RESEARCH

Costs Outweighing Benefits: Proposals for Free College Point Towards Expensive Options and Few Economic Benefits.

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Executive Summary

In his 2015 State of the Union address, President Obama announced a $60 billion initiative to provide students with two years of free community college. The program would require states to opt in and commit 25 percent of the necessary funding. Schools receiving funding would be required to adopt evidence-based reforms to improve student outcomes as well as create programs that provide occupational training or fulfill transfer requirements to 4-year colleges and universities. In return, the federal government would pick up the remaining 75 percent of funding for tuition and fees.

In this paper, the American Action Forum (AAF) examines the impact of "free college" proposals on students, states, and taxpayers. Highlights of the key findings include:

- Only one out of three college students in the United States would be eligible to participate.
- Over a quarter of college students would be prevented from accessing a public federal relief program because the program doesn't allow students at private nonprofit and for-profit institutions to participate.
- Annual state spending would need to increase by approximately 5 to 13 percent in order to meet the contribution to be eligible to receive federal matching funds.
- The total annual additional cost to states would be $3.7 billion to $4.1 billion.
- Approximately 60 percent – or $48 billion - of the $80 billion combined federal and state investment for President Obama's proposed free college program would go to individuals that are unlikely to ever earn a college credential.

Introduction

Efforts to provide "free" postsecondary training are not new. The State of Indiana, for example, started their 21st Century Scholars program nearly 25 years ago and Princeton launched a no-loans financial aid policy as early as 1998. These efforts from a mix of states, institutions and private providers have, however, only served small student populations.

Today there are a number of proposals to make the first couple years of college free. Like the president's initiative, these proposals do not fully cover the cost of attendance, just tuition and fees. They typically ask states to provide funding commitments and meet "maintenance of effort" conditions. In the small number of state-level pilots that exist, these efforts have also been structured as "last dollar" programs.[i] Free in this context isn't about driving down the cost of providing education to zero but instead shifting who directly shoulders the burden of paying for higher education away from students and families and onto taxpayers.

A balanced policy discussion on these proposals needs to consider tradeoffs and costs. Not every student would benefit from proposals like these and not every state will be willing or able to participate. Where public resources are scarce, the fact that so many students start college but never finish raises important questions about whether existing funding could be more efficiently allocated to achieve more favorable outcomes.

Not All Students Win

Current estimates place the total college-going population in the United States at around 21 million, with about 15 million or some 72 percent of those students enrolled in public institutions.[ii] Since free college proposals would not apply to students enrolled in private higher education programs, more than one in four college-going students would automatically be prevented from accessing any form of tuition relief. Of those enrolled at public institutions about 6.8 million, or roughly 45 percent are enrolled in two-year community colleges, which means that the president's proposal would effectively only benefit approximately one out of every three college students in the United States.

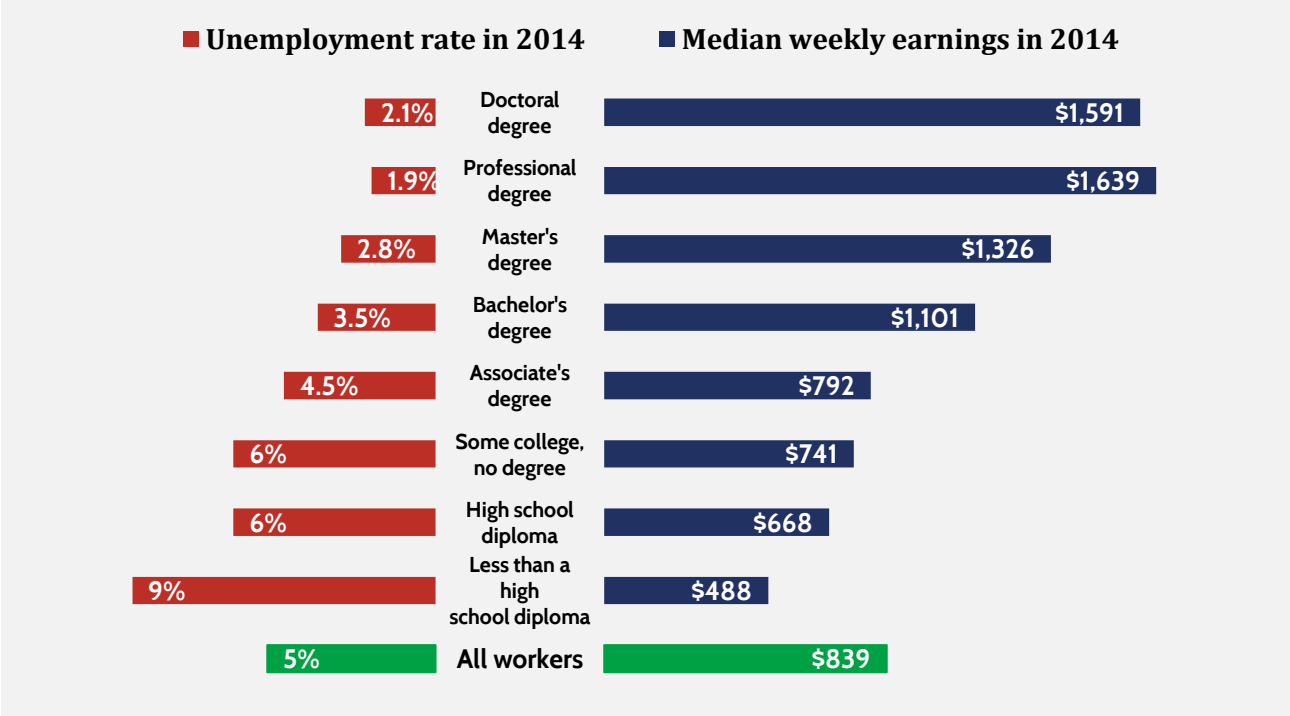
The impact of state- versus student-targeted aid is stark as those institutions where students would be ineligible to benefit from the president's proposal serve a large percentage of the nation's financially needy students. Just more than 30 percent of Pell recipients attend public four-year colleges and universities while another 33 percent of Pell recipients are enrolled at private non-profit and for-profit institutions.[iii]

Why Push Students Towards Community Colleges?

The president's proposal allocates taxpayer dollars toward one of the worst-performing sectors of American higher education. It also seeks to drive enrollment into what is already American higher education's largest sub-sector.

Community college participants not only represent the group with the highest unemployment rates (amongst individuals with a college education) but their earnings are lowest amongst all individuals having a post-high school credential as shown in the chart below. They represent the largest group of students who begin college but never complete a degree; some estimate that 48.8 percent of all students at two-year public community colleges have not completed a degree and are not enrolled at another institution 6 years later.[iv] As a sector these students also have the highest propensity to default on their federal student loan debt.[v]

Chart 1: Earnings and Unemployment Rates by Educational Attainment



Source: Bureau of Labor and Statistics

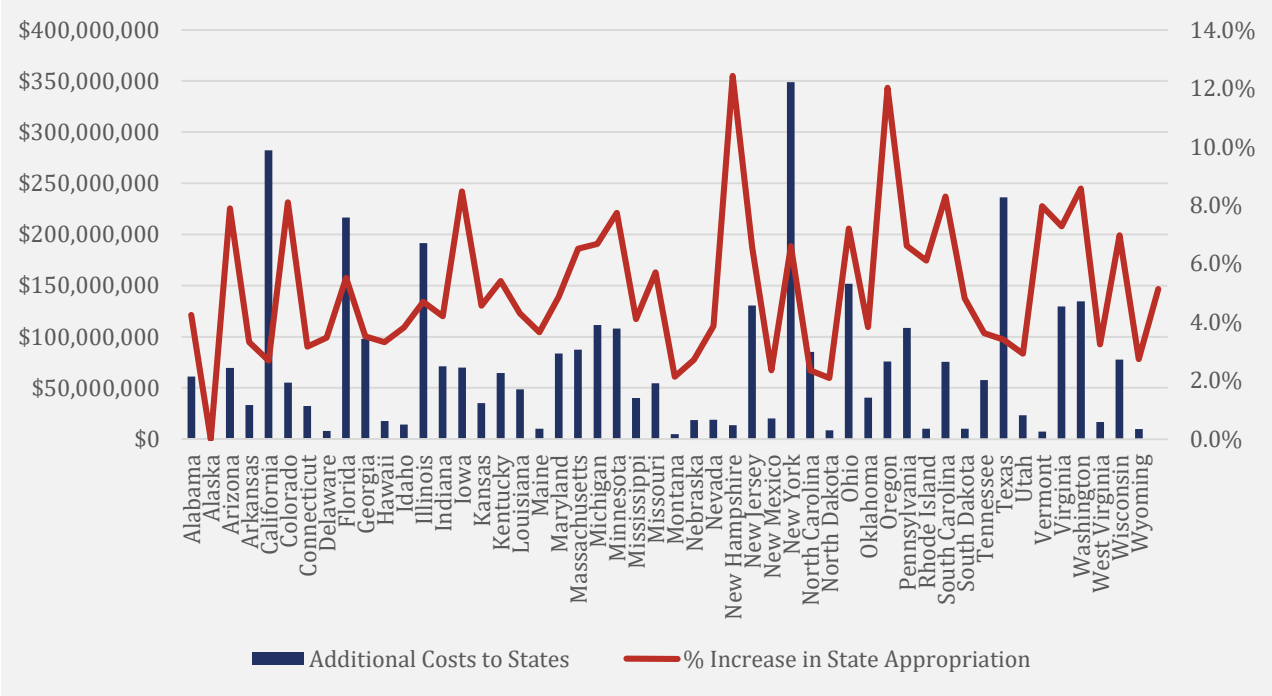
The Cost of State (Lack of) Participation[vi]

The president's proposal is structured as a matched investment including an additional commitment to making and sustaining appropriate funding increases. The annual cost of anticipated state investment varies substantially, from as low as $7.4 million in Vermont to more than $349 million in New York (see Chart 2). At a minimum, the incremental one-year additional cost for all states would be approximately $3.7 billion.[vii] This does not take into account tuition increases nor does it address the potential for students not currently in the higher education market to enroll in community colleges or for students at 4-year institutions to shift

to community college education. Under very simple assumptions[viii] the collective annual cost to states could easily reach $4.1 billion.

Pairing these minimum additional commitments with existing annual state appropriations for higher education[ix] suggests that the average state would need to increase its annual higher education appropriations by 5.1 percent to 5.7 percent to cover states' shares of the proposal's match requirement. Across individual states those percentages vary from as low as 2.1 percent in Montana to 12.4 percent in New Hampshire.

Chart 2: Baseline Estimate of State Costs & Percentage of Budget Increase Needed to Cover Costs



Source: AAF Analysis (See Appendix 1)

States must be fiscally capable of making such investments but they must also be willing to participate in this program, which currently has yet-to-be-defined performance standards. Any standards will require additional regulatory costs and also impose new levels of administrative and reporting burden on states and institutions. In either case the incentive grant structure means that different levels of state participation will impact the eligible college-going population differently. For example, just four states enroll one-third of all public college students (California, New York, Texas and Florida) and half of all public community college students come from just seven states. California alone enrolls approximately one out of every five community college students in the United States. Given that states, not students, initially determine participation levels, for one or more of the "Big Four" states above to either be unwilling or unable to meet the incentive grant requirements the result

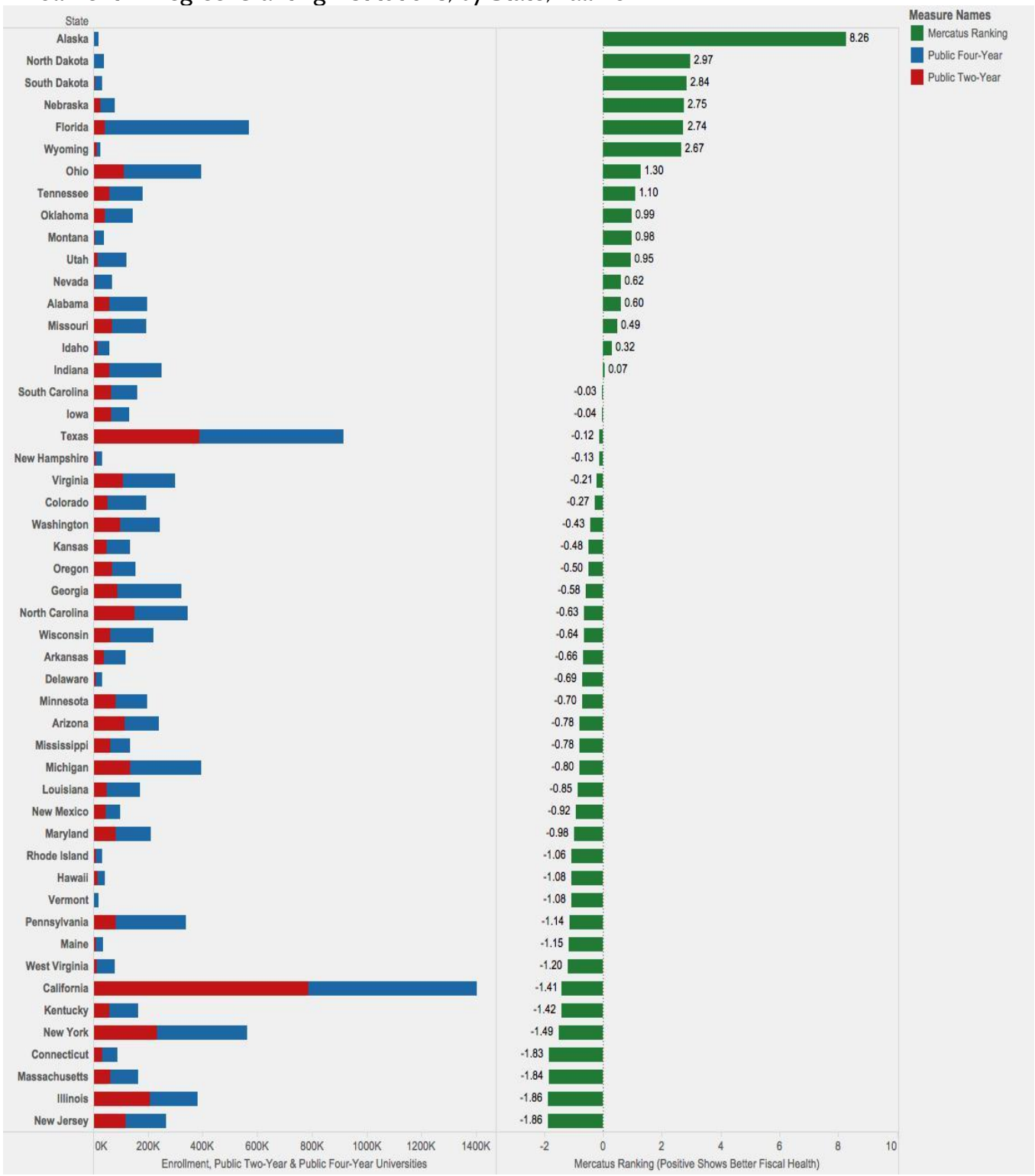
would be making anywhere from 200,000 to 1.6 million students ineligible for the proposed public subsidy.

The ability to both inject and sustain additional resource commitments into public higher education will depend in part on individual states' public priorities, notably health care and pensions commitments. Despite the last recession ending almost five years ago and a number of states having experienced budget surpluses in recent years, declines in state higher education investment continues to persist. Between 2008 and 2015, 31 states cut per-student funding by more than 20 percent, and 6 states cut funding by more than one-third.[x]

Proposals for free college are specifically expected to offset such declines by creating matching federal investments; however, it is unclear to what extent capacity for such investments exists. Up to 16 states are expected to run deficits in the next year or two years. In some states with sizeable public higher education systems like Illinois, Maryland, Wisconsin and Pennsylvania, stateg budget deficits are expected to run between $750 million and $6 billion.[xi]

Chart 3 plots state 2- and 4-year enrollments against George Mason University's *Mercatus Center* index of states' fiscal health.[xii] The bottom five states in particular are classified by the Center as being in "financial peril" based on high deficits and unfunded debt obligations. If one assumes that the bottom quintile was financially unable to meet the matching fund requirements, more than 1.6 million community college students in these states would find themselves ineligible for relief provided by the president's proposal.

Chart 3: Ranking of States' Fiscal Health Compared to Public Full-Time Equivalent Enrollment in Degree-Granting Institutions, by State, Fall 2012

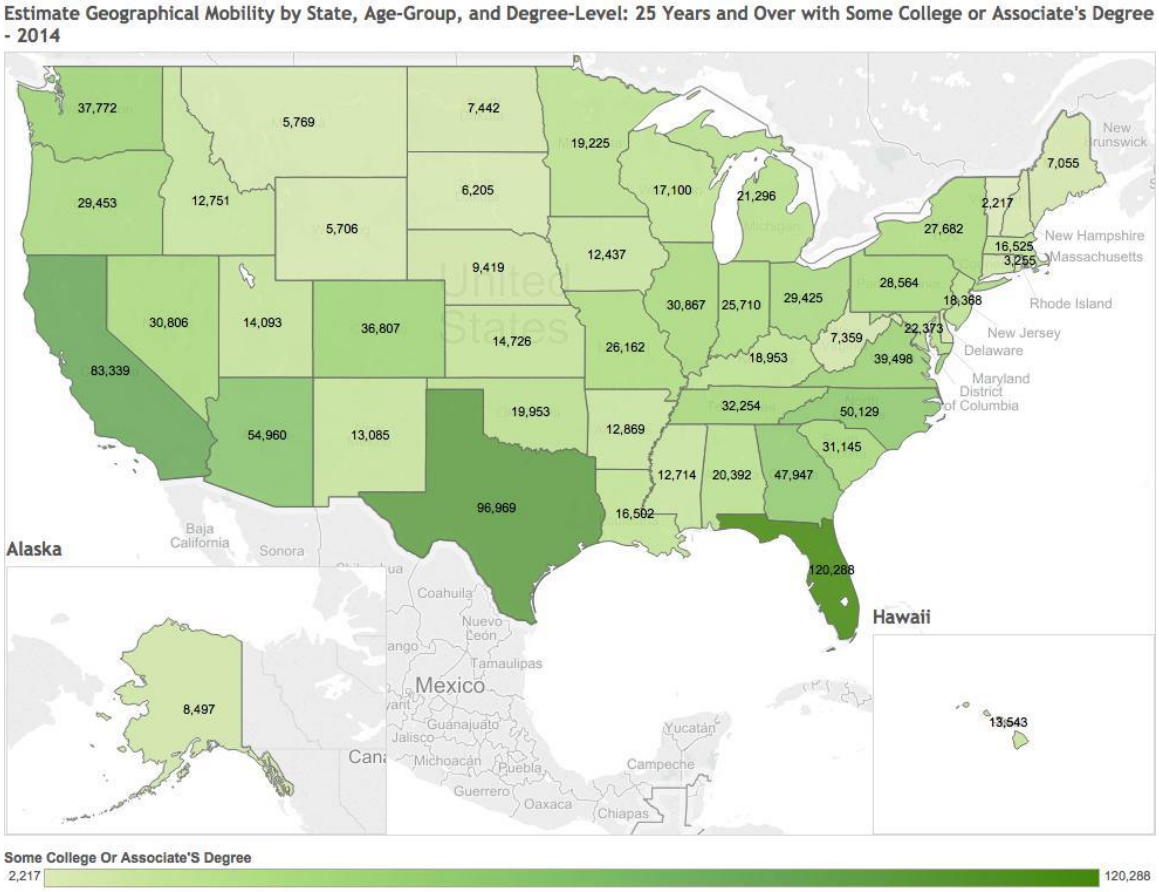


Note: Based on FTE fall enrollments.

Source: NCES, Digest of Education Statistics 2013, Table 307.20.; Mercatus Center at George Mason University

State willingness to participate may also be affected by college graduates' migration patterns. Unlike other infrastructure investments, such as highways, human capital does not have to remain within the state where it was created. As Figure 1 shows, hundreds of thousands of students with either some college or associates degrees annually move to different states.

Figure 1:



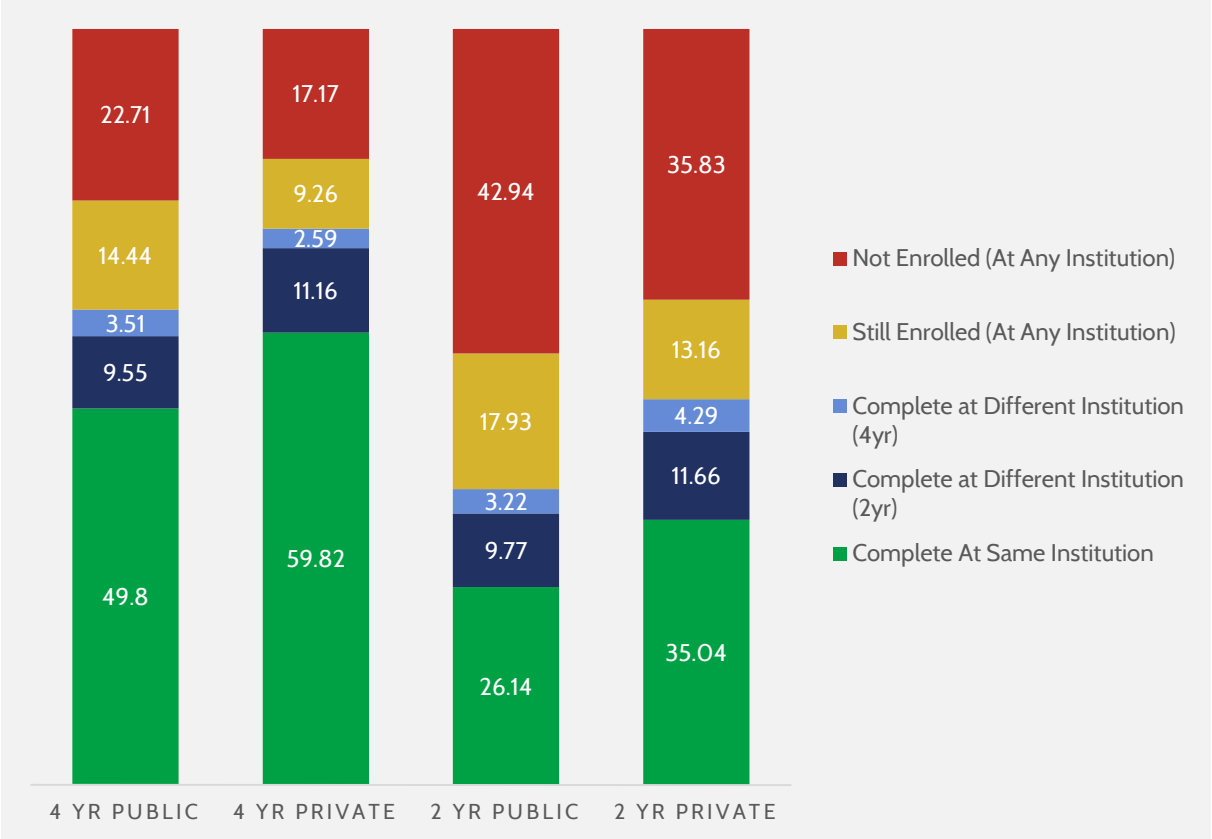
Source: U.S. Census Bureau, 2014 American Community Survey 1-Year Estimates

Finally, evidence supporting the success of higher education programs of this type is thin and is more apt to suggest states generally struggle to meet federal eligibility conditions. The U.S. Government Accountability Office published a report in December 2014 on state and federal programs to improve college affordability that was only able to identify three federal/state incentive-style programs. Of these, the one closest in structure to free college proposals, the College Access Challenge Grant Program, appropriated $142 million in 2013 (the last year of the program) but only ended up spending half of the money because not all of the states were able to meet the maintenance of effort conditions required for the funding.[xiii]

The Taxpayer Cost of Funding Access Versus Completion

In general, federal investments in higher education are made in an effort to increase the degrees and credentials needed to ensure a productive workforce with lower unemployment rates, higher wages, and economic growth. By definition free college proposals improve access to higher education but more students does not equate to more degrees granted, which yield the kinds of wage gains consumers seek or the tax and productivity gains that governments expect to realize.[xiv] The lack of evidence or support for improving completion has been a common refrain amongst both economists and pundits.[xv]

Chart 4. Six-Year Outcomes by Starting Institution Type



Source: National Student Clearinghouse Research Center

In fact, in November of 2014, just two months before the president unveiled his plan, the National Student Clearinghouse released an in-depth study that students at the public 2-year colleges at the heart of the president's plan are highly unlikely to earn a degree or credential (see Chart 4).

As the chart shows, after six years only about 39 percent of public community college students end up completing a degree.[xvi] This means that the president's free college proposal would effectively be spending $36 billion of a $60 billion investment on up to 5.4 million students who will likely never receive any type of college credential. Add the share of the $20 billion that states would be required to

invest on top of the federal match and the total potential loss on an $80 billion federal and state investment could be close to $48 billion.

A full accounting of the economic costs is difficult to produce, especially given the migration of students from 2- to 4-year institutions. Still, research from the American Institutes of Research found that between 2004 and 2008 almost $4 billion in federal and state taxpayer monies through grants and appropriations went to community college students who dropped out after just one year of study.[xvii]

It's important to note that the federal taxpayer's $60 billion investment is not directed towards student services such as remedial support or counseling or even childcare. This proposal quite plainly provides grant dollars to students regardless of whether they actually receive a degree. It provides aid whether the student is part of a family of four that lives below the poverty line or are part of a family that makes $200,000 per year.

Addressing the Real Challenge

The easiest way to understand the challenges to the president's free community college proposal is to compare it to additional investment in, for example, existing federal programs designed to foster affordability like the Pell grant.

If getting individuals to complete and reap the benefits of advanced education is what matters, it is unclear why a policy should care which entity provides the service. In comparison to Pell, state-based grants or allocations to institutions must, by design, curtail access since individuals do not dictate initial eligibility. It also raises the practical question of why students who by virtue of being born and living in states that are unwilling or unable to make these kinds of investments should not be the beneficiaries of federal subsidies? Under what circumstances should a federal policy prevent a poor, yet academically talented individual in one state from obtaining affordable higher education while financially assisting wealthier individuals in other states?

As many critics have already noted, free community college ends up subsidizing some individuals for whom higher education may already be affordable. Yet it also works against efforts to redress problems associated with under-matching: the idea that qualified students from less-affluent households do not end up pursuing degrees in competitive colleges and instead enroll in less-selective or two-year community colleges. In either of these circumstances proponents need to be able to articulate why a free community college run via state-based incentive grant programs would be more efficient or effective at improving affordability, access or completion than Pell grants.

The under-matching issue is particularly salient because it means the free college concept is basically at odds with existing federal education policy. For years Congress

and the Department of Education have pursued efforts to facilitate and improve consumer choice. They have stressed the need for cost calculators and ratings systems so that people can make decisions that best fit their unique circumstances. They have encouraged shopping for schools and programs and to be mindful of things like graduation and attrition rates and to make academic major and career decisions based on wages and future employment prospects. They have brought under- and over-matching into the national policy debate and actively sought ways to help students avoid making college-going decisions based on what costs the least and instead on where their skills and talents fit best.

And yet free community college proposals effectively throw nearly all of this by the wayside with incentives for students to enroll in institutions with the highest attrition rates, some of the lowest wage curves and the greatest unemployment variability of any post-high school training institution. They make cost the main driver of the educational investment decision, without placing any downward pressure on the cost of college. They effectively place a financial penalty on millions of poor students for choosing a 4-year public or private option that may be a better fit for their capabilities, increase their chances of graduating, and produce hundreds of thousands of dollars in additional lifetime earnings.

As policy goes, promoting choice while financially encouraging participation in a single sub-sector sends consumers mixed signals. It also creates economic inefficiencies by giving free college to students at one institution type and without regard for what they're studying that risks an overflow of students in programs that labor markets neither need nor want. Here again proponents of free community college have not done a clear enough job of explaining why an alternative such as investing more dollars into an existing program like Pell grants cannot achieve similar outcomes while also being more consistent with current federal strategy.

At the state level, the obvious obstacle is that states most capable of even meeting the conditions necessary to receive matching federal funds will be those who are likely to need it the least. As Figure 2 showed earlier, the financially healthiest states almost exclusively service small community college populations and already provide substantial public subsidies. The states that need the dollars the most, the ones where economic investment can – over the long run – foster a larger, more stable revenue base, will find it most difficult to secure the investment dollars and maintain those levels over time.

In this regard, a state-based incentive grant feels like a policy that actually promotes gaps between the haves and the have-nots. If the federal government announced a program where families that agreed to make sustained investments in their children's higher education would have the balance of their tuition and fees paid for, it would immediately be met with derision as a tool that assists the wealthy at the expense of the poor. Enacting similar policy at the state level is not very different.[xviii]

The idea behind free community college is that states and institutions are supposed to make the kinds of investments that will eventually lead to the kinds of structural changes to higher education that students, families and policymakers all seek: lower-cost education programs and higher completion rates. There is, unfortunately, no evidence or logical support for the idea that free community college "bends the cost curve" or provides states making substantial financial commitments with assurance or incentives that completion rates will rise as a result.

Conclusion

While proposals to make community college free continue to attract attention, these proposals are expensive and fail to help students in need. Additionally, these proposals require states to make investments that they've shown a great deal of reluctance committing to while offering no promise or guarantee of a return on the money spent.

There is strong public agreement that policymakers need to develop new ways of promoting higher education completion and build new tools that will help students, institutions, and government manage college affordability. Every option should be weighed through a balanced assessment of the extent to which it meets the needs of all parties that it may affect, the costs on taxpayers, and its impact on affordability.

Appendix 1: Calculating Costs and Budgets

State	Delta enrollment estimates 2010	Delta subsidy rate 2010	Mecatus index	2-yr FTE (2013)	4-yr UG FTE (2013)	2015-16 in-district T&F	Additional Annual State Cost (AASC) Estimate*	AASC (with simple sector enrollment increase)**	AASC (with simple tuition increase)***	AASC (with state-specific tuition increase)****	AASC (with sector enrollment increase AND state-specific tuition increase)*****	State Fiscal Support for Higher Education FY2014	Percent Increase in State Fiscal Support Based on AASC
Alabama	93,927	69.9%	0.6	56,817	111,482	$4,310	**$61,219,958**	$67,226,069	$62,444,358	$63,097,796	$69,288,136	1,441,862,304	4.2%
Alaska	940	85.9%	8.26	0	18,070		**$0**	$0	$0	$0	$0	384,666,000	0.0%
Arizona	220,669	70.7%	-0.78	112,022	104,815	$2,480	**$69,453,433**	$72,702,709	$70,842,502	$71,473,440	$74,817,218	880,468,000	7.9%
Arkansas	59,910	72.0%	-0.66	39,020	66,295	$3,400	**$33,167,283**	$35,984,807	$33,830,629	$34,699,731	$37,647,434	1,001,496,233	3.3%
California	1,627,479	87.2%	-1.41	795,324	538,833	$1,420	**$282,340,138**	$291,904,418	$287,986,941	$315,521,891	$326,210,204	10,535,904,000	2.7%
Colorado	98,200	38.7%	-0.27	53,991	116,344	$4,080	**$55,071,160**	$61,004,721	$56,172,583	$57,195,733	$63,358,203	679,462,447	8.1%
Connecticut	59,713	67.2%	-1.83	31,821	47,210	$4,050	**$32,218,763**	$34,608,769	$32,863,138	$32,767,148	$35,197,834	1,018,691,658	3.2%
Delaware	15,728	45.6%	-0.69	8,856	21,080	$3,570	**$7,903,980**	$8,844,690	$8,062,060	$8,106,642	$9,071,472	227,606,200	3.5%
Florida	452,332	66.2%	2.74	268,334	222,742	$3,230	**$216,679,974**	$225,673,169	$221,013,574	$219,488,756	$228,598,528	3,925,291,451	5.5%
Georgia	188,437	61.8%	-0.58	107,245	174,871	$3,650	**$97,860,758**	$105,839,248	$99,817,974	$101,573,648	$109,854,846	2,790,040,144	3.5%
Hawaii	32,438	82.8%	-1.08	19,204	17,354	$3,660	**$17,571,355**	$18,365,316	$17,922,782	$18,397,269	$19,228,549	530,388,306	3.3%
Idaho	14,645	65.1%	0.32	14,775	34,711	$3,870	**$14,294,813**	$15,973,941	$14,580,709	$15,394,894	$17,203,243	374,642,100	3.8%
Illinois	380,305	67.2%	-1.86	204,277	132,488	$3,750	**$191,509,375**	$197,719,766	$195,339,563	$196,807,570	$203,189,774	4,082,978,500	4.7%
Indiana	113,881	39.3%	0.07	65,894	152,093	$4,320	**$71,165,880**	$79,378,902	$72,589,198	$73,270,732	$81,726,669	1,695,683,480	4.2%
Iowa	99,912	61.1%	-0.04	58,729	56,690	$4,750	**$69,740,292**	$73,106,280	$71,135,098	$71,266,549	$74,706,202	823,333,019	8.5%
Kansas	82,333	73.2%	-0.48	50,409	68,788	$2,790	**$35,160,278**	$37,559,247	$35,863,483	$35,995,281	$38,451,223	771,121,325	4.6%
Kentucky	99,918	84.3%	-1.42	55,580	88,784	$4,650	**$64,612,138**	$69,772,688	$65,904,380	$65,773,857	$71,027,193	1,194,881,285	5.4%
Louisiana	68,839	73.2%	-0.85	48,809	100,049	$3,970	**$48,443,263**	$53,408,178	$49,412,129	$54,637,993	$60,237,801	1,125,250,832	4.3%
Maine	16,276	69.8%	-1.15	11,404	21,398	$3,490	**$9,950,281**	$10,883,754	$10,149,286	$9,906,889	$10,836,292	271,864,121	3.7%
Maryland	140,111	62.4%	-0.98	78,200	97,670	$4,270	**$83,478,144**	$88,691,298	$85,147,707	$85,058,142	$90,369,965	1,718,546,477	4.9%
Massachusetts	103,571	52.1%	-1.84	62,197	85,246	$5,620	**$87,386,785**	$93,375,293	$89,134,521	$89,427,770	$95,556,144	1,342,072,529	6.5%
Michigan	256,088	58.1%	-0.8	127,095	207,147	$3,510	**$111,525,570**	$120,614,130	$113,756,081	$115,770,582	$125,205,081	1,669,524,700	6.7%
Minnesota	133,216	49.6%	-0.7	80,077	93,054	$5,390	**$107,903,308**	$114,172,822	$110,061,375	$107,839,106	$114,104,888	1,394,503,000	7.7%
Mississippi	82,433	74.1%	-0.78	61,760	58,523	$2,590	**$39,989,600**	$41,884,271	$40,789,392	$40,904,780	$42,842,811	973,846,876	4.1%
Missouri	103,363	57.7%	0.49	68,230	104,047	$3,190	**$54,413,691**	$58,562,578	$55,501,965	$55,839,690	$60,097,306	954,236,519	5.7%
Montana	9,349	63.4%	0.98	5,969	29,743	$3,250	**$4,850,083**	$6,058,406	$4,947,085	$4,830,793	$6,034,310	226,961,354	2.1%
Nebraska	46,557	76.3%	2.75	25,803	41,075	$2,890	**$18,642,908**	$20,126,743	$19,015,767	$18,990,581	$20,502,088	688,173,035	2.7%
Nevada	60,841	69.5%	0.62	26,803	34,493	$2,810	**$18,828,873**	$20,040,452	$19,205,451	$19,365,071	$20,611,152	487,184,042	3.9%
New Hampshire	9,939	48.3%	-0.13	8,320	22,587	$6,510	**$13,541,343**	$15,379,387	$13,812,169	$13,402,192	$15,221,348	109,000,000	12.4%
New Jersey	177,795	39.4%	-1.86	113,407	123,049	$4,600	**$130,418,433**	$137,493,751	$133,026,802	$132,259,170	$139,434,349	1,990,469,000	6.6%
New Mexico	81,830	79.5%	-0.92	47,909	39,858	$1,680	**$20,121,780**	$20,958,798	$20,524,216	$20,746,865	$21,609,885	856,215,012	2.4%
New York	322,864	58.8%	-1.49	273,536	239,949	$5,100	**$348,758,400**	$364,055,170	$355,733,568	$361,092,005	$376,929,735	5,283,125,597	6.6%
North Carolina	249,519	81.4%	-0.63	146,890	161,036	$2,320	**$85,196,393**	$89,866,437	$86,900,321	$88,486,589	$93,336,985	3,617,627,709	2.4%
North Dakota	11,210	60.3%	2.97	7,749	26,612	$4,410	**$8,543,640**	$10,010,627	$8,714,513	$8,607,621	$10,085,593	409,693,640	2.1%
Ohio	223,853	41.8%	1.3	133,940	203,841	$4,530	**$151,687,428**	$163,229,905	$154,721,176	$155,017,125	$166,812,972	2,104,931,061	7.2%
Oklahoma	79,429	63.3%	0.99	44,269	79,511	$3,650	**$40,395,767**	$44,023,441	$41,203,682	$41,821,091	$45,576,764	1,053,566,920	3.8%
Oregon	107,147	63.7%	-0.5	64,964	72,448	$4,670	**$75,845,859**	$80,075,011	$77,362,776	$77,940,473	$82,286,420	631,121,950	12.0%
Pennsylvania	144,772	46.2%	-1.14	88,242	209,677	$4,930	**$108,758,265**	$121,679,590	$110,933,430	$115,222,523	$128,911,852	1,644,692,000	6.6%
Rhode Island	17,721	51.5%	-1.06	9,539	18,572	$4,270	**$10,182,883**	$11,174,181	$10,386,540	$10,319,510	$11,324,109	166,650,435	6.1%
South Carolina	99,750	41.0%	-0.03	62,839	82,767	$4,800	**$75,407,200**	$80,373,240	$76,915,344	$78,456,077	$83,622,905	909,110,205	8.3%
South Dakota	5,871	26.7%	2.84	6,521	23,902	$6,140	**$10,010,247**	$11,844,725	$10,210,452	$10,456,532	$12,372,796	207,837,626	4.8%
Tennessee	93,061	47.4%	1.1	56,177	102,143	$4,100	**$57,581,425**	$62,816,254	$58,733,054	$59,569,846	$64,985,445	1,587,786,604	3.6%
Texas	701,753	67.8%	-0.12	400,724	402,812	$2,360	**$236,427,357**	$248,310,301	$241,155,904	$244,026,084	$256,290,944	6,943,348,308	3.4%
Utah	49,167	79.1%	0.95	26,087	79,896	$3,570	**$23,282,945**	$26,848,304	$23,748,604	$23,916,339	$27,578,691	798,346,200	2.9%
Vermont	6,225	17.5%	-1.08	3,925	14,514	$7,530	**$7,388,813**	$8,754,974	$7,536,589	$7,537,457	$8,931,103	92,686,200	8.0%
Virginia	192,358	56.9%	-0.21	107,951	155,209	$4,800	**$129,541,200**	$138,853,740	$132,132,024	$135,333,993	$145,062,969	1,780,468,378	7.3%
Washington	205,957	68.3%	-0.43	129,712	93,141	$4,150	**$134,576,546**	$139,408,253	$137,268,077	$138,023,642	$142,979,110	1,570,807,000	8.6%
West Virginia	17,279	73.6%	-1.2	17,595	48,294	$3,800	**$16,715,567**	$19,009,548	$17,049,878	$17,971,250	$20,437,556	515,656,320	3.2%
Wisconsin	130,530	78.7%	-0.64	69,472	129,000	$4,470	**$77,635,333**	$84,843,189	$79,188,039	$79,593,302	$86,982,941	1,114,018,800	7.0%
Wyoming	23,170	82.9%	2.67	13,708	8,876	$2,810	**$9,630,104**	$9,941,862	$9,822,706	$9,927,947	$10,249,347	352,669,707	2.7%

* =	25% share of 2-year college FTE enrollments
**=	Adds assumption that some 4-year students will opt
***=	Adds assumption that states' tuition and fee
****=	Adds assumption that states' tuition and fee structures would increase by a simple average of a state's 2-year sector average tuition growth documented over the prior 5 years
*****=	AASC estimate assuming sector enrollement increase

Appendix 2: Estimated Geographical Mobility by State, Age-Group, and Degree-Level: 25 Years and Over with Some College or Associate's Degree -2014

STATE	SOME COLLEGE OR ASSOCIATE'S DEGREE
Alabama	20,392
Alaska	8,497
Arizona	54,960
Arkansas	12,869
California	83,339
Colorado	36,807
Connecticut	9,840
Delaware	5,637
District of Columbia	4,103
Florida	120,288
Georgia	47,947
Hawaii	13,543
Idaho	12,751
Illinois	30,867
Indiana	25,710
Iowa	12,437
Kansas	14,726
Kentucky	18,953
Louisiana	16,502
Maine	7,055
Maryland	22,373
Massachusetts	16,525
Michigan	21,296
Minnesota	19,225
Mississippi	12,714
Missouri	26,162
Montana	5,769
Nebraska	9,419
Nevada	30,806
New Hampshire	6,680
New Jersey	18,368
New Mexico	13,085
New York	27,682
North Carolina	50,129
North Dakota	7,442
Ohio	29,425
Oklahoma	19,953
Oregon	29,453
Pennsylvania	28,564
Rhode Island	3,255
South Carolina	31,145
South Dakota	6,205
Tennessee	32,254
Texas	96,969
Utah	14,093
Vermont	2,217
Virginia	39,498
Washington	37,772
West Virginia	7,359
Wisconsin	17,100
Wyoming	5,706

[i] Last dollar here describes programs where the amount awarded isn't determined until all other grants and scholarships have been accounted for.
[ii] Source: http://nces.ed.gov/programs/digest/d13/tables/dt13_303.10.asp and http://nces.ed.gov/programs/digest/d13/tables/dt13_303.25.asp
[iii] Calculations are based on Table 20a from the U.S. Department of Education's *2012-2013 Federal Pell Grant Program End-of-Year Report*. http://www2.ed.gov/finaid/prof/resources/data/pell-2012-13/pell-eoy-2012-13.html
[iv] Similar rates at 4-year public and private institutions are 20.1 percent and 17.1 percent respectively. Source: The Delta Cost Project's *Institutional Costs of Student Attrition*. Table #2. September 2012 http://www.deltacostproject.org/sites/default/files/products/Delta-Cost-Attrition-Research-Paper.pdf
[v] Source: http://www2.ed.gov/offices/OSFAP/defaultmanagement/schooltyperates.pdf
[vi] A core challenge to developing reliable cost estimates is that, at any given time, the most recent state-, school- and student-based data typically captures a number of different years. The estimates provided here face the same constraint though the divergence only spans approximately three calendar years. Rather than normalize and report "old" data, we have opted to instead utilize the most recent data available for each data type on the assumption that incremental, year-on-year changes have not been so dramatic as to significantly alter the spirit or purpose of the estimates being provided.
[vii] Cost estimates are based on the FTE enrollment levels and average tuition and fee data provided by the College Board's *Trends in College Pricing 2015*. http://trends.collegeboard.org/sites/default/files/trends-college-pricing-web-final-508-2.pdf
[viii] Assumes a two percent tuition and fee increase and an increase in a state's community college population that equates to a 5 percent shift of a state's existing public 4-year population.
[ix] Source: Illinois State University College of Education Grapevine 2014 data (Table 1). http://education.illinoisstate.edu/grapevine/tables/
[x] Source: Center on Budget and Policy Priorities. http://www.cbpp.org/research/state-budget-and-tax/years-of-cuts-threaten-to-put-college-out-of-reach-for-more-students
[xi] Source: https://www.multistate.com/insider/2015/01/a-look-at-states-facing-budget-deficits-in-2015/
[xii] More information about the Mercatus rankings can be found here: http://mercatus.org/statefiscalrankings
[xiii] The other program that the GAO identified as part of their research was the Leveraging Educational Assistance Partnerships (LEAP) program. The report also mentions the GEAR UP program. However that program is designed more towards assisting a wider array of educational partners than just colleges or towards colleges' abilities to reduce costs. Source: U.S. Government Accountability Office report, *Higher Education: State Funding Trends and Policies on Affordability*. http://www.gao.gov/assets/670/667557.pdf
[xiv] According to the National Center for Education Statistics, 6-year graduate rates for undergraduates are less than 60 percent nationally while the equivalent metric for students at 2-year colleges is only about 30 percent.
[xv] See, for example, Judith Scott Clayton and Thomas Bailey's piece from January, 2015: "The Problem with Obama's 'Free Community College' Proposal." http://time.com/money/3674033/obama-free-college-plan-problems/
[xvi] Shapiro, D., Dundar, A., Yuan, X., Harrell, A. & Wakhungu, P.K. (2014, November). Completing College: A National View of Student Attainment Rates – Fall 2008 Cohort (Signature Report No. 8). Herndon, VA: National Student Clearinghouse Research Center.
[xvii] Source: The American Institutes for Research 2011 report, *The Hidden Costs of Community Colleges*. http://www.air.org/sites/default/files/downloads/report/AIR_Hidden_Costs_of_Community_Colleges_Oct2011_0.pdf.

[xviii] To get a better understanding of the challenges to state-based efforts at promoting university funding equality, look at the National Science Foundation's *Experimental Program to Stimulate Competitive Research* (EPSCoR), which was designed to redress the concentration of federal research dollars in a relatively small number of universities at the expense of many flagship institutions in the central part of the United States. More information can be found here: http://www.nsf.gov/od/oia/programs/epscor/2030%20Report.pdf