI or less
 - Instate UG tuition increases (after need-based aid) limited to CPI or less
 - Reduced costs/degree
- Create a Coherent Financing Plan
 - Align policies regarding appropriations to institutions, tuition, & student aid policies
 - Treat different sectors differentially
 - “Reset” base funding levels
 - Adopt an investment approach

Short-Term Actions

(continued)

- Invest more (reduce less) state appropriations in institutions that must contribute most to student access and success
- Protect need-based financial aid
- Mandate increases in instructional productivity
 - SCHs per FTE faculty
 - Reduced credits to degree
 - Have a plan for use of savings – require investments in reform

Long-Term Actions

- Refocus institutional missions
 - Directly
 - Through de-funding certain programs/functions
- Require certain programs to be self-supporting (e.g., MBA)
- Align state & federal student aid programs – leave no federal money on the table
- Administer need-based aid as a state – not institutional – program
- Tackle developmental education on a statewide basis
 - Common STDs, modularized, technology enhanced
 - Consider a separate delivery entity
- Undertake a policy audit with an eye toward eliminating unnecessary bureaucracy
- Adopt a strategy for investing in productivity enhancement
 - Course redesign on a system-wide basis
 - Retrofitting buildings for energy efficiency
 - Reengineered business processes
 - Inter-institutional collaboration

Campus Level

Reducing Demands Each Student Places on the System

- 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

Ask the Right Questions

- Are campus (strategic planning) goals
 - Clearly stated?
 - Clearly – and frequently – communicated?
 - Accompanied by performance metrics?
 - Measured and widely reported at least annually?
- Is performance considered in the resource allocation process – are resources targeted to priorities/highest payoff relative to goal achievement?
- Are metrics for productivity in place? Are they benchmarked?
 - SCH/FTE faculty
 - Students/administrator

Ask the Right Questions

(continued)

- Is there evidence of improvement?
- Is faculty time being allocated to highest priorities?
- Is institutional aid being effectively used to help meet goals?
- Are there some things the institution shouldn't be doing?
- Where would collaboration yield better results at less cost?
- Are investments being made in
 - Restructuring curricula
 - Reengineering courses
 - Improving business processes
 - Enhancing support services

Short-Term Actions

- Reallocate faculty time to undergraduate courses and away from
 - Administrative and committee work and other activities for which release time is granted
 - Undersubscribed graduate programs that cannot be justified by regional labor market needs
 - Non-sponsored research
- Collaborate with other institutions – share
 - Academic programs
 - Administrative services
- Make sure that students are receiving all aid for which they're eligible

Longer Term Strategies – Mission Focus

Refocus on the institutional mission – serving state and student needs rather than institutional aspirations

- Eliminate small, non-core programs – close low-demand, high-cost programs that aren't distinguished and can't be justified by labor market needs
- Re-think institutional aid – focus on removing barriers to attendance rather than competing for students whose college participation is not in question

Longer Term Strategies

Invest in reengineering curricula and delivery methods

- Restructure general education
 - Fewer options
 - More large enrollment courses
 - More courses that can be taught by faculty from multiple disciplines
- Invest in course redesign
- Invest in modifications to delivery system
 - Required some proportion of degree of degree requirements to be met through off-campus instruction
 - Competency based assessments

Longer Term Strategies

Make investments in more efficient administration and plant operations

- Retrofit building for energy efficiency
- Reengineer business processes
- Renegotiate relationships with the state (invest in a Policy Audit with an eye toward restructuring state administrative and reporting requirements)

The Key to Managing Costs at the Institutional Level...

Effective management of human resources.
Time/effort is the key resource to be allocated.
Management discretion extends to:

- Assignments of personnel to functions
- Assignments of personnel to activities

Administrative Decision Space

	Full-Time Faculty	Part-Time Faculty	Students	Administrative/ Professional
Lower-Division Instruction				
Upper-Division Instruction				
Graduate Instruction				
Research				
Service				
Advising				
Administrative				
Professional Development				

Allocation of Assets to Instructional Activities

Five Instructional Activities	Faculty Member	Teaching Professional	Technology	External Provider
Design				
Development				
Delivery				
Mediation				
Assessment				

The Unbundling of Institutional Functions

RESOURCES USED	ACTIVITIES							
	Curriculum Design	Content Development	Information Delivery	Mediation/Tutoring	Assessment	Advising/Counseling	Other Student Services	Administration
Faculty	X	X	X	X	X	X		
Professional Staff							X	X

(continued)

The Unbundling of Institutional Functions (cont.)

RESOURCES USED	ACTIVITIES							
	Curriculum Design	Content Development	Information Delivery	Mediation/Tutoring	Assessment	Advising/Counseling	Other Student Services	Administration
Faculty	X	X	X	/		X		
Graduate Assistants				X				
Professional Staff							X	X

(continued)

The Unbundling of Institutional Functions (cont.)

RESOURCES USED	ACTIVITIES							
	Curriculum Design	Content Development	Information Delivery	Mediation/Tutoring	Assessment	Advising/Counseling	Other Student Services	Administration
Faculty	X							
Vendors		X						
Technologies			X					
Technical Staff			X					
Paraprofessionals				X				
Partner Organization					X	X	X	X

Improve Retention

As a way of

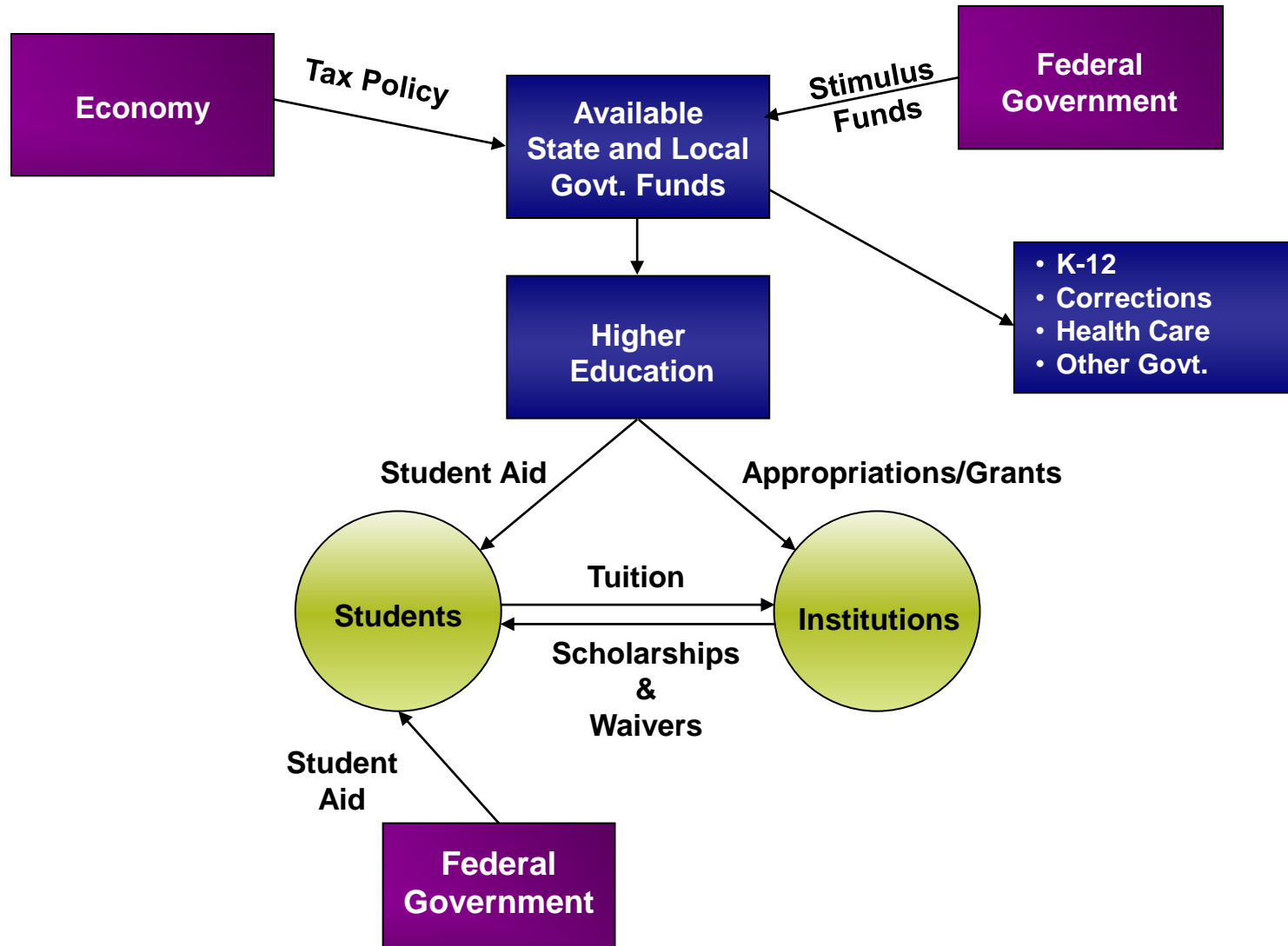
- Enhancing Revenue
- Reducing Recruitment Costs
- Filling Unused Upper-Division Seats

As a rule

- Increased Lower-Division Enrollments Create a Requirement for Additional Expenditures
 $MR = MC$
- Increased Upper-Division Enrollments Create a Lesser Requirement for Additional Expenditures
 $MR > MC$

A word about performance funding.

The Flow of Funds - State



Finance Policy – The Options

	Institution Focused	Student Focused
Core Capacity	<ul style="list-style-type: none">• Base-Plus• Formulas• Investment Funds	Tuition & Aid Policy Focused on Revenue Generation
Capacity Utilization/ Public Agenda	Performance Funding	Tuition & Aid Policy Focused on Attainment of Specified Outcomes

Performance Funding - Institutions

- Use completed credits (not enrolled credits) as the basis for resource allocation
- Capacity utilization component
 - Pay for outcomes achieved, e.g., increases in numbers of degrees produced

Performance Funding - Students

- Core component
 - Add a performance component to need-based aid programs
 - Tennessee – Lottery Scholarship
 - Indiana – 21st Century Scholars
- Public agenda component
 - Pay for achieving state goals
 - Indirect – forgivable loans
 - Direct – payments for certain behaviors (e.g., graduating with fewer than 120 credits)

For More Information

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and visit

NCHEMS Information Center for Higher Education
Policymaking and Analysis

www.higheredinfo.org