

Strategic Budgeting at Humboldt State University



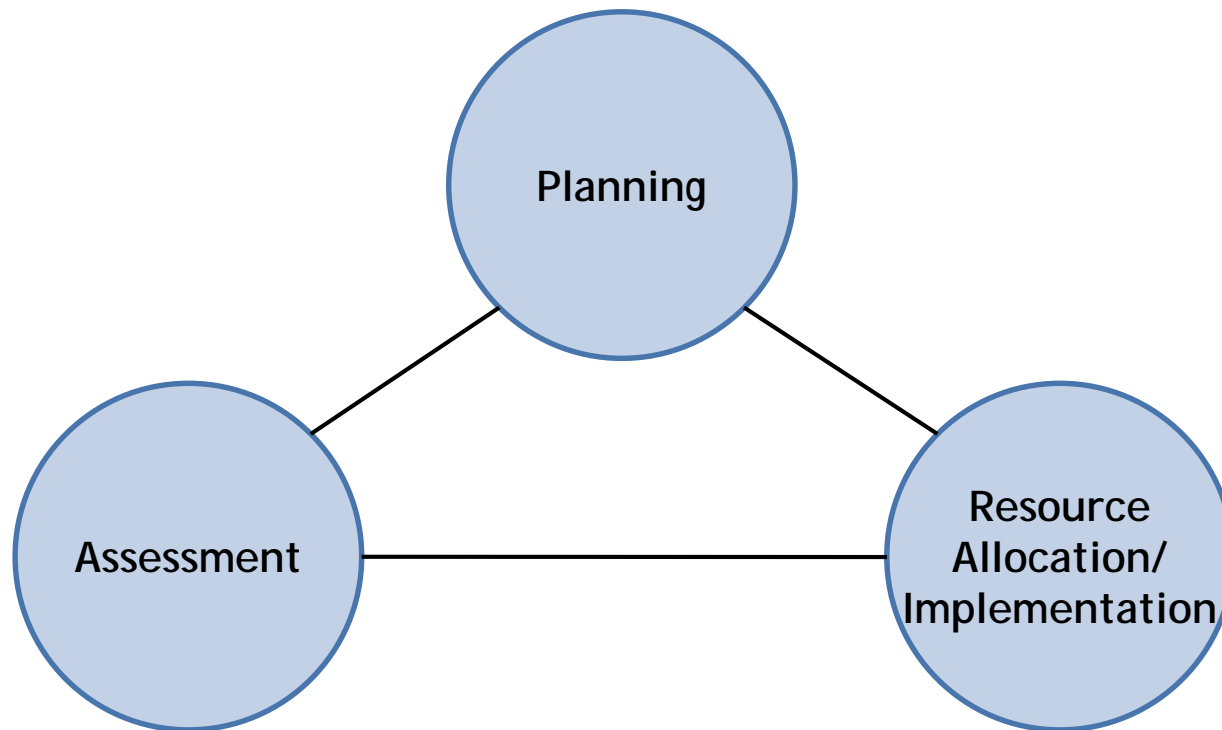
University Resources & PLG Committee
August 28, 2015



NCHEMS

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

The Management Cycle

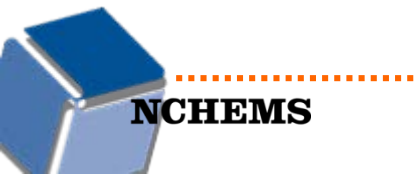


Strategic Management – The allocation of resources to programmed activities calculated to achieve a set of goals.

- Making decisions about organizational priorities that specify what changes in intentions, competencies, or behaviors the organization will pursue
- The mechanism through which organizational values and methods of identifying them are affirmed

Note:

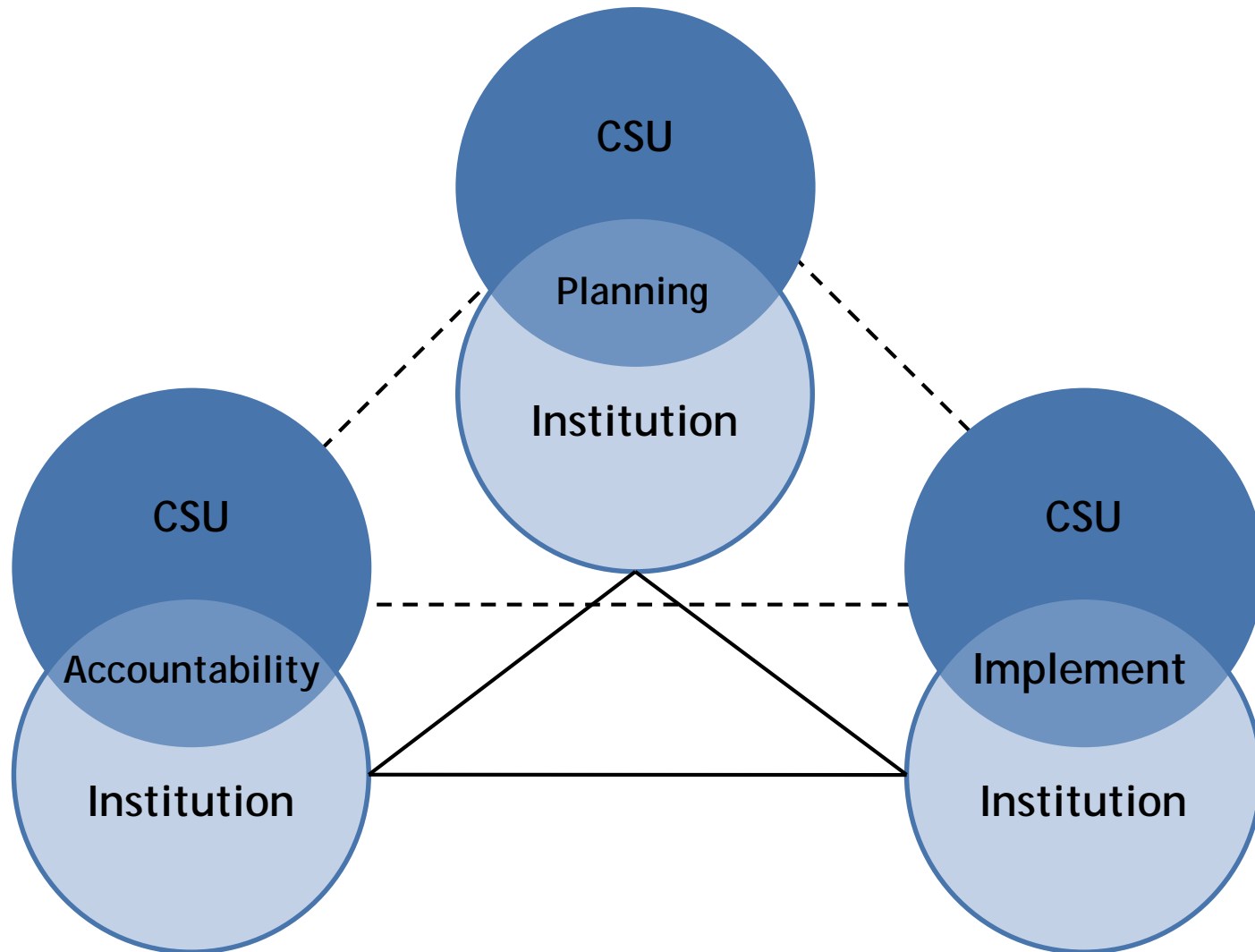
- Planning must result in decisions.
- It is fundamentally a change process.



Humboldt State University Goals

- Goal 1: Prepare students to be socially and environmentally responsible leaders in a diverse and globalized world
- Goal 2: Foster meaningful relationships across differences, including diverse cultural communities, identities, and competencies.
- Goal 3: Strengthen partnership with local communities.
- Goal 4: Serve as effective stewards of the natural and built environment and the University's financial resources with a focus on sustainability.

The Management Cycle in a Public Institution



University of California (UC) and California State University (CSU) Performance Measures

Performance Metrics for UC and CSU	
Metric	Definition
CCC transfers	(1) Number of CCC transfers enrolled. (2) CCC transfers as a percent of undergraduate population.
Low-income students	(1) Number of Pell Grant recipients enrolled. (2) Pell Grant recipients as a percent of total student population.
Graduation rates ^a	(1) Four- and six-year graduation rates for freshmen entrants. (2) Two- and three-year graduation rates for CCC transfers. Both of these measures also calculated separately for low-income students.
Degree completions	Number of degrees awarded annually in total and for: (1) Freshman entrants. (2) Transfers. (3) Graduate students. (4) Low-income students.
First-year students on track to degree	Percentage of first-year undergraduates earning enough credits to graduate within four years.
Funding per degree	(1) Total core funding divided by total degrees. (2) Core funding for undergraduate education divided by total undergraduate degrees.
Units per degree	Average course units earned at graduation for: (1) Freshman entrants. (2) Transfers.
Degree completions in STEM fields	Number of STEM degrees awarded annually to: (1) Undergraduate students. (2) Graduate students. (3) Low-income students.

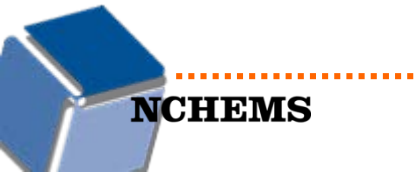
^a Six- and three-year graduation rates apply only for CSU.
STEM = science, technology, engineering, and mathematics.

CSU Graduation Initiative Targets

Performance Indicator	Baseline (2012)	Target (2020)	Graduation Initiative (2025)
Increase the six-year graduation rate for first-time full-time freshmen	41%	50%	53%
Increase the four-year graduation rate for first-time full-time freshmen	14%	20%	22%
Increase the four-year graduation rate for transfer students	62%	67%	69%
Increase the two-year graduation rate for transfer students	20%	26%	28%
Improve the six-year URM/non-URM graduation rate gap	7%	4%	3%
Improve the six-year Pell/non-Pell graduation rate gap	7%	4%	3%

What Is Budgeting?

Making decisions
that distribute resources
to enable action.

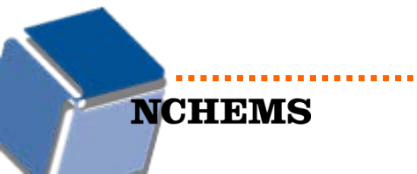


Linking Planning and Budgeting

- In the absence of a plan – the budget *is* the plan
- If a plan exists and it is not closely linked to the budget, the budget is *still* the plan
- Therefore, if a plan is to be implemented, there must be a strong linkage between the plan and the budget

The Typical Budget Process

- Starts with revenue estimates
- Establishes budget guidelines focused on price changes
 - Salary increases
 - Operations/utilities
 - Equipment
- Invites units to submit:
 - Budgets within these guidelines
 - Special requests
- Involves “triage” at every step up the organizational structure



Most Resource Allocation Approaches

Reward:	Do not reward:
Growth – Quantity: Levels of Activity	Quality: Levels of Performance
Enrollments	Graduates/Completion
Spending Resources	Saving Resources
Individual (Unit) Action	Group/Institutional Accomplishment
Status Quo	Change

Linking Planning and Budgeting...

...Is so difficult because:

- Planning is typically conducted at the strategic level
- Budgeting is typically focused at the operational level



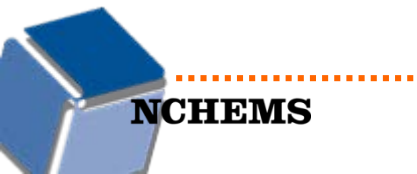
We need to develop an approach to strategic budgeting.

Strategic decisions focus on:

- Creation and maintenance of institutional capacity

Operational decisions focus on:

- Utilization of that capacity in ways designed to accomplish specified purposes



All approaches to resource allocation create incentives for particular kinds of behavior.

Central question:

Do these incentives encourage or impede the desired changes?

Strategic budgeting is not only about money. The most important decisions are those dealing with institutional assets – especially Human Resources.

Budgeting should be driven by academic decisions.

Corollary

Academic management issues should not go unexamined in budgeting process.

Some First Principles

- Know the asset structure you'd like to have—what adjustments would be most desirable?
- Recognize that uncertainty is the norm
- Create circumstances that let you avoid decisions made in a crisis environment—the necessity of a contingency fund

Some First Principles (cont.)

- Don't take anything off the table before you start – especially personnel
- Protect (some) resources for strategic investments even in tough times
- Use tough times as a rationale for change



The Focus of Budget Decisions

- Assets
 - What kinds will we have/own?
 - In what quantities/how many?
 - With what characteristics?
 - Quality
 - Appropriateness
 - At what price?
 - What are assumptions about levels of utilization?
 - In what areas (and to what extent) will we substitute purchase of services for ownership of assets?

The Focus of Budget Decisions (cont.)

- Consumables (utilities, insurance, supplies, etc.)
 - In what quantities?
 - At what prices?
- Revenues
 - In what amounts?
 - From which sources?
- Allocation
 - To which units?
 - To what ends? (Basis of accountability)

Structure of the Budget

In order for the budget to respond to the responsibilities of institutional leaders and link to the strategic plan, it is suggested that:

1. The budget be given a structure that explicitly reflects the areas of responsibility of strategic level decisionmakers—that it contain the following components:
 - Base/continuation—the status quo adjusted for price changes
 - Strategic initiatives
 - Contingency
 - Asset maintenance
 - Asset creation/deletion—intentional changes in the asset structure
2. The budget process be such that guidelines are established around each component prior to initiating unit level budget-building.

The Key Set of Budget Decisions & Trade-Offs

				Costs		Revenues	
				Unit Cost	Total Cost	Total Revenue	Revenue Sources
Quality	Quantity	Utilization					
Assets							Student Fees State Budget Appropriations Govt. Grants Private Gifts Endowment Sales & Services Other Revenues Reserves
Personnel							
Facilities							
Equipment							
Collections							
Students							
Finances							
Program							
Consumables							
Services							
Supplies							
Utilities							
Contingency							
New Initiatives							
Total						=	

Types of Assets

- Personnel
 - Faculty
 - Administrators
 - Support
- Facilities
 - Classrooms
 - Labs
 - Offices
 - Etc.
- Equipment/Technology
- Collections
- Students/Cientele
- Finances
 - (endowments/reserves)
- Program/Curricula
- Intangible Assets

Asset Related Issues

- Faculty and staff development
- Program/curriculum development
- Deferred maintenance
- Obsolescence/sufficiency of equipment
- Currency/accessibility of information resources
- Adequacy of reserves
- Change/repair of
 - Image
 - Good will

To Evaluate the Budget, Ask Questions

- About changes in the asset structure
 - How will staffing patterns change?
 - How will materials acquisitions be affected?
 - How will the stock of equipment/technology change?
- About asset maintenance
 - What is relationship between expenditures on renovation and renewal of plant and replacement value of plant?
 - What is rate of replacement of equipment?
 - What is the ratio of personnel development to compensation?
 - What is trend in expenditures on curriculum development?
 - What level of financial reserves is being maintained?
 - How effective is the investment in student financial aid?

To Evaluate the Budget, Ask Questions

(continued)

- About the contingency fund
 - How large is the contingency fund relative to the operating budget?
- About the consequences of resource utilization
 - What is the evidence that the institutional priorities are being achieved? That the institution is fulfilling its mission?
 - What is the evidence that the state/system priorities are being achieved?

Shifting to Notion of Faculty as Institutional Asset

- Requires that we view faculty as a priority
- Requires shift in decisionmaking context in management of human resources
 - “Purchase of services”
vs.
 - “Investment in capacity”
- Forces consideration of
 - What’s required to create and maintain this asset?
 - What’s required for ongoing management and cost-effective utilization of this asset?

Key Questions on Personnel

- Are people resources being appropriately utilized?
- Are salaries competitive?
- Is the institution allocating sufficient resources to faculty and staff development?

Managing Strategically

- Requires attention to
 - Numbers of employees and their utilization
 - Controlling the array of programs offered
 - Controlling the array of course offered
 - Creative use of alternative modes of delivery

Degrees of Freedom in Utilization of Personnel

- Allocation across functions
- Allocation across activities within functions

Managing Utilization of Reassigned Time for Faculty

Useful ratio

$$\frac{\text{Part-time Faculty FTE}}{\text{Reassigned FTE of Full-time Faculty}}$$

Exercise: Could you eliminate all part-time faculty and cover all classes with full-time faculty?

Allocation of Personnel to Functions

	Full-time Faculty	Part-time Faculty	Students	Administrative
Lower-Division Instruction				
Upper-Division Instruction				
Graduate Instruction				
Community Service				
Advising				
Administrative Activities				

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

The Unbundling of Institutional Functions

(continued)

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

The Unbundling of Institutional Functions

(continued)

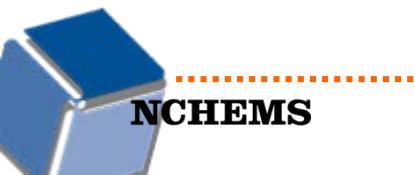
RESOURCES USED	ACTIVITIES					
	Curriculum Design	Content Development	Information Delivery	Mediation/Tutoring	Assessment	Advising/Counseling Other Student Services Administration
Faculty	X			/		
Graduate Students			X	/		
Product Developers		X				
Technologies			X			
Technical Staff			X			
Professional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

Pew Grant Program in Course Redesign – Round I Savings Summary

Institution	Course	Cost per Student		Savings per Student	Percent Savings
		<i>Traditional</i>	<i>Redesign</i>		
Va Tech	Math	86	26	60	70
U at Buffalo	Computer Lit	248	114	134	54
U of So. Maine	Psychology	113	58	55	49
Rio Salado	Algebra	49	31	18	37
U of Illinois-UC	Statistics	237	159	78	33
Penn State	Statistics	176	123	53	30
UW-Madison	Chemistry	257	185	72	28
UColorado-Boulder	Astronomy	171	137	34	20
IUPUI	Sociology	83	66	17	20
U of Central Florida	Amer Gov't	82	76	6	7
AVERAGE					35%

Institution	Course	Annual Enrollment	Annual Cost		Annual Savings
			<i>Traditional</i>	<i>Redesign</i>	
UW-Madison	Chemistry	4,100	1,053,700	758,500	\$ 295,200
U of Illinois-UC	Statistics	3,200	758,400	508,800	249,600
U at Buffalo	Computer Lit	1,000	248,000	114,000	134,000
Penn State	Statistics	2,200	387,200	270,600	116,600
Va Tech	Math	2,000	172,000	52,000	120,000
UColorado-Boulder	Astronomy	2,080	355,680	284,960	70,720
U of Central Florida	Amer Gov't	2,200	180,400	167,200	64,300
U of So. Maine	Psychology	850	96,050	49,300	46,750
IUPUI	Sociology	2,000	166,000	132,000	34,000
Rio Salado	Algebra	955	46,795	29,605	17,190
TOTAL		20,585			\$1,148,360

UCF includes reductions in # of sections

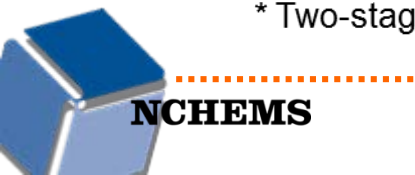


Pew Grant Program in Course Redesign – Round II Savings Summary

Institution	Course	Cost per Student		Savings per Student	Percent Savings
		<i>Traditional</i>	<i>Redesign</i>		
Cal Poly Pomona	Psychology	135	21	114	84
U of Tennessee	Spanish	109	28	81	74
U of Idaho	Math	139	97	42	31
Riverside CC	Elem Algebra	206	113	93	45
U of Dayton	Psychology	139	78	61	44
U Mass	Biology	199	117	82	41
Carnegie Mellon *	Statistics	227	138	89	39
Fairfield U *	Biology	506	350	156	31
U of Alabama	Int Algebra	122	86	36	30
U of Iowa	Chemistry	277	223	54	20
AVERAGE					44%

Institution	Course	Annual Enrollment	Annual Cost		Annual Savings
			<i>Traditional</i>	<i>Redesign</i>	
Riverside CC	Elem Algebra	3,600	741,600	406,800	\$ 334,800
U of Idaho	Math	2,428	337,492	235,516	101,976
Cal Poly Pomona ^	Psychology	1,500	202,500	31,500	171,000
U of Tennessee ^	Spanish	1,539	167,751	43,092	124,659
U of Iowa	Chemistry	1,300	360,100	289,900	70,200
U Mass	Biology	700	139,300	81,900	57,400
U of Alabama	Int Algebra	1,500	183,000	129,000	54,000
U of Dayton	Psychology	850	118,150	66,300	51,850
Fairfield U ^	Biology	260	131,560	91,000	40,560
Carnegie Mellon	Statistics	420	95,340	57,960	37,380
TOTAL			14,097		\$1,043,821

* Two-stage redesign ^ Adds students

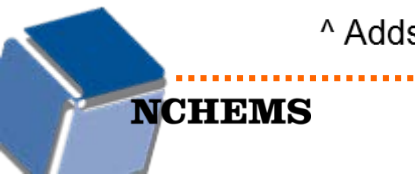


Pew Grant Program in Course Redesign – Round III Savings Summary

Institution	Course	Cost per Student		Savings per Student	Percent Savings
		<i>Traditional</i>	<i>Redesign</i>		
U of S Mississippi	World Lit	70	31	39	56
Northern Arizona U	College Algebra	138	73	65	47
U of New Mexico	Psychology	72	38	34	47
Iowa State U	Math	129	75	54	42
Drexel U	Computer Prog	172	100	72	42
Tallahassee CC	English Comp	252	145	107	42
Brigham Young U	English Comp	181	108	73	40
Florida Gulf Coast U	Fine Arts	132	81	51	39
Ohio State U	Statistics	190	132	58	31
Portland State U	Spanish	178	128	50	28
AVERAGE					41%

Institution	Course	Annual Enrollment	Annual Cost		Annual Savings
			<i>Traditional</i>	<i>Redesign</i>	
Tallahassee CC	English Comp	3,000	756,000	435,000	\$ 321,000
Brigham Young U	English Comp	3,400	615,400	367,200	248,200
Ohio State U	Statistics	2,850	541,500	376,200	165,300
Iowa State U	Math	1,800	232,200	135,200	97,200
U of S Mississippi	World Lit	2,000	140,000	62,000	78,000
U of New Mexico	Psychology	2,250	162,000	85,500	76,500
Drexel U	Computer Prog	1,024	176,128	102,400	73,728
Northern Arizona U	College Algebra	920	126,960	67,160	59,800
Florida Gulf Coast U	Fine Arts	800	105,600	64,800	40,800
Portland State U	Spanish	690	122,820	88,320	34,500
TOTAL		18,734			\$1,195,028

^ Adds students



Managing the Array of Programs

- Incidence of small programs—few majors or graduates
- Proliferation of minors
- Avoiding programs that are unrelated to any other programs—the importance of creating groupings of related programs
- Avoiding situations in which selective admissions programs:
 - Create a dropout problem
 - Have no obvious fallback position for students who do not gain admissions

Reshaping the Curriculum

- Basic and Higher Order Skills—Separate Courses or Taught Across the Curriculum
- Distribution Requirements vs. Core Curriculum
- Integrating Liberal Arts and the Professions
- Proliferation of Majors
- The Upward Creep
 - Minors to Majors
 - Masters to Doctoral

Managing the Proliferation of Courses

- In General Education
- In the Majors/Minors

Proliferation/specialization almost inevitably leads to small – and therefore, expensive – classes.

Creating Managerial Degrees of Freedom Through Influencing Course/Curriculum Content

- The more specific the course, the fewer the degrees of freedom – a faculty with a specific disciplinary background must teach the course
- The more general the course, the greater the degrees of freedom – faculty from multiple disciplines can teach the course
- Creative use of freshmen seminars/first-year experience

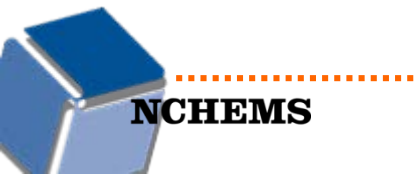
The importance of system action:
ensuring transferability

The Consequences of General Education Distribution Requirements

- Press for majors in all departments with courses that can be counted for general education credit
- Small classes

Exercise: document the courses that students actually take in fulfillment of general education requirements

- Focus attention on courses that dominate the choices
- Eliminate others



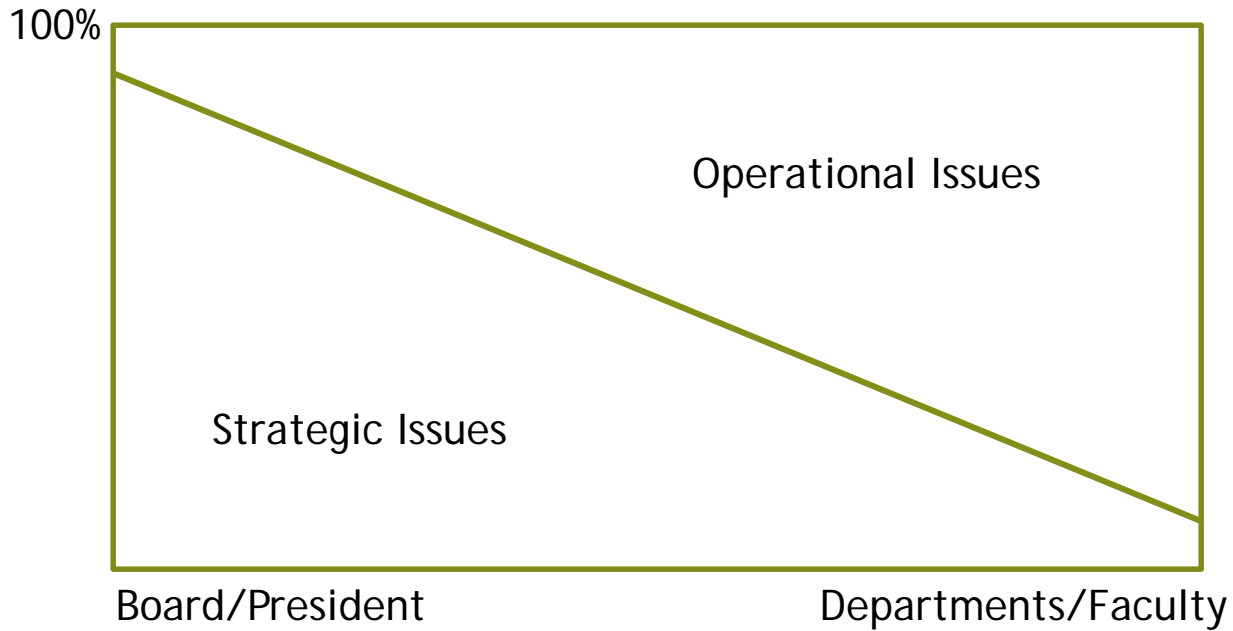
Being Strategic in Tough Times

- Know the desired future condition – what should the institution's asset structure be?
- Understand managerial degrees of freedom
 - Personnel
 - Program structure

A Second Set of Trade-Offs

	Assets (Personnel, Equipment, etc.)	Consumables
Organizational Units		
College A		
Dept. 1		
Dept. 2		
⋮		
College B		
Dept. 10		
Dept. 11		
⋮		
Administrative Units		

The Focus of Attention



A Third Set of Tradeoffs

Assets
(Personnel, Equipment, Etc.)

Consumables

Organizational Unit 1
Instruction
Research
Public Service
Administration

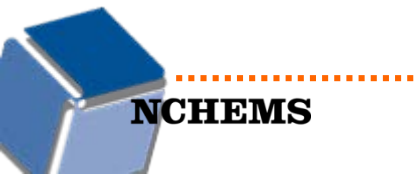
Organizational Unit 2
Instruction
Research
Public Service
Administration

Other Things to Think About

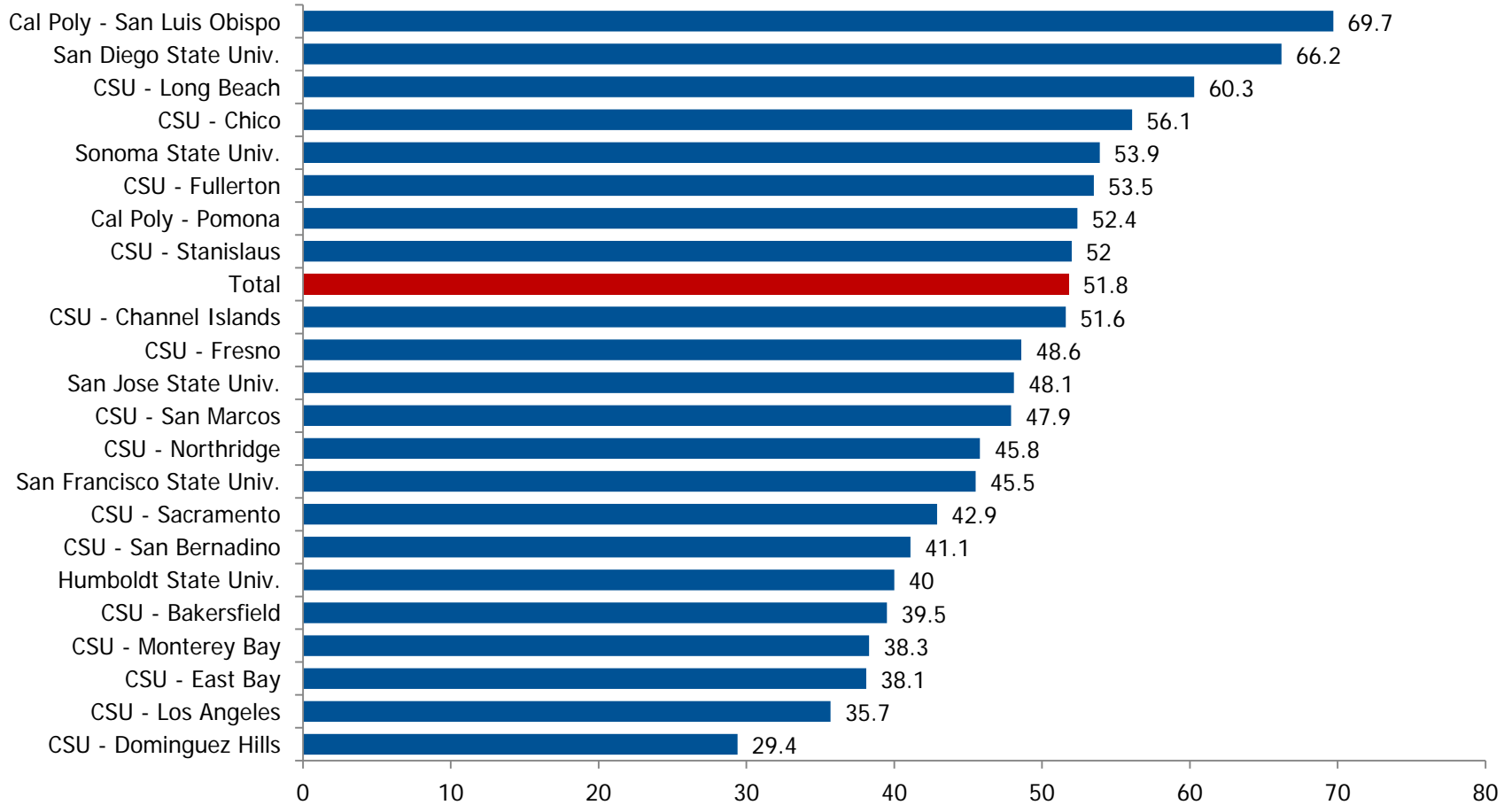
- Retention and why it's important
- The realities of state funding
 - Unpredictable
 - Constrained
- Affordability as a national issue
- Productivity improvement as a necessity

Improving Retention

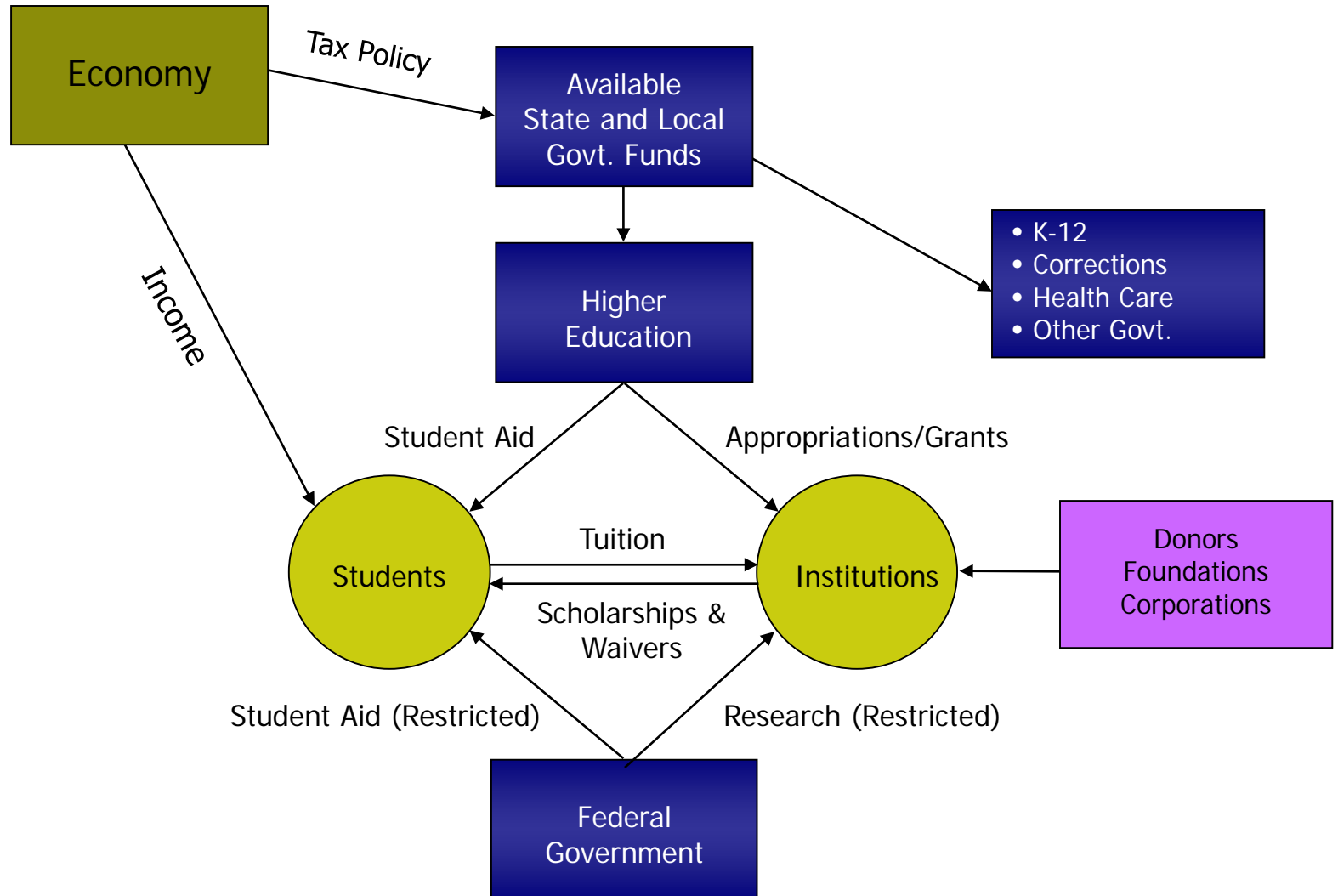
- As a Way of
 - Enhancing Revenue
 - Reducing Recruitment Costs
 - Filling Unused Upper-Division Seats
- As a Rule
 - Increased Lower-Division Enrollments Create a Requirement for Additional Expenditures
 - MR = MC
 - Increased Upper-Division Enrollments Create a Lesser Requirement for Additional Expenditures
 - MR > MC



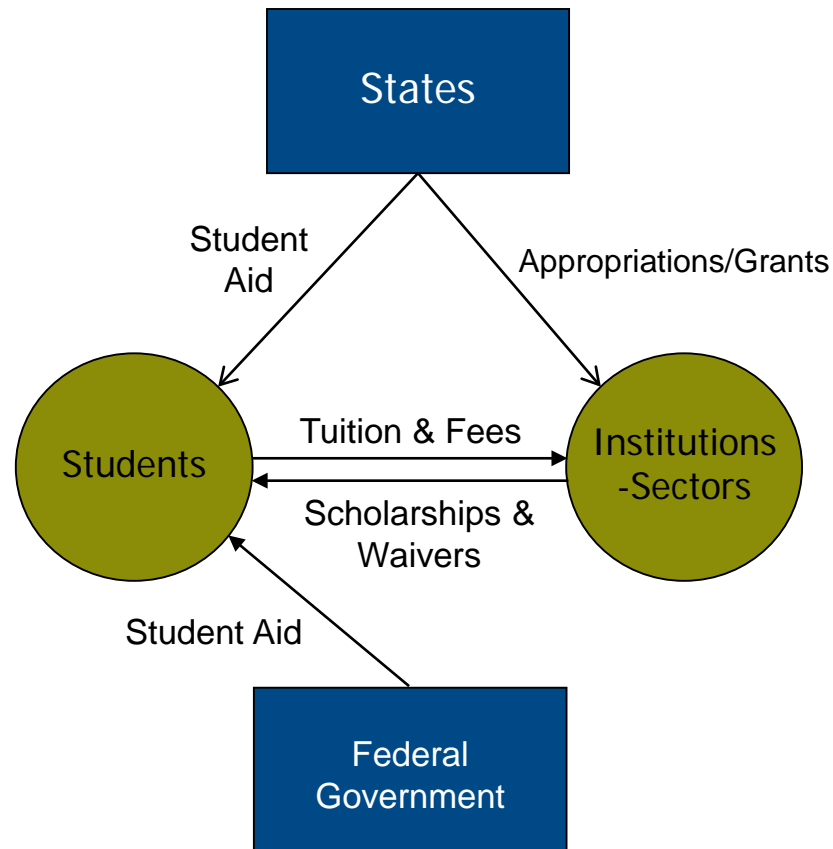
California State University Graduation Rates



The Flow of Funds

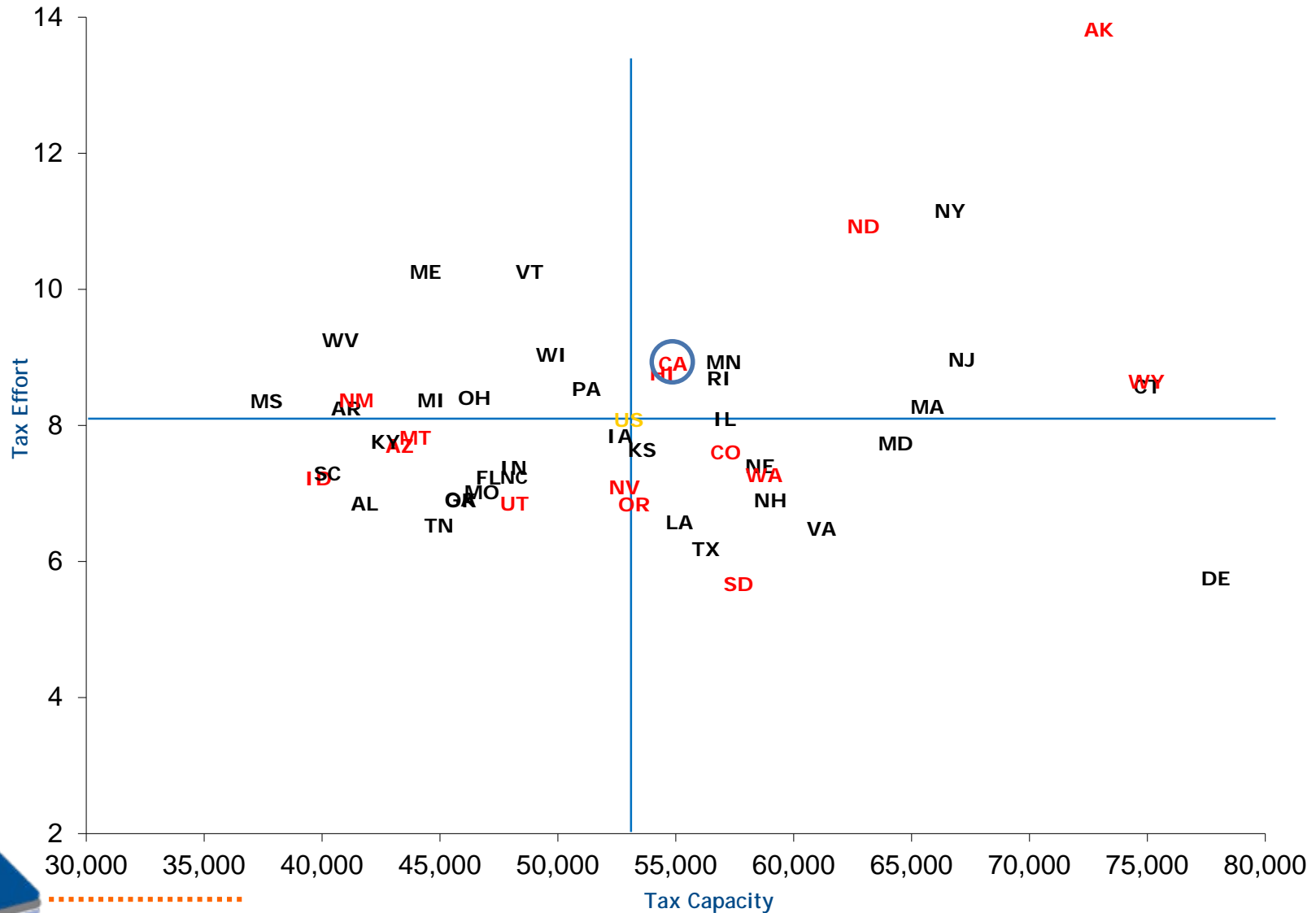


The Elements of Finance Policy



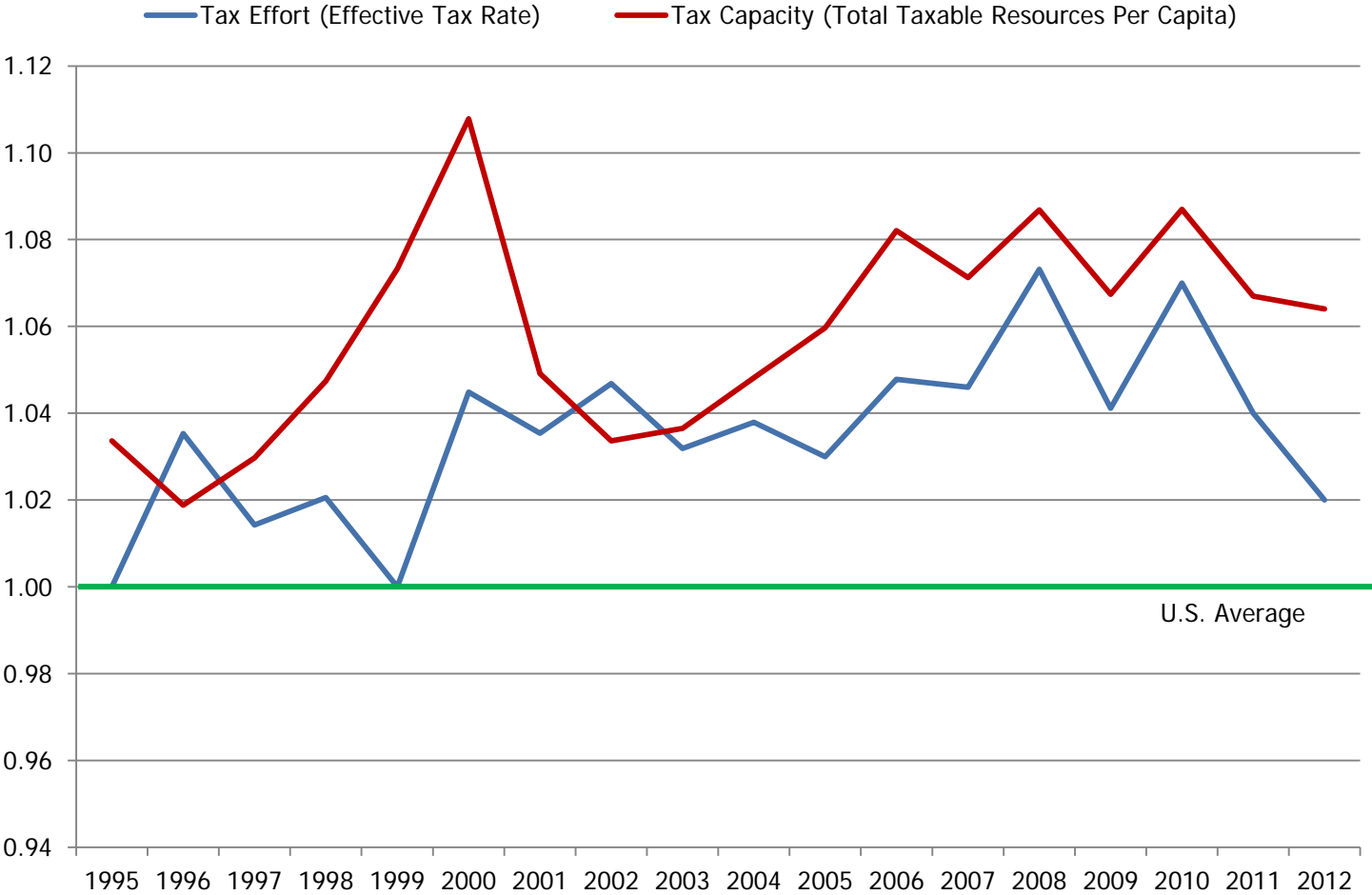
State Tax Capacity & Effort

Indexed to U.S. Average, 2011

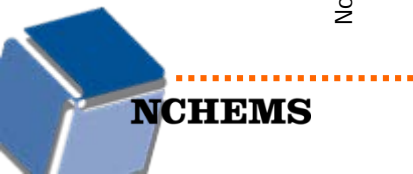
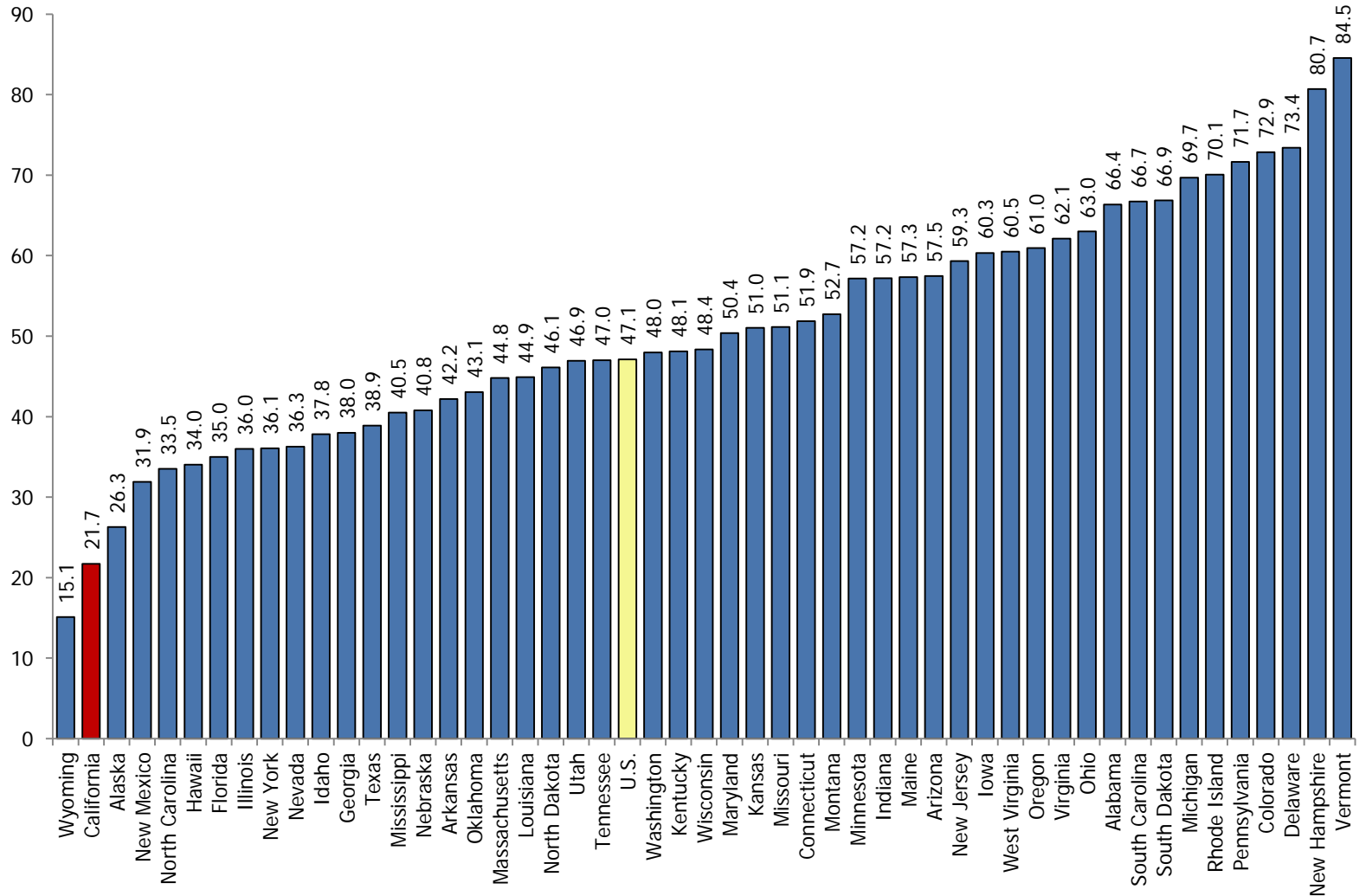


State Tax Capacity & Effort

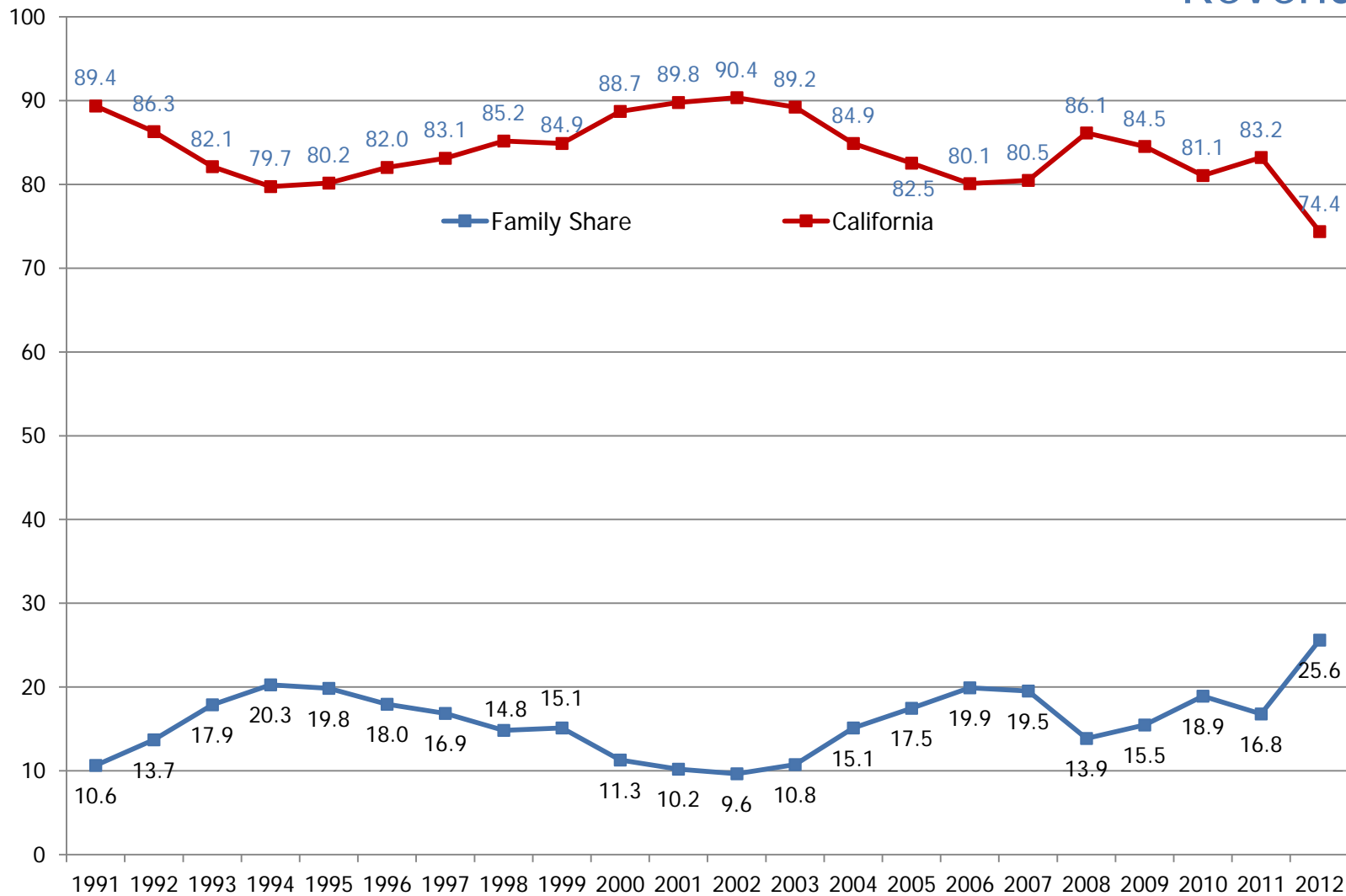
California Indexed to the U.S. Average



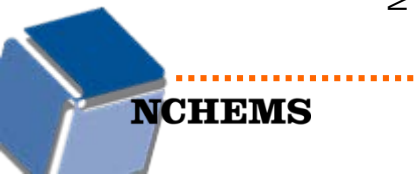
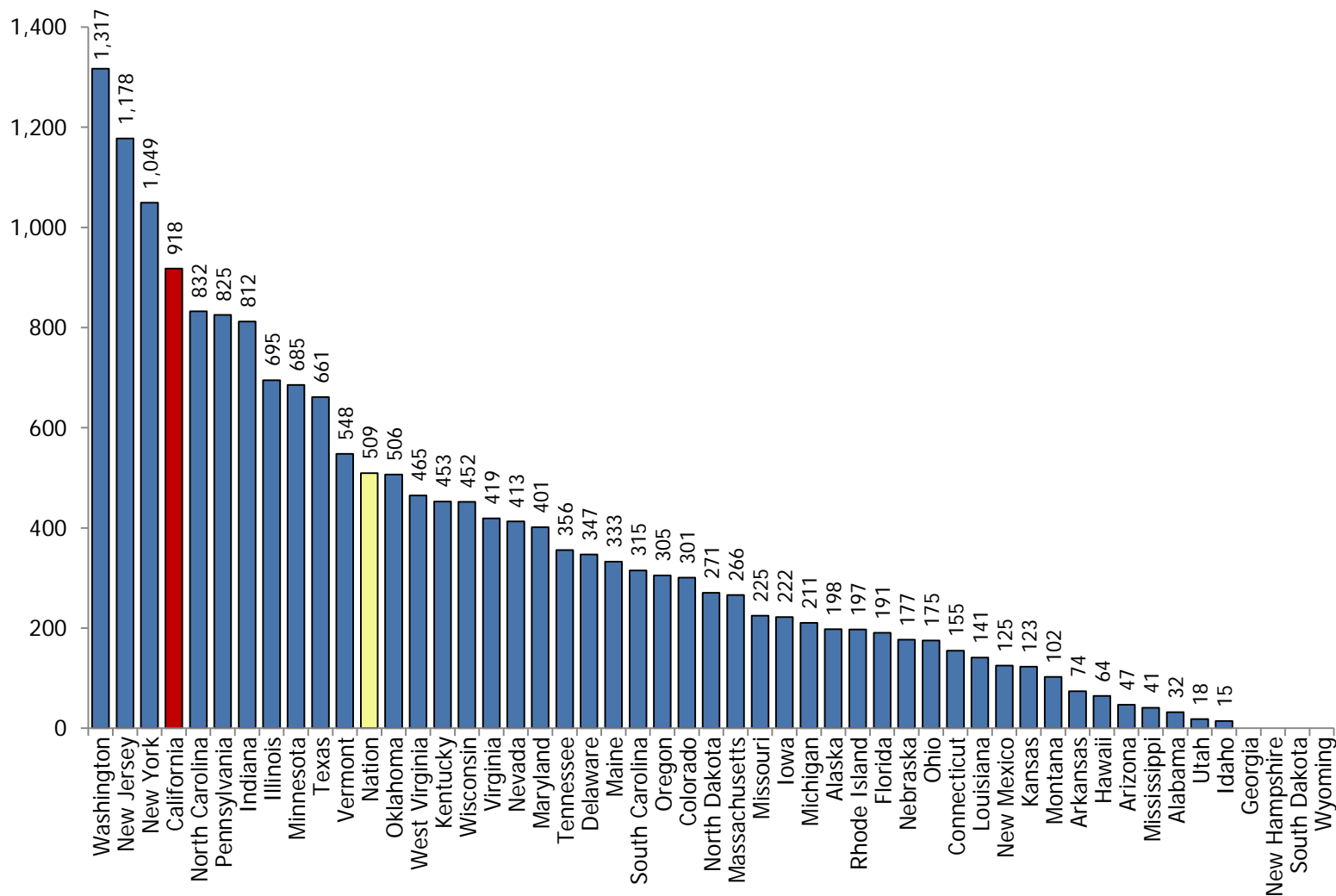
Net Tuition as a Percent of Public Higher Education Total Educational Revenue by State, FY 2014



Family Share of Public Higher Education Operating Revenues

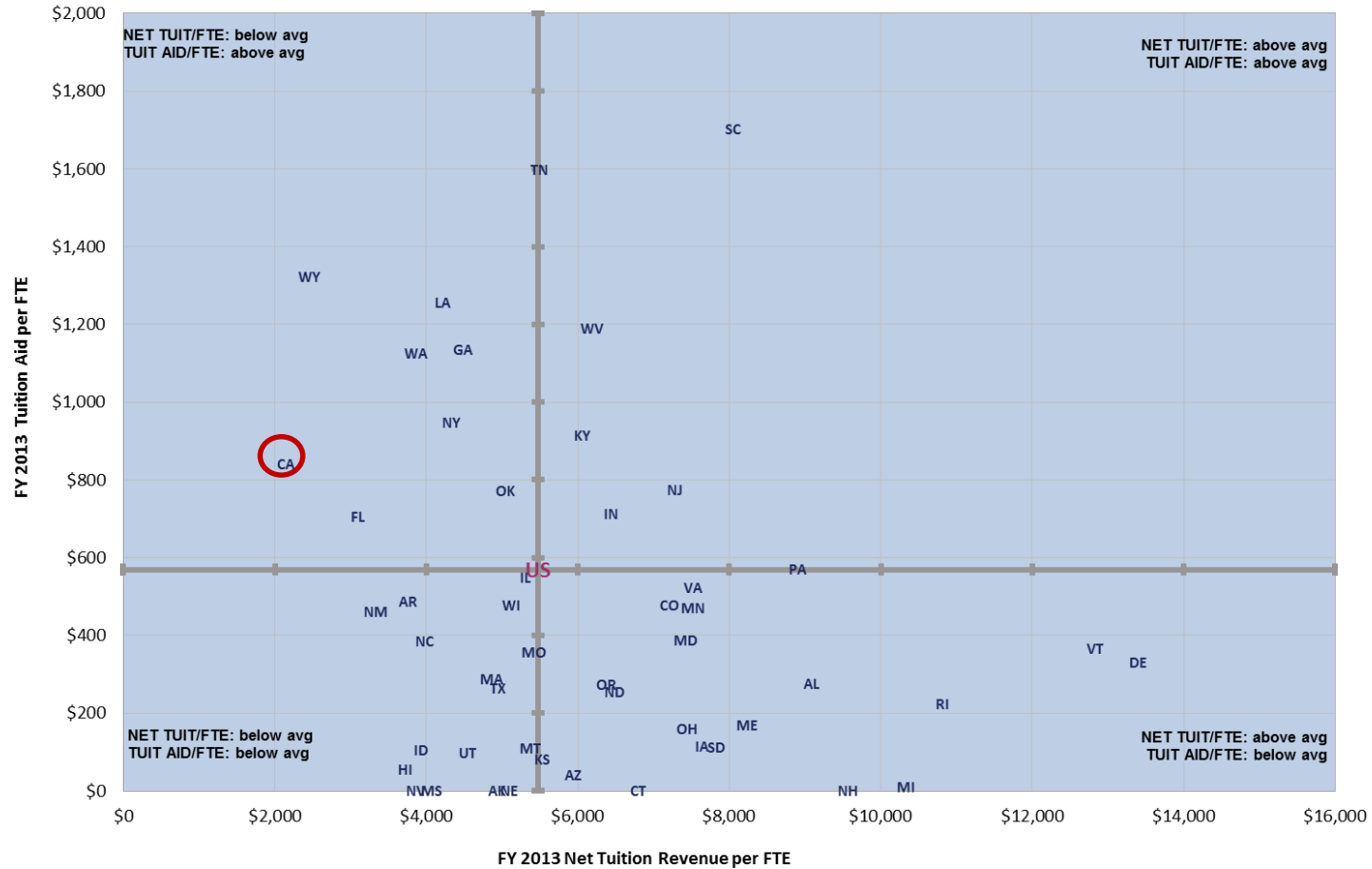


Estimated Need-based Undergraduate Grant Dollars per Undergraduate FTE, by State, 2012-13



Source: US Department of Education, NASSGAP 44th Annual Survey Report on State Sponsored Student Financial Aid

Net Tuition Revenue per FTE and State-Funded Tuition Aid per FTE by State, FY 2013 (Public Institutions Only)



Note: Figures are adjusted for inflation, public system enrollment mix, and state cost of living.

The Imperative of Improved Productivity

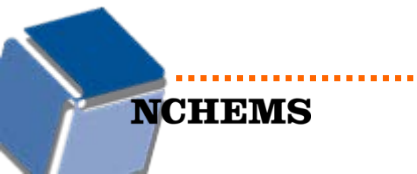
- The country – and most states – can't afford the desired increases in degree production doing business as usual
- Improvements in productivity will be necessary
- And there is evidence that productivity gains are possible



What Do We Mean By *Productivity*?

Simply put

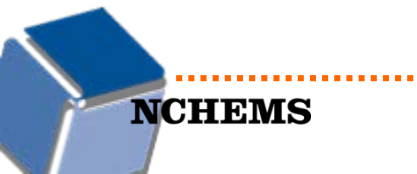
$$\text{Productivity} = \frac{\text{Outputs Produced}}{\text{Costs (Resources Utilized)}}$$



Productivity Means

- Increasing outputs
- Reducing costs

Without reducing access or quality



Productivity Does Not Mean

- Finding new revenue sources or shifting costs to students
- Becoming more selective and reducing access in the process



The objective is more graduates,
not a higher graduation rate.

Approaches to Improving Productivity

Productivity \uparrow if $\frac{\text{Outputs} \rightarrow}{\text{Costs} \downarrow}$

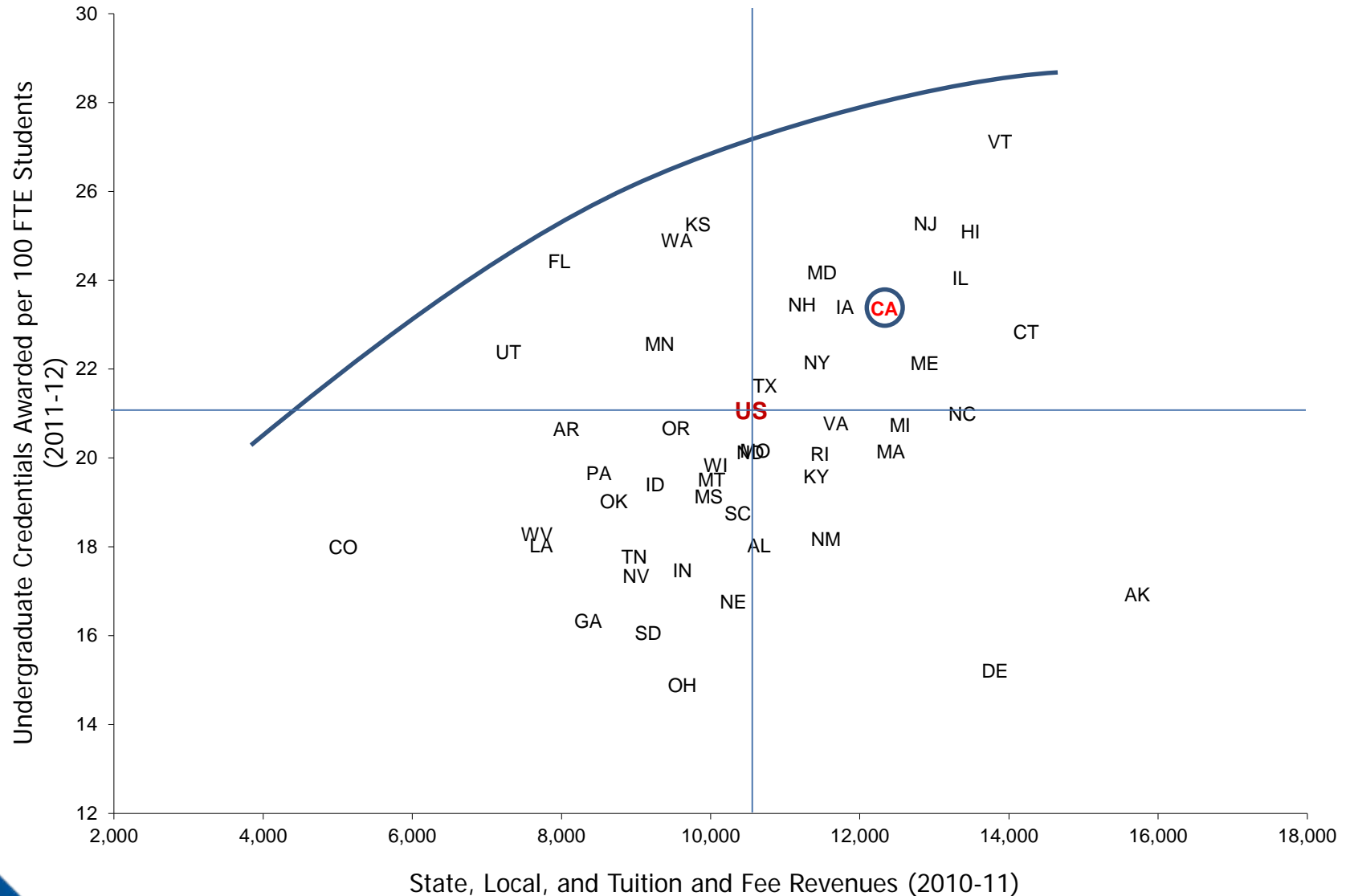
or

Productivity \uparrow if $\frac{\text{Outputs} \uparrow}{\text{Costs} \rightarrow}$

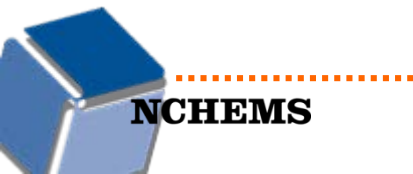
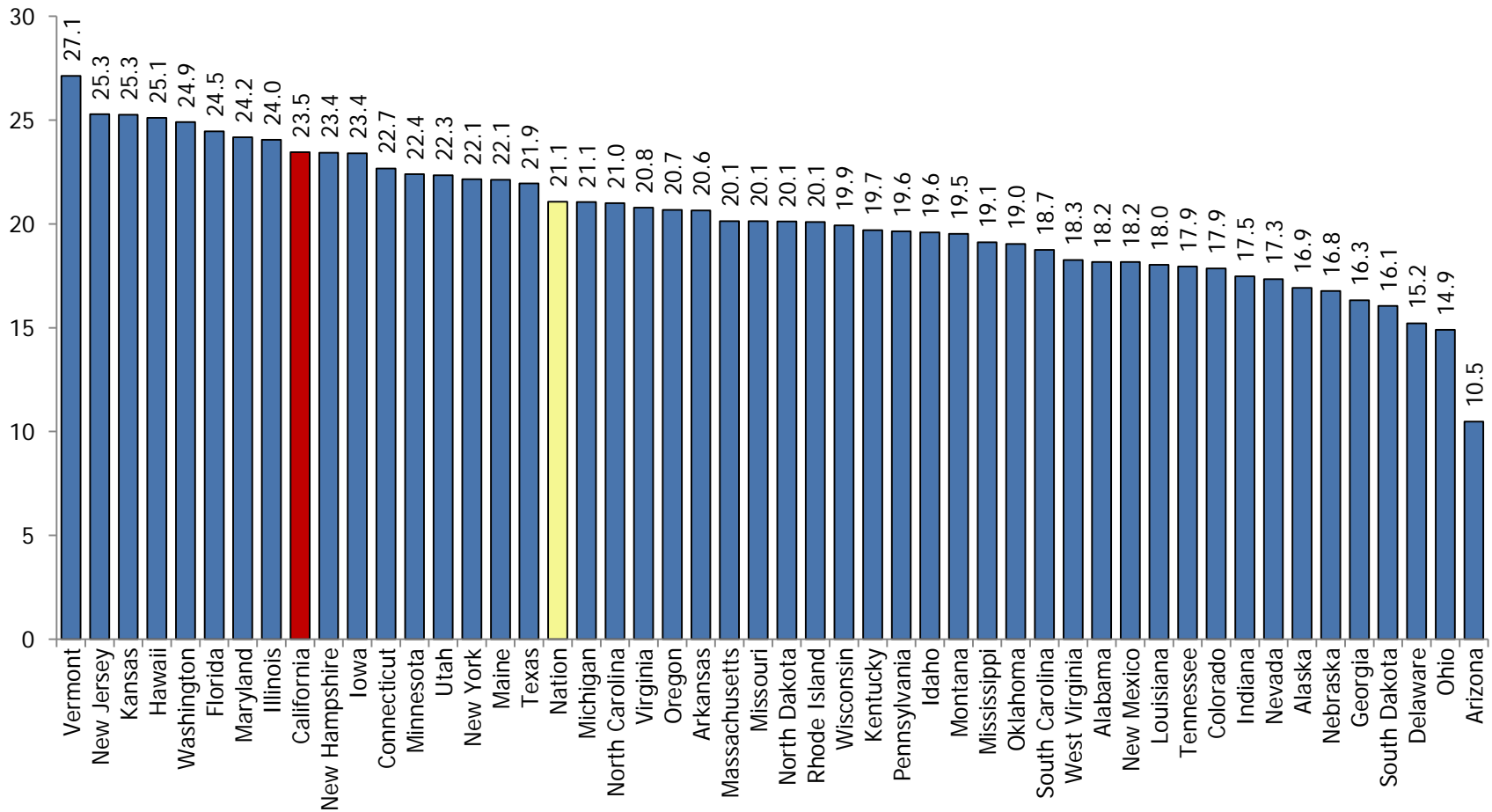
Approaches to Achieving Greater Productivity

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

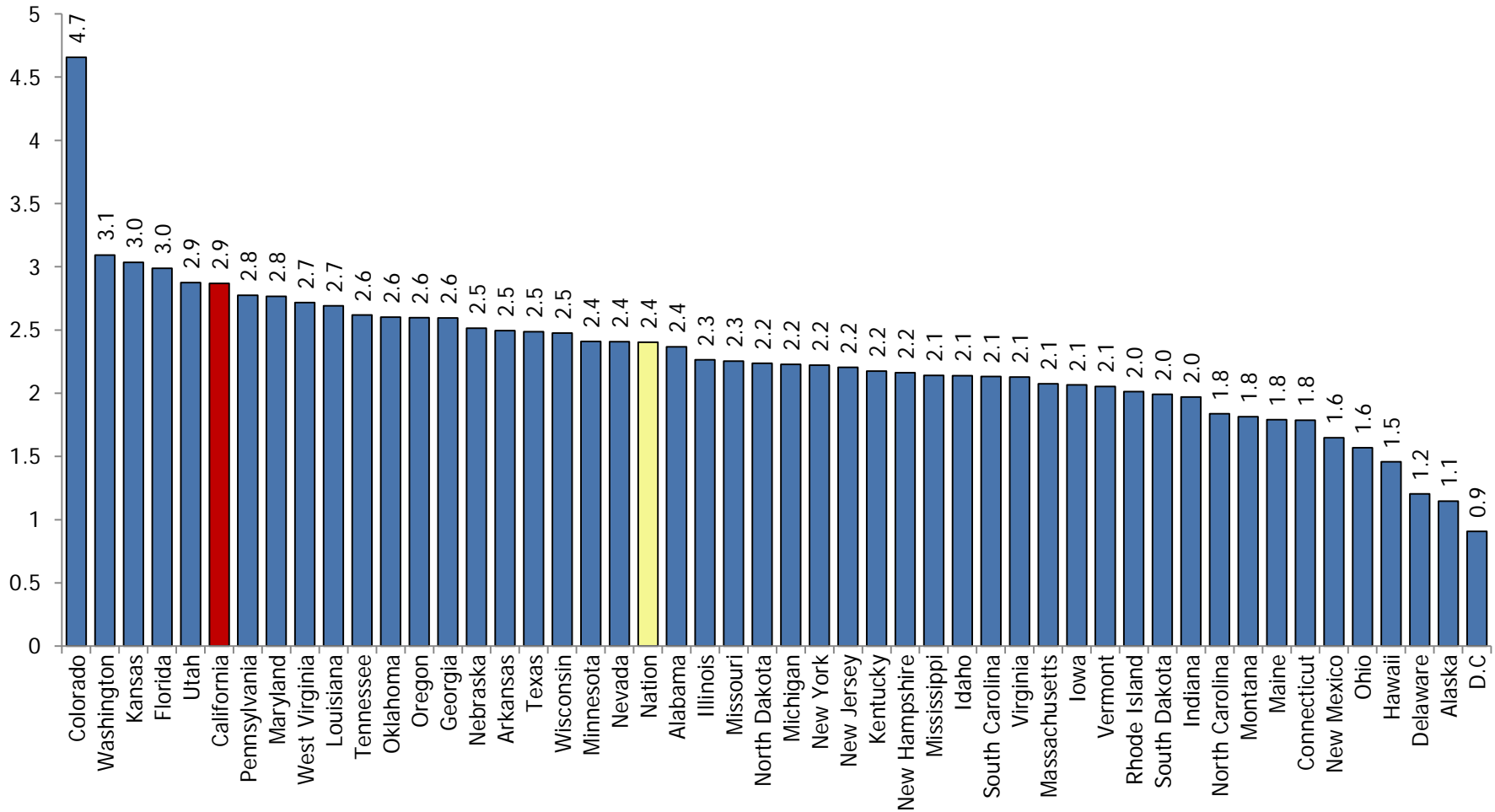
Public Bachelors and Masters Institutions: Undergraduate Credentials per 100 FTE Undergraduates and Total Funding per FTE Student



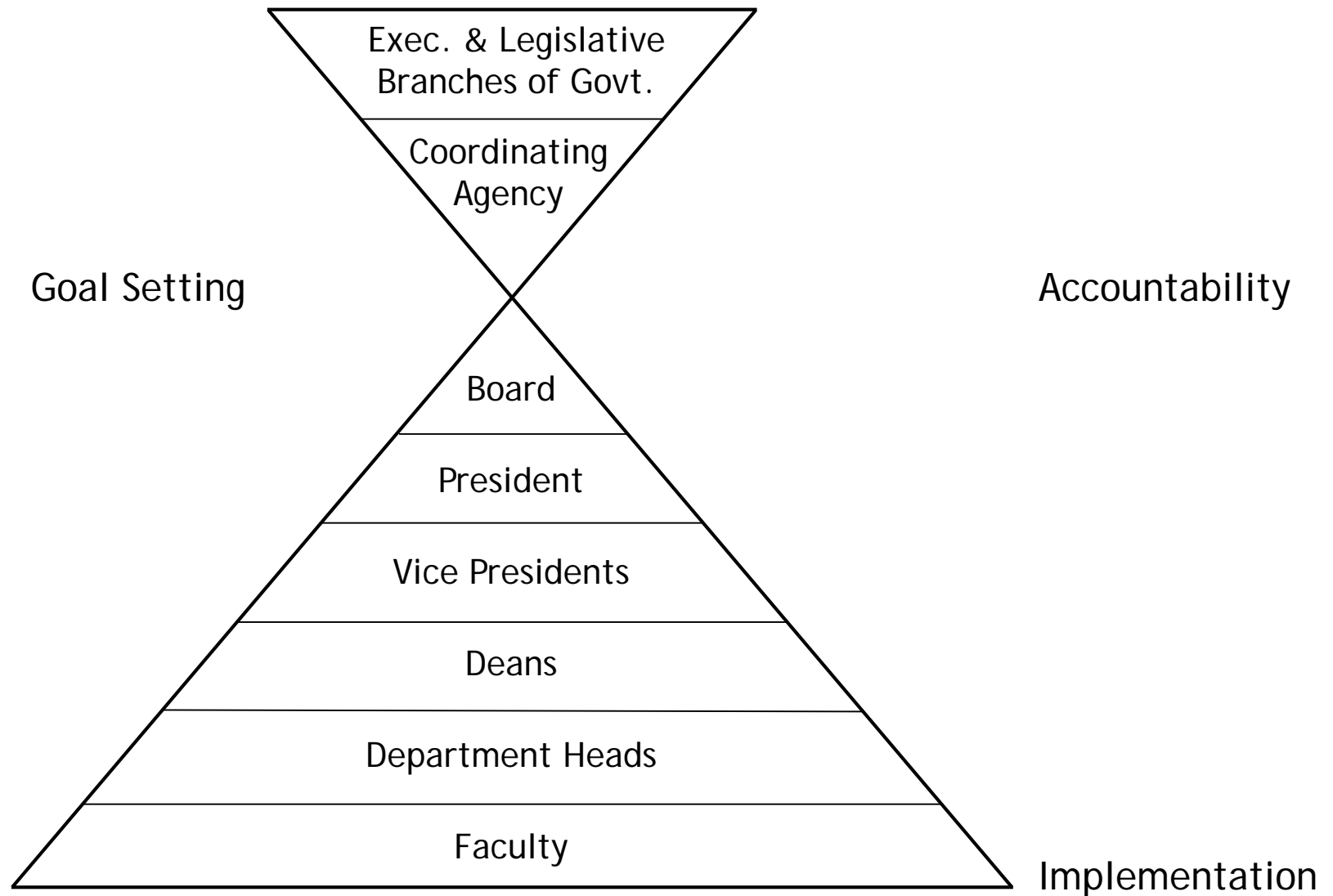
Undergraduate Awards per 100 FTE Undergraduates by State, Public Bachelors & Masters, 2011-12



Awards per \$100,000 of State & Local Appropriations and Tuition & Fees Revenues, 2010, Public Bachelors and Masters



The Hierarchical Realities



The system [education] is *bottom heavy* and *loosely coupled*. It is bottom heavy because the closer we get to the bottom of the pyramid, the closer we get to the factors that have the greatest effect on the program's success or failure. The system is loosely coupled because the ability of one level to control the behavior of another is weak and largely negative...

The skillful use of delegated control is central to making implementation work in bottom-heavy, loosely controlled systems. *When it becomes necessary to rely mainly on hierarchical control, regulation, and compliance to achieve results, the game is essentially lost.*

Richard F. Elmore, *Complexity and Control: What Legislators and Administrators Can Do About Implementing Public Policy*

