

FUNDING VIRGINIA COMMUNITY COLLEGES DURING A RECESSIONARY PERIOD

Implications of Utilizing an
Outcomes-Based Funding Model



Cathleen H. Cogdill, MBA, Ph.D.

Higher Education Funding in Jeopardy

- Great Recession (December 2007- June 2009)
 - Unemployment rising
 - Consumer spending dropped
 - Limited business investments
 - Dwindling tax revenue

- Public Good
 - Third largest component of total state funding
 - Population shifts create service challenges
 - FTE student funding at lowest level (2008-2013)
 - Tennessee dropped 31.9%¹
 - Virginia dropped 28.3%¹
 - Reinvestment period slow and inconsistent

¹ *State Higher Education Finance: FY2014*. Boulder: State Higher Education Executive Officers Association.

Literature

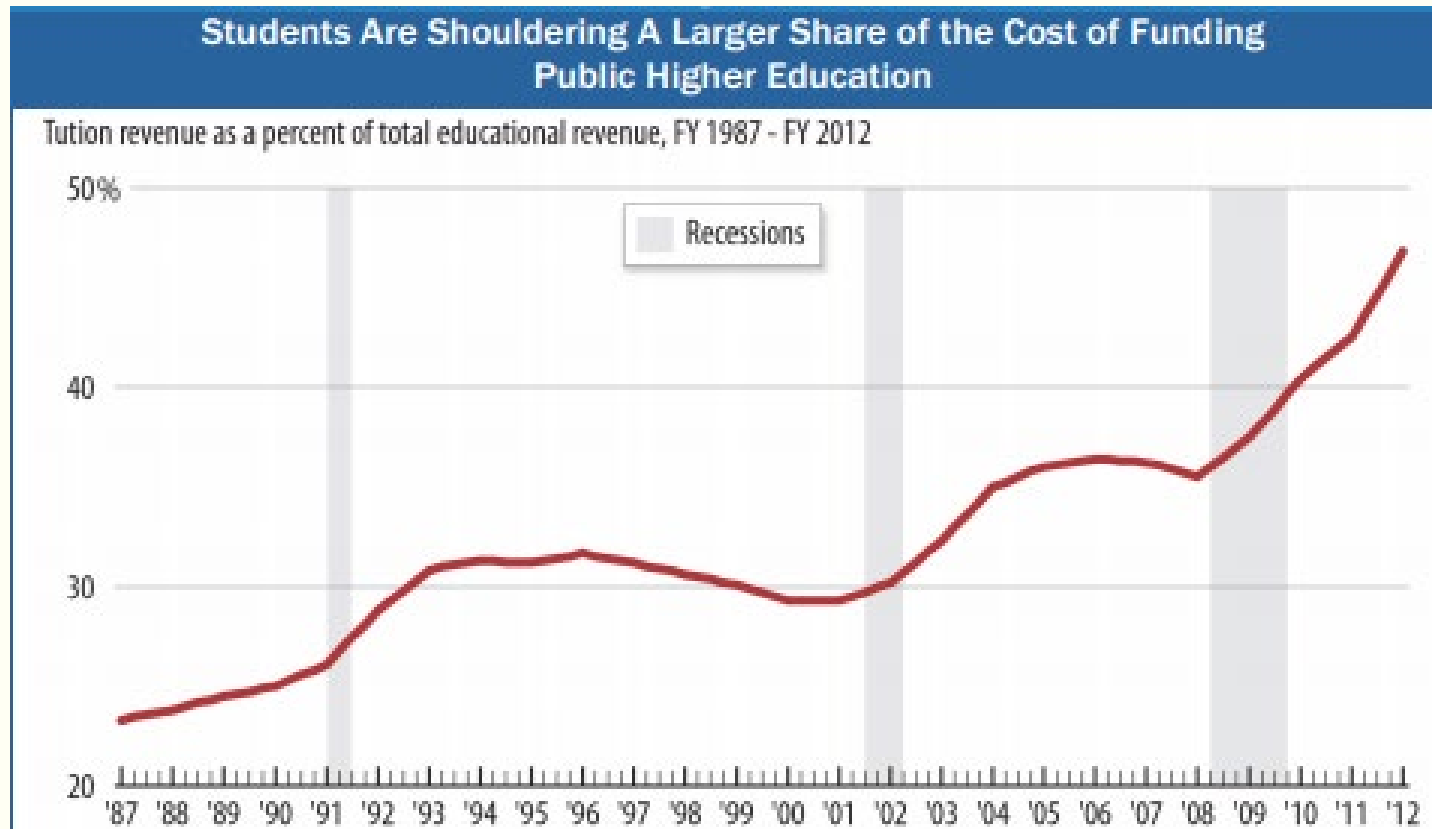
Strengths

- Improve college performance in persistence, graduation, completion
- Positive associations allowing flexibility and accountability
- Does not penalize failure to achieve pre-determined goals
- Framework for government with ongoing policy discussion for higher education
- The model is adjustable to account for new outcomes or a different policy focus

Challenges

- HOW to achieve success and excellence
- Gaming the system could inflate progress
- Evidence of improvement; not money
- Consolidated majors
- Balance stability and volatility
- Heavily quantitative; quality?
- Outcomes function of input

Impact on Students

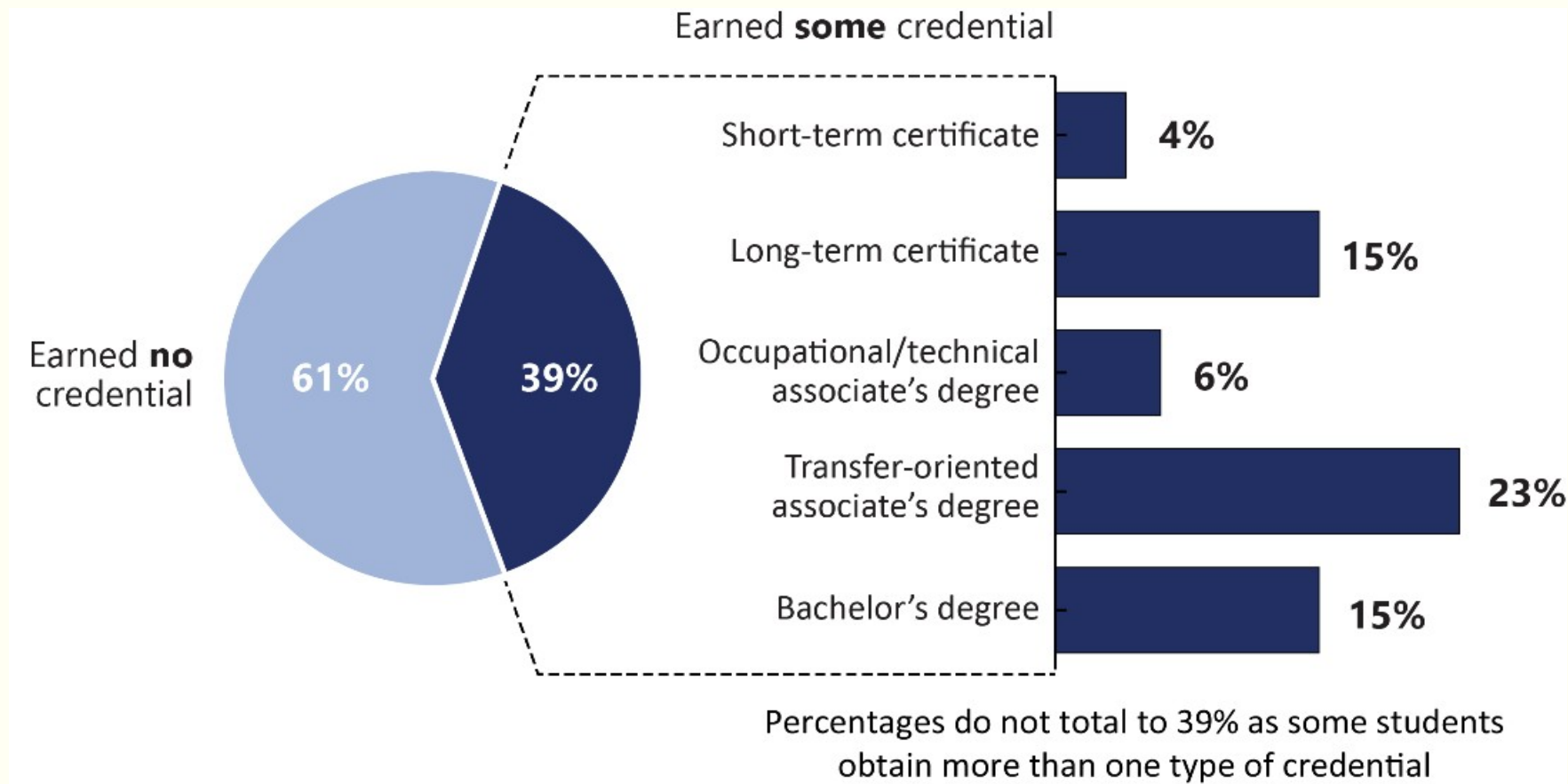


Students are Shouldering A Larger Share of the Cost of Funding Public Higher Education. Source: State Higher Education Financing FY 2012, State Higher Education Executive Office Association. Note: Total educational revenue combines net tuition with state and local appropriations for higher education, excluding medical students, and represents the vast majority of instructional funding. Retrieved from <https://tcf.org/content/commentary/graph-as-state-funding-for-higher-education-collapses-students-pay-the-difference/>

Statement of the Problem

- Funding remains unstable with slow reinvestment
- Current focus on graduation rates
- Federal expectation
 - 2009 American Graduation Initiative
 - AACC endorsed
 - Community College Challenge Fund
 - College Access and Completion Fund
 - Online Skills Laboratory
 - *America's College Promise*
- Student debt rising
- Tuition three times rate of inflation
- Completers vs. noncompleters

Majority of community college students did not earn a community college credential or bachelor's degree

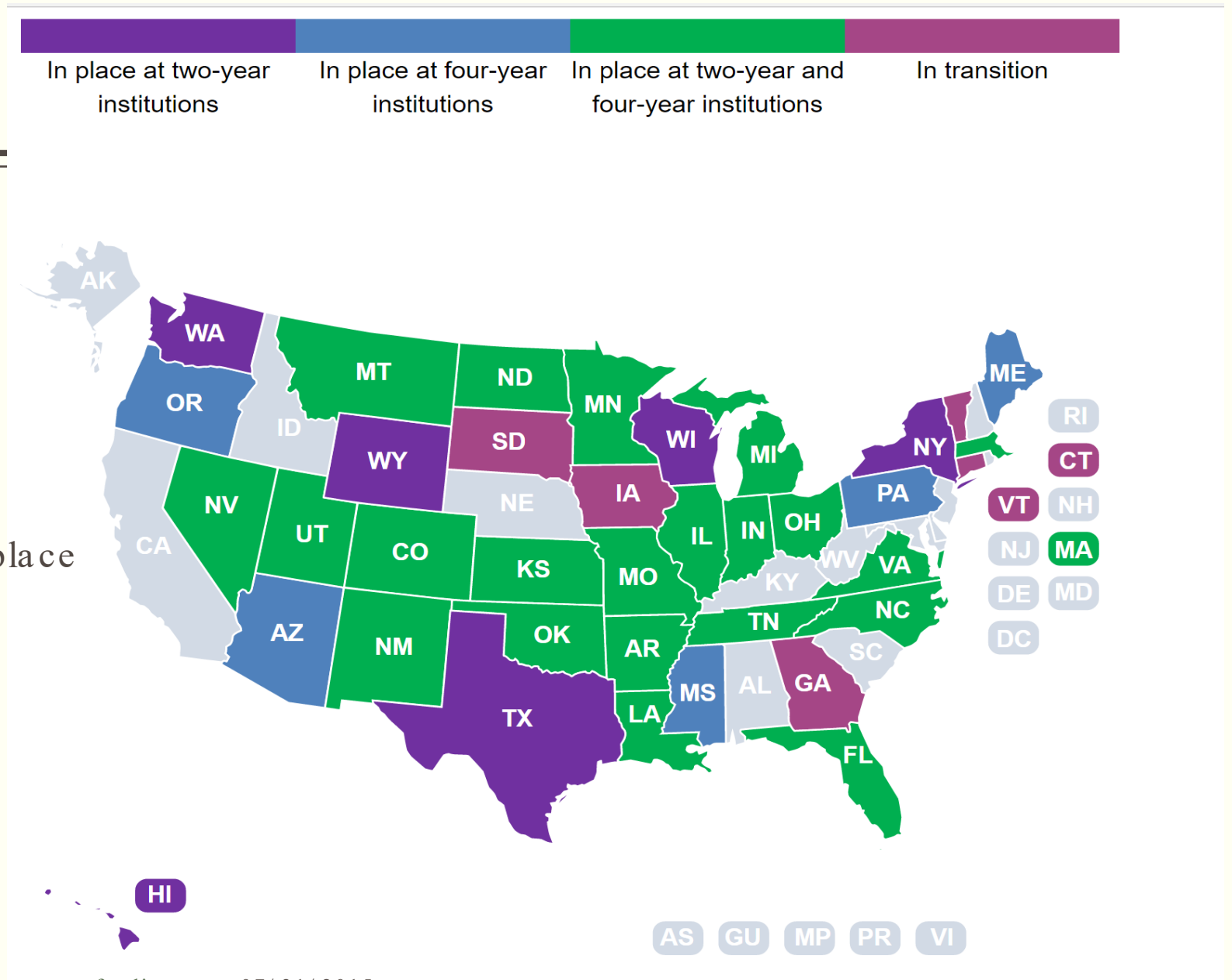


SOURCE: JLARC cohort analysis of data on individual community college students maintained by SCHEV.

NOTE: Includes students who transferred to four-year institutions and obtained a bachelor's degree. Students in the JLARC cohort analysis left college before several VCCS student success initiatives were implemented. Student success rates may be higher for a cohort entering community college after these initiatives were begun. Analysis does not include students in non-credit programs, such as the Workforce Credentials Grant program.

PERFORMANCE-BASED FUNDING FOR HIGHER EDUCATION

States Respond
32 have policy or formula in place
5 transitioning



Performance Funding in Community Colleges

Tennessee

13 colleges

THEC

TBR

1978

Virginia

23 colleges

SCHEV

VCCS

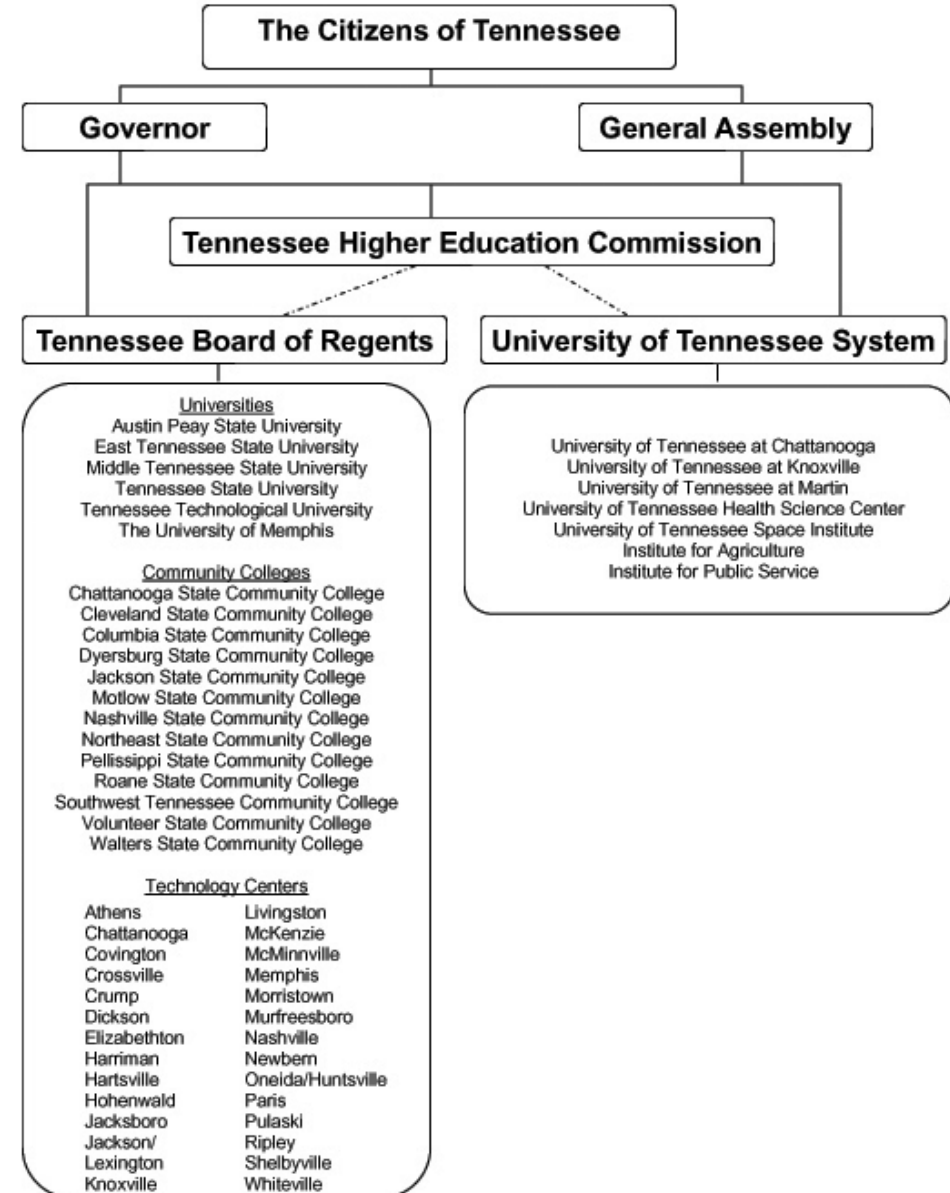
2005

Tennessee

TBR largest higher education governing system

- 40 postsecondary institutions with 200+ teaching locations
- 13 community colleges
- 27 colleges of applied technology

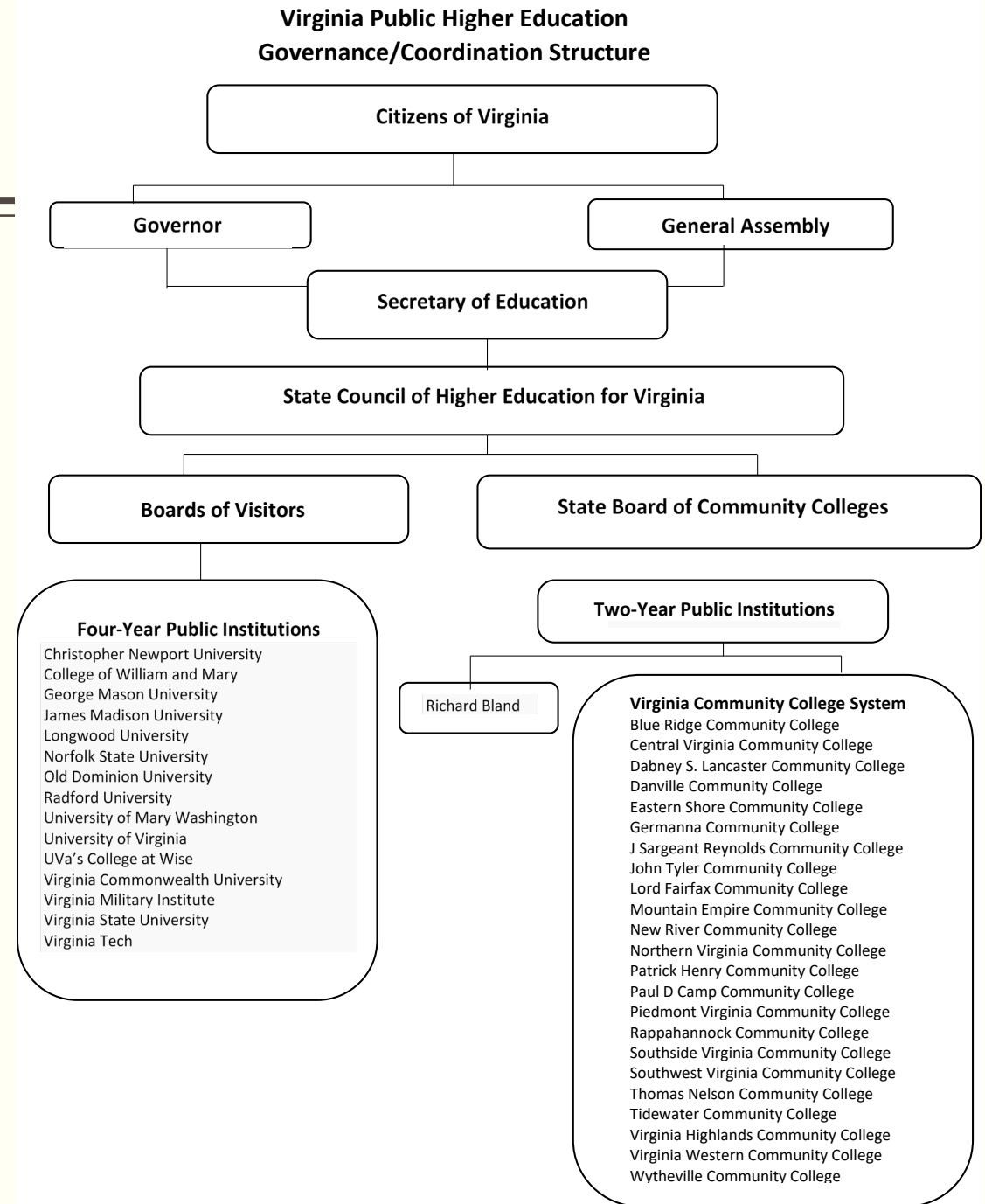
Tennessee Public Higher Education Governance/Coordination Structure



Virginia

SCHEV coordinating entity

- 15 postsecondary institutions
- 23 community colleges
- 1 junior college



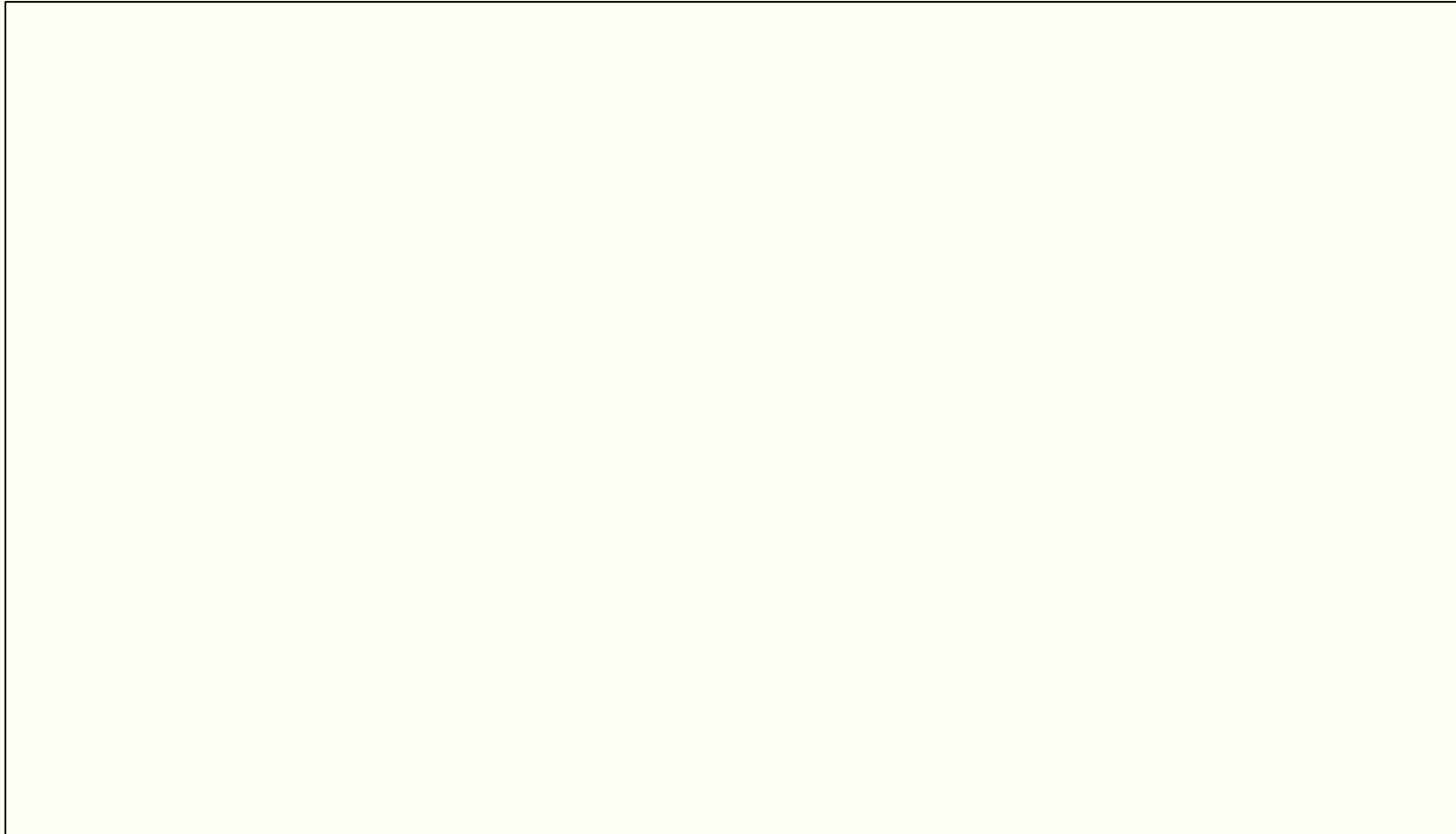
Tennessee

Funding Amount	Metrics	Documentation
<p>After a base amount is set aside for operational support, 100% of state funding is allocated based on institutional outcome</p>	<p>Adults (over 25) and low-income students completing any of the metrics are more heavily weighted. Additional weights are applied to each outcome depending on the priority and institutional mission.</p> <p><u>Community College Metrics</u></p> <ul style="list-style-type: none"> • Student accumulating: 12, 24, and 36 hours • Dual enrolled students • Associates degrees • Graduates placed in jobs • Remedial and development success • Transfers out with 12 credit hours • Workforce training (contact hours) • Award per 100 FTEs 	<p>2010 Complete College Tennessee Act</p> <p>Tennessee Higher Education Commission Fiscal Affairs</p>

Virginia

Funding Amount	Metrics	Documentation
<p>Under the incentive-funding model, institutions that meet certain performance targets are able to retain unexpended funds.</p>	<p>Incentive funding metrics include:</p> <ul style="list-style-type: none">• In-State Enrollment• Underrepresented enrollment• Degree awards• Affordability• Need-based borrowing• Tuition assessment• SACS program review• Degrees per FTE faculty• Retention rate• Degrees per FTE students• Transfer agreements• Degree transfers• Dual enrollment• Research expenditures• Patents and licenses• K-12 partnerships• Campus Safety and Security	<p>Virginia Higher Education Opportunity Act of 2011</p>

Virginia's Budget Process



Research Questions

To evaluate the funding differences between an outcomes-based funding model and a base adequacy model, the following questions were studied:

1. To what extent would applying Virginia's 2010 enrollment-based adequacy model to Virginia's largest community college's 2007-2009 student data have impacted VCCS funding for the 2008-2010 biennium in that region of the Commonwealth?
2. In comparison to the actual VCCS enrollment-based adequacy model, to what extent would applying the 2015-2020 THEC Outcomes-Based Funding Formula for community colleges have changed the actual funding for VCCS' 2008-2010 biennium?

Data Collection

- Achieving the Dream initiative (2006-2009)
- Nashville State Community College
- Star Community College

Data Set

2007-2009 Data

Academic Year 1:
 Summer 2006
 Fall 2006
 Spring 2007

Academic Year 2:
 Summer 2007
 Fall 2007
 Spring 2008

Academic Year 3:
 Summer 2008
 Fall 2008
 Spring 2009

	Nashville State Community College	Star Community College
Data Set Weighted Outcomes		
Students Accumulating 12 hours	3%	3%
Students Accumulating 24 hours	5%	5%
Students Accumulating 36 hours	7%	7%
Dual Enrollment	15%	-
Associates	22.5%	22.5%
1-2 Year Certificates	10%	10%
<1yr Certificates	10%	10%
Job Placements	7.5%	-
Transfers Out with 12 hours	10%	-
Workforce Training (Contact Hours)	5%	-
Awards per 100 FTE	5%	5%
Total	100%	62.5%

Population and Sample

	NSCC	SCC
Total Enrollment	10,192	52,078
Part Time	42.47%	64.60%
Full Time	57.53%	35.40%
Student Characteristics		
Gender		
Male	40.88%	48.92%
Female	59.12%	51.08%
Race/ Ethnicity		
African Am	27.13%	16.49%
Asian/ Pacific	3.20%	15.06%
Hispanic	5.84%	20.65%
Native Am	0.29%	.26%
White	58.51%	38.85%
Other	5.03%	8.70%
Total Minority	36.46%	52.45%

Note: American Association of Community Colleges, 2016 using IPEDS College Data 2015-2016. No statistically significant difference.

Demographic Proportions

Student Characteristic	Nashville State Community College	Star Community College*
Total Enrollment	10,192	12,880
Part Time	42.47%	39.64%
Full Time	57.53%	60.36%
Gender		
Male	40.88%	53.28%
Female	59.12%	46.72%
Race/ Ethnicity		
African American	27.13%	9.73%
Asian/ Pacific	3.20%	23.32%
Hispanic	5.84%	16.58%
Native American	0.29%	1.14%
White	58.51%	40.83%
Other	5.03%	8.39%
Total Minority	36.46%	50.77%

*unduplicated headcount, Fall 2015

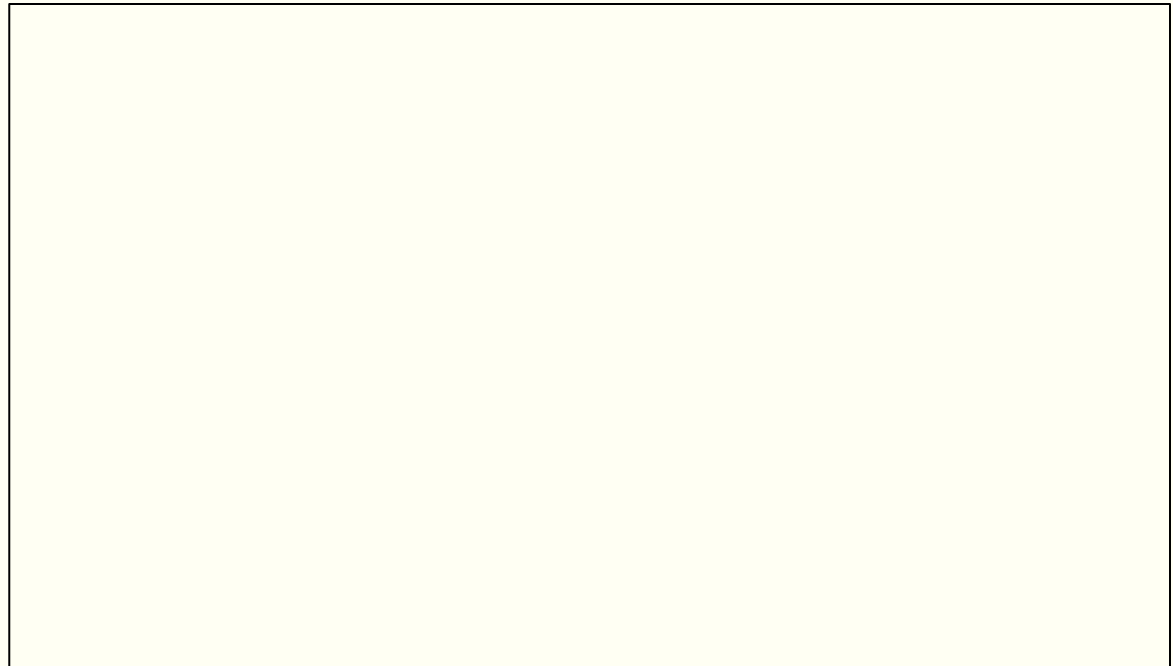
Enrollment Data for Academic Years 2006-2009

Category	2006-2007	2007-2008	2008-2009
Race			
White	2828	3104	3003
Black	668	728	741
Native American	94	85	67
Asian	1731	1851	1839
Hispanic	1166	1289	1303
Other	548	618	642
Gender			
Male	3682	4087	4054
Female	3353	3588	3541
Status			
Full-time	4293	4721	4651
Part-time	2742	2954	2944

Note. Students' FTIC status ranges from Summer 2000 to Spring 2007. Includes Pell data for academic years 2006-07 through 2008-09, and placement data from Fall 2006 to Spring 2009. Source: OIR, IRIS Files, VCCS Pell Data, and VCCS Placement Data.

VCCS Budget Development

- **Agency budget preparation phase**
 - VCCS analyzes system programs and needs through a strategic planning process which includes review of mission and how each college serves its students
- **Budget development phase**
 - VCCS issues a *Fiscal Year Preliminary Resource Distribution* memorandum with guidelines/ direction on financial model's allocation methods.
 - System Budget Office issues instructions initiatives and expectations for resource requests to Community College President
 - VCCS sends request for funding to Department of Planning and Budget
- **Legislative action phase**
- **Governor's review phase**
- **Budget execution phase**
 - When received each college receives its allocation with the Fiscal Year Validated Resource Distribution



Manual Calculations

Calculation for the Number of Teaching Faculty for the 3-Year Average In-State Full-Time Enrollments (FTE)

College	2006-2007 In-State FTEs	2007-2008 In-State FTEs	2008-2009 In-State FTEs	3-Year Average In-State FTEs
STAR	7,035	7,675	7,595	7,435
Total	98,535	103,896	111,070	104,500

Number of Faculty Computed Under Joint Committee Guidelines Based on Actual Enrollment, by Discipline Cluster

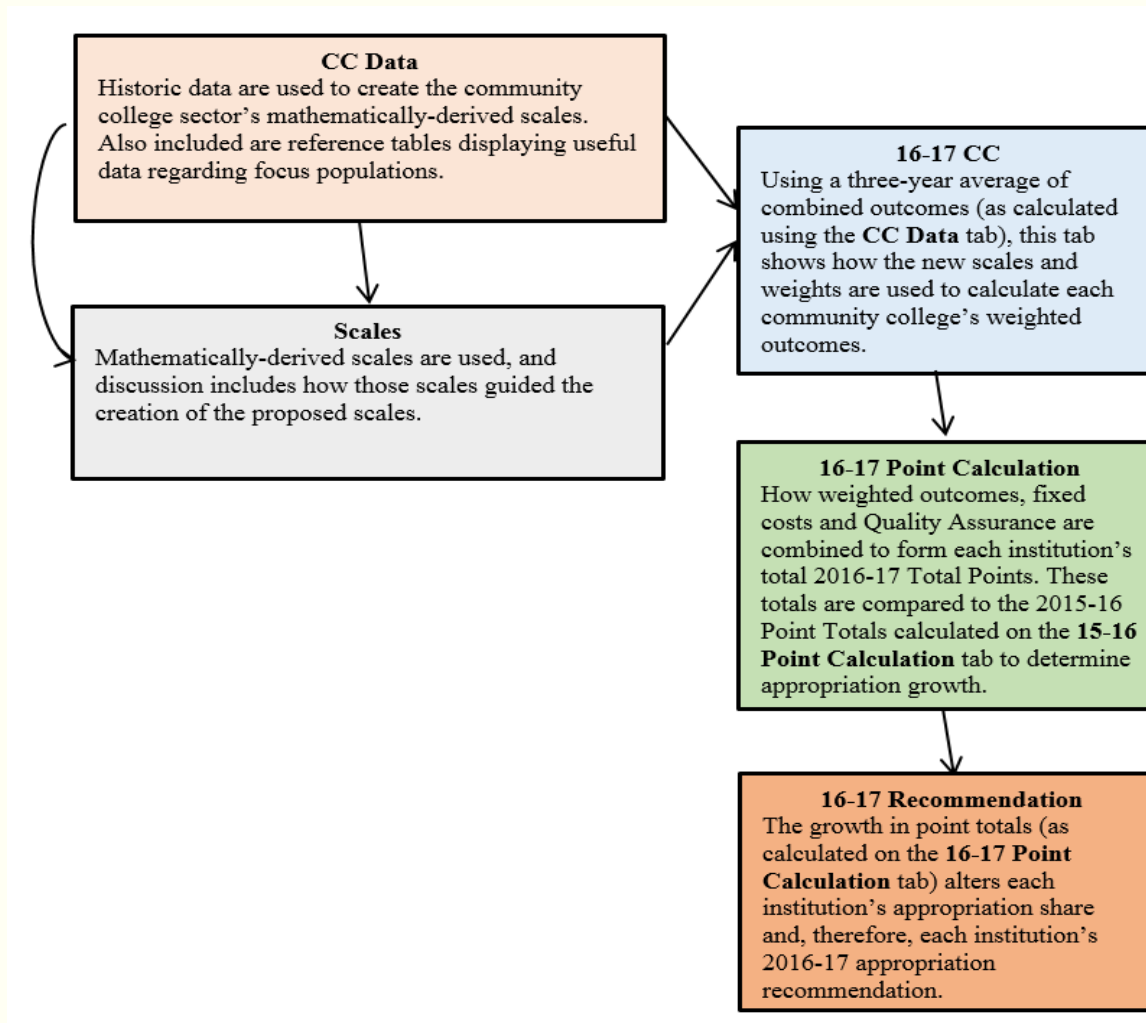
	FY07			FY08			FY09			3-Year Average	
	FTEs	Faculty	Joint Ratio	FTEs	Faculty	Joint Ratio	FTEs	Faculty	Joint Ratio	FTEs	Faculty
STAR											
	7,035	234.30	18.29	7,675	253.26	18.25	7,595	266.17	18.26	7,435	407.08
Total											
	96,856	5,296.79	18.29	101,890	5,583.27	18.25	108,573	5,946.48	18.26	102,439	5,608.69

VCCS Validated Resource Distribution FY 10

General Funds	Amount	Distribution
Instruction	17,115,001	
Academic Support	2,898,174	
Student Services	2,330,819	
Plant Operations and Maintenance	3,609,575	
Institutional Support	5,272,613	
Funding @ 100% of Joint Subcommittee Guidelines - All FTEs	31,226,183	
Efficiency Factor	1.1030	
Funding Adjusted for Efficiency Factor	28,310,229	
Percentage of In-State FTES	90.92%	
Funding Allocated for In-State FTES	25,739,660	
Remove the NGF Portion (48%)	(12,355,037)	
GF Funding Subtotal Before Scaling to Available GF Resources	13,384,623	
Systemwide Percentage Applied to Scale Down to Available GF	87.30%	
Guideline Allocated GF Subtotal		11,685,317

Note. T&R faculty pos. 853.92. Salary average \$47,264. Efficiency factor 1.1030.

Outcomes-Based Model



Focus Population per Academic Year

Population	Star	2006-07	2007-08	2008-09
One Focus Population Only	Students Accumulating 12 hours	711	699	600
	Students Accumulating 24 hours	869	945	867
	Students Accumulating 36 hours	2,360	2,509	2,589
	Associate's	3,773	3,965	3,890
	1- to 2-Year Certificates	52	56	54
	< 1-Year Certificates	115	131	112
Two Focus Populations Only	Students Accumulating 12 hours	159	176	144
	Students Accumulating 24 hours	270	372	330
	Students Accumulating 36 hours	902	946	1,054
	Associate's	1,306	1,449	1,484
	1- to 2-Year Certificates	6	17	21
	< 1-Year Certificates	19	28	23
All Three Focus Populations	Students Accumulating 12 hours	827	873	729
	Students Accumulating 24 hours	1,191	1,386	1,282
	Students Accumulating 36 hours	3,356	3,873	4,131
	Associate's	5,175	5,889	5,914
	1- to 2-Year Certificates	59	73	70
	< 1-Year Certificates	140	170	158

2015-16 Total Point Calculations

Community Colleges	Weighted Outcomes	Fixed Cost	Fixed Cost Share	Fixed Cost Points	Point Subtotal	Quality Assurance	Quality Assurance Points	2015-2016 Total
Chattanooga	382	\$9,576,285	2.30%	166	547	93.0	28	575
Cleveland	175	4,051,608	0.97%	70	245	92.0	12	257
Columbia	275	4,867,058	1.17%	84	359	88.0	17	376
Dyersburg	136	3,333,057	0.80%	58	194	95.0	10	204
Jackson	244	4,414,729	1.06%	76	320	93.0	16	336
Motlow	238	4,137,921	1.00%	72	309	80.0	12	323
STAR	3,250	6,042,490	1.45%	104	3,355	96.0	176	3,530
Northeast	326	6,343,416	1.53%	110	436	94.0	22	458
Pellissippi	391	8,679,450	2.09%	150	541	96.0	28	569
Roane	330	8,298,396	2.00%	143	474	88.0	23	496
Southwest	559	13,135,976	3.16%	227	786	91.0	39	825
Volunteer	367	5,484,013	1.32%	95	462	85.0	21	483
Walters	352	9,675,928	2.33%	167	519	98.0	28	547
Subtotal	7,025	\$88,040,327	21.18%	1,522	8,547		434	8,981

2016-17 Total Appropriation Request

2015-16 Formula Calculation	\$1,287,018,400
2015-16 Recurring Appropriations	\$814,318,500
2016-17 Point Growth	0.00%
2016-17 Salary Increase	0.00%
2016-17 Formula Calculation	\$1,287,018,400
2016-17 New Funding Rec	\$0
2016-17 Total Appropriation Request	\$814,318,500

$$\$814,318,500 \times 2.08\% = \$16,937,825$$

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1. To what extent would applying Virginia's 2010 enrollment-based adequacy model to Virginia's largest community college's 2007-2009 student data have impacted VCCS funding for the 2008-2010 biennium in that region of the Commonwealth?

Answer: **\$11,685,317**

Research Questions

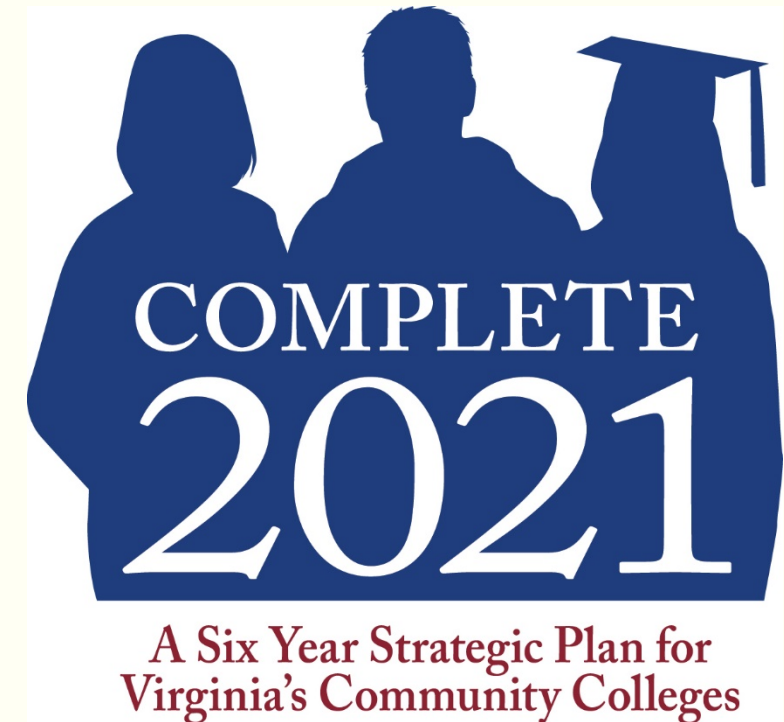
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2. In comparison to the actual VCCS enrollment-based adequacy model, to what extent would applying the 2015-2020 THEC Outcomes-Based Funding Formula for community colleges have changed the actual funding for VCCS' 2008-2010 biennium?

Answer: \$16,937,825 – 11,685,317 = **\$5,252,508**

Complete 2021 Priorities

1. Triple Community College Degree, Diploma and Certificate Completion
2. Address Virginia's Hiring Challenge
3. Ensure College Affordability and Transfer Success
4. Expand Institutional and Learning Analytics to Support Data-Informed Decision Making
5. Increase Faculty and Staff Salaries
6. Increase Educational Attainment in Rural Virginia for Economic Prosperity
7. Improve Efficiency and Effectiveness of Administrative Services to Focus Resources on Mission-Critical Program

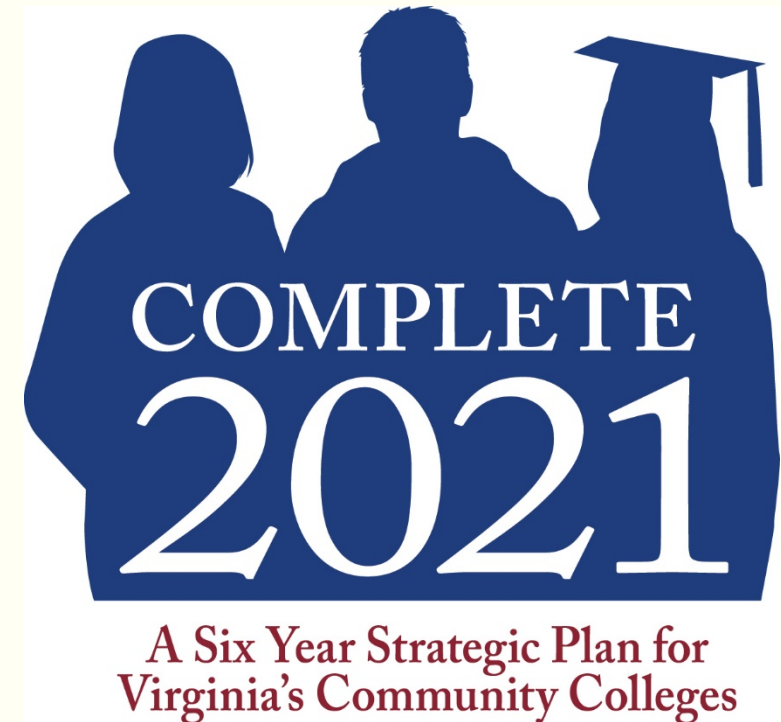


Complete 2021 Priorities

Triple Community College Degree, Diploma and Certificate Completion

- a) Create Structured Pathways to Success
- b) Implement Stackable Credits
- c) Improve student readiness and onboarding
- d) Increase Change Management Capacity among Campus Leaders
- e) Invest in Outcomes-Based Funding
- f) Establish Veterans Advising Programs
- g) Increase Community College Designations as Cybersecurity Institutions of Excellence

\$2.42 million FY 17 \$2.02 million FY 18

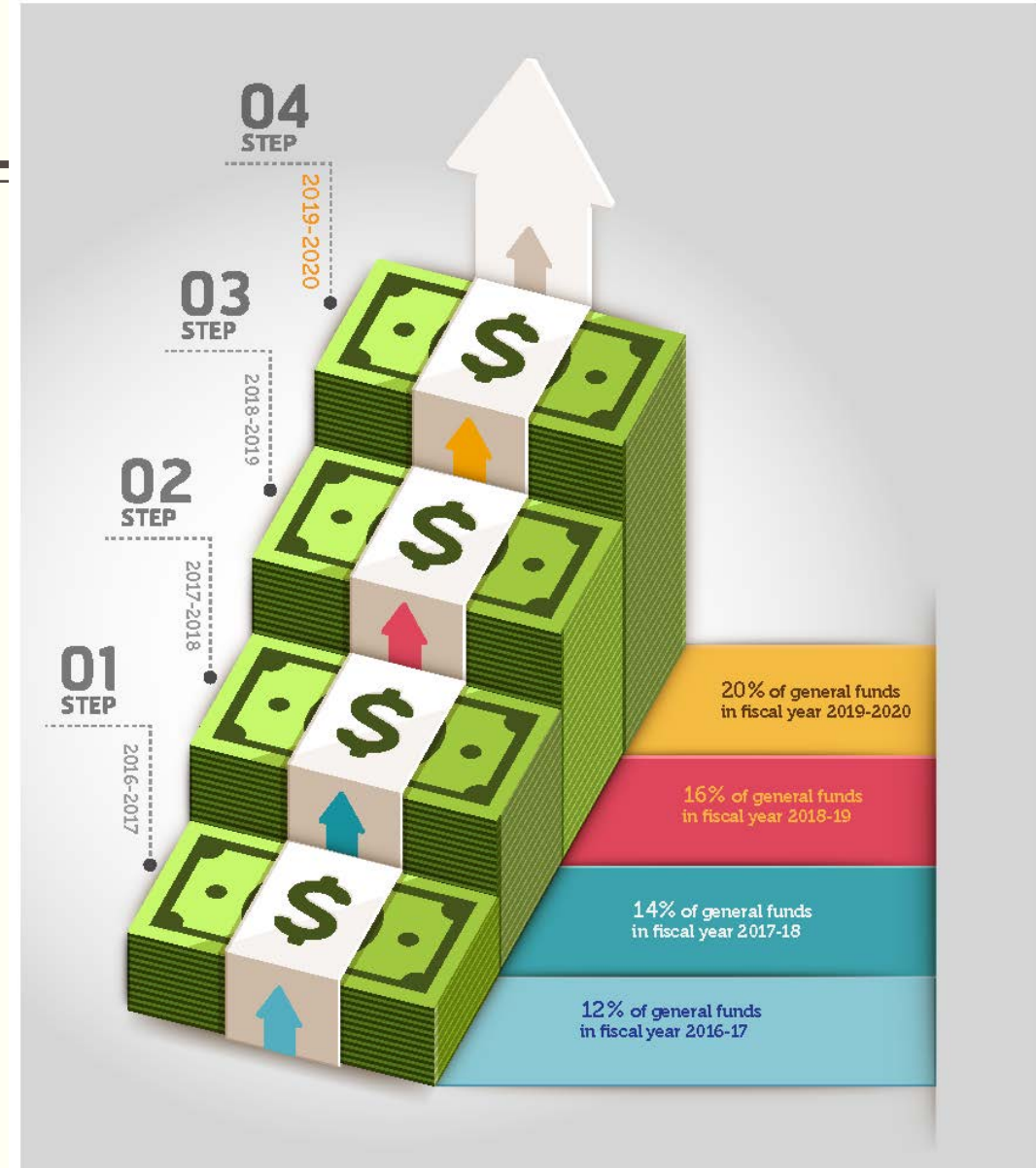


Virginia Point System

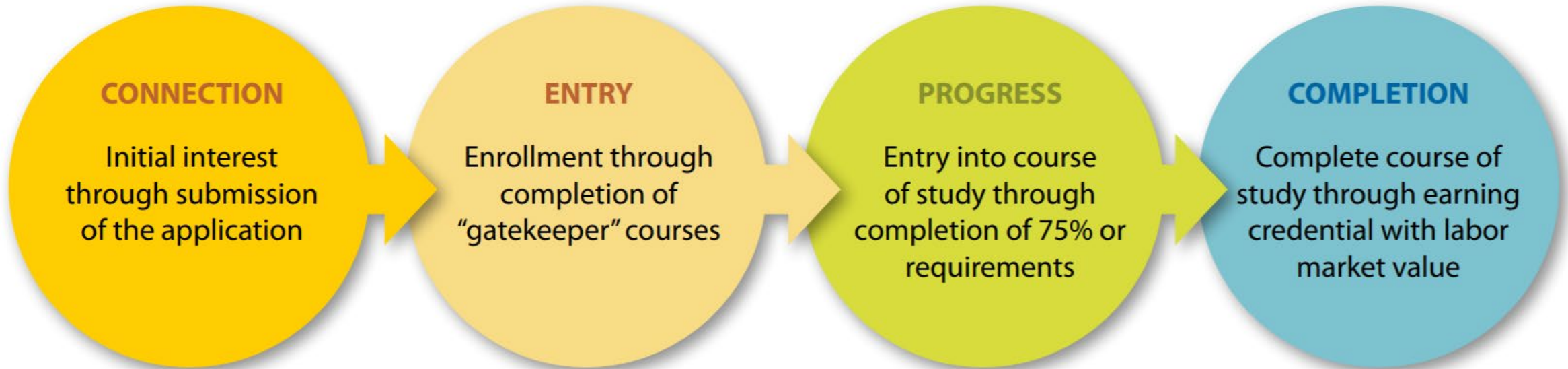
Phased in implementation
FY 2017 – FY 2020

Metrics include:

- Completion of College-Level Math
- Completion of College-Level English
- Retention
- Credit Hour Accumulation
- Earning Awards
- Transfer



Loss/Momentum Framework



Source: Adapted from Preventing Loss, Creating Momentum Framework, Rassen, Chaplot, Jenkins, & Johnstone, 2013

VA Performance Metrics Dashboard- ENTRY

Performance Funding Metric	Metric Definition	Points Earned Per Student	Cohort
Mathematics (Developmental)	Number of developmental math cohort students who successfully completed a college-level math course within 4 semesters of their first enrollment	0.5	Fall FTIC students enrolled in any associate degree or diploma program in the fall or spring of the same academic year (who took the VPT and did not place out of diagnostic modules 1-5)
Mathematics (College Ready)	Number of college-ready math cohort students who successfully completed a college-level math course within 3 semesters of their first enrollment	0.5	Fall FTIC students enrolled in any associate degree or diploma program in the fall or spring of the same academic year (who placed out of diagnostic modules 1-5 or did not take the VPT)
English (Developmental)	Number of developmental English cohort students who successfully completed a college-level English course within 4 semesters of their first enrollment	0.5	Fall FTIC students enrolled in any associate degree or diploma program in the fall or spring of the same academic year (who took the VPT and placed into ENF 1 or ENF 2)
English (College Ready)	Number of college-ready English cohort students who successfully completed a college-level English course within 3 semesters of their first enrollment	0.5	Fall FTIC students enrolled in any associate degree or diploma program in the fall or spring of the same academic year (who did not take the VPT or took the VPT and placed into ENF 3 or higher)

VA Performance Metrics Dashboard-

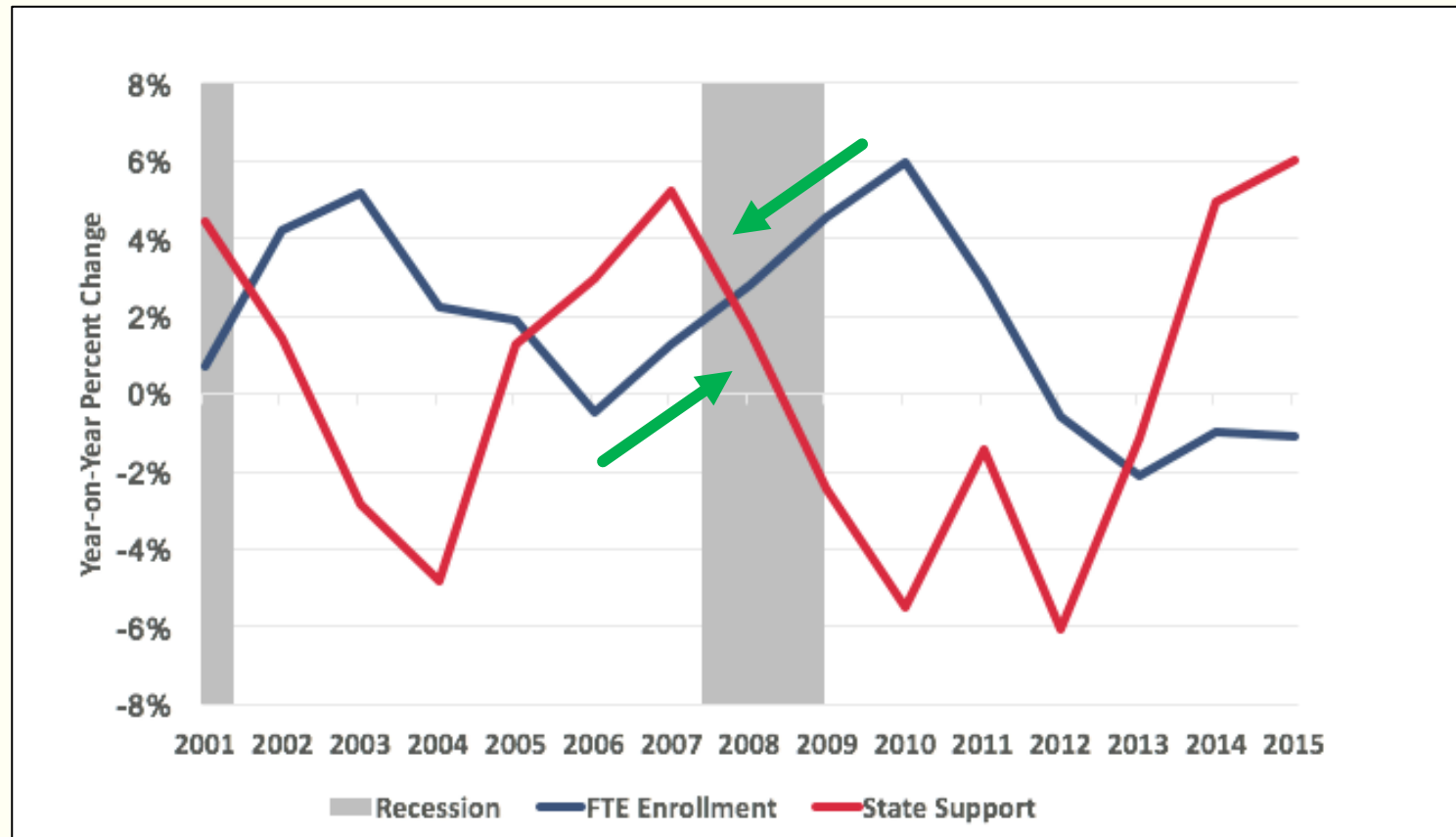
RETENTION & PROGRESSION

Performance Funding Metric	Metric Definition	Points Earned Per Student	Cohort
Full-time Fall-to-Spring	Number of full-time fall cohort students who enrolled in the spring of the same academic year	0.5	Fall full-time (12 or more credits) FTIC students enrolled in any associate degree or diploma program
Full-time Fall-to-Fall	Number of full-time fall cohort students who enrolled in the fall of the next academic year	0.5	Fall full-time (12 or more credits) FTIC students enrolled in any associate degree or diploma program
Part-time Fall-to-Spring	Number of part-time fall cohort students who enrolled in the spring of the same academic year	0.5	Fall part-time (less than 12 credits) FTIC students enrolled in any associate degree or diploma program
Part-time Fall-to-Fall	Number of part-time fall cohort students who enrolled in the fall of the next academic year	0.5	Fall part-time (less than 12 credits) FTIC students enrolled in any associate degree or diploma program
Progress (12 Credit Hours)	Number of the fall cohort students who completed 12 college credits with a cumulative GPA of 2.0 or higher by the end of the spring of the same academic year	0.5	Fall FTIC students enrolled in any associate degree or diploma program
Progress (24 Credit Hours)	Number of fall cohort students who completed 24 college credits with a cumulative GPA of 2.0 or higher by the end of the spring of the next academic year	0.5	Fall FTIC students enrolled in any associate degree or diploma program

VA Performance Metrics Dashboard-COMPLETION

Performance Funding Metric	Metric Definition	Points Earned Per Student	Cohort
Awards (Overall)	Number of students who earn one or more awards within a given academic year	1.5 (Associate or Diploma) or 1.0 (Certificate or CSC)	Not Applicable
Awards (Under-served)	Number of students from underserved populations (USP) who earn one or more awards within a given academic year. These students are also included in the Awards number	0.5	Not Applicable
Transfer (16 Credit Hours)	The number of students that transfer with 16 or more credit hours, but no award. This category includes students who complete certificate or career studies certificate	1	Not Applicable
Transfer (with Associate Degree)	The number of students that transfer with 16 or more credit hours and an associate degree or diploma	0.5	Not Applicable
Transfer (Graduate from 4-Year)	The number of students that transfer with 16 or more credits and earn a bachelor's degree within 6 years from initial enrollment with the community college	0.5	Not Applicable

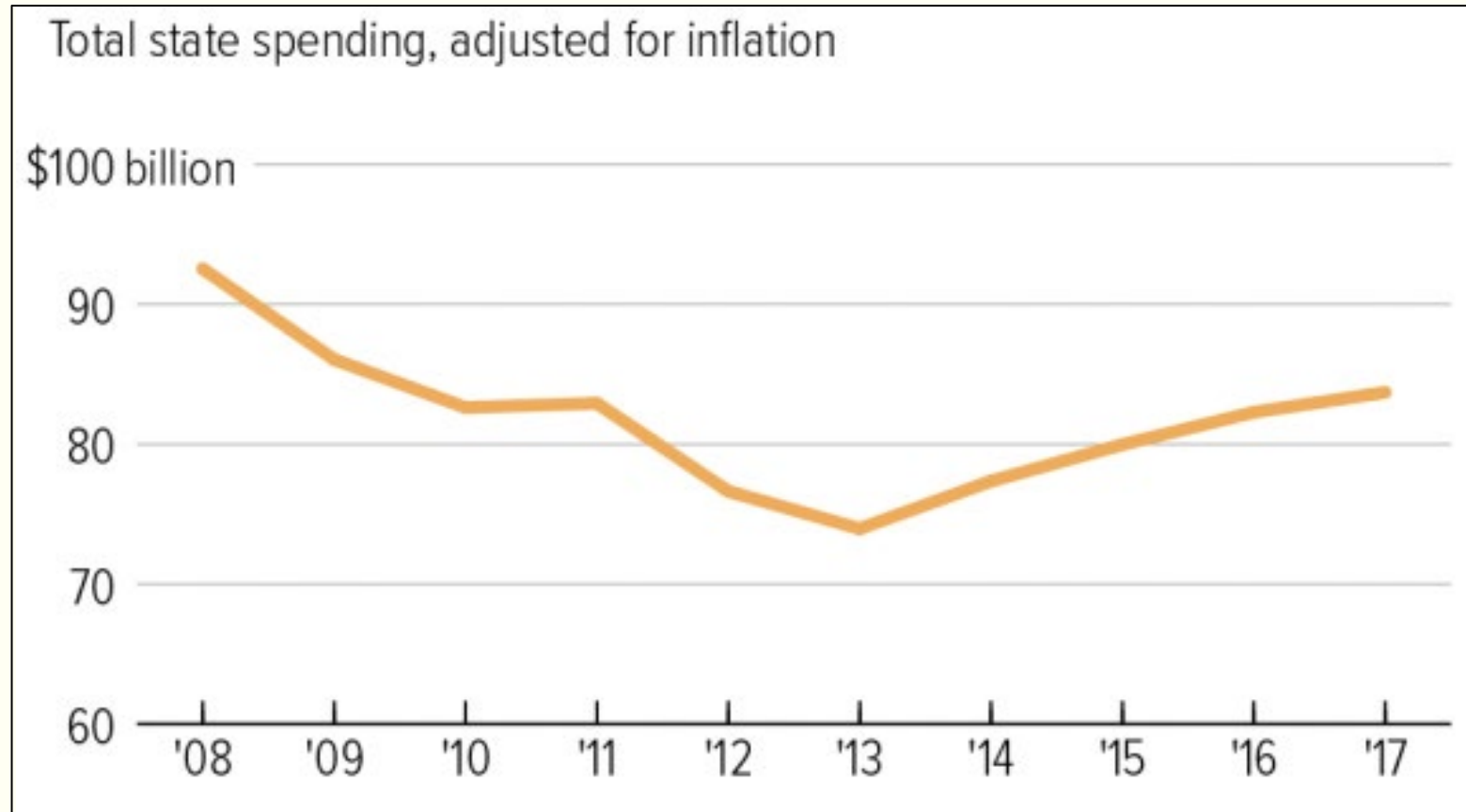
Changes in Enrollment and State Funding for Public Institutions of Higher Education



Note: This chart depicts year-on-year percentage change in FTE enrollment at public institutions of higher education and state support for those universities (in constant dollars). Source: SHEEO and The Federal Reserve Bank of St. Louis.

Retrieved 11/24/18 from <https://bipartisanpolicy.org/blog/rising-college-tuition-are-states-to-blame/>

State Spending on Higher Education Well Below Pre-Recession Levels



CBPP analysis of data from Grapevine survey and State Higher Education Executive Officers Association, 2017. Retrieved 11/24/18 from <https://www.cbpp.org/research/state-budget-and-tax/a-lost-decade-in-higher-education-funding>

Dual Enrollment

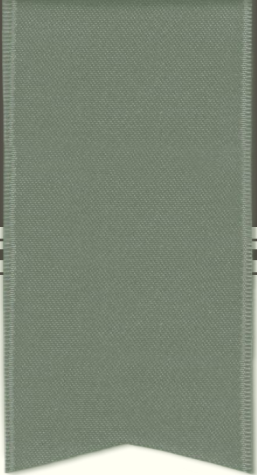
- Effectiveness of Dual Enrollment and College Transfer Policies
- Higher proportion of dual enrollment students attend and complete college
- Dual enrollment reduces time and cost of credential attainment for community college students
- Dual enrollment does not as clearly benefit students at four-year institutions
- Community colleges do not consistently ensure the quality of dual enrollment courses
- Irregular dual enrollment funding model leads to statewide variation in program costs



Direct Enrollment

- Effectiveness of Direct Enrollment and College Transfer Policies
- Higher proportion of dual enrollment students attend and complete college
- Direct enrollment reduces time and cost of credential attainment for community college students
- Irregular funding model leads to statewide variation in program costs





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