

At Students' Expense: Rising Costs Threaten Pennsylvania Public Universities' Role in Upward Mobility



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Contents

Executive Summary..... 2

Introduction 4

Pennsylvania Underinvests in Public Higher Education..... 5

 Pennsylvania Funding for Higher Education 5

 State Funding for Pennsylvania State System Universities 7

 Lower State Funding Means Higher Costs and Debt for Pennsylvania Students 8

The Interaction of Cost and Enrollment at State System Schools 13

 Enrollment Trends 13

 Enrollment from Bottom 60% and Top 40% Households..... 14

 The Shrinking Gap in “Net Total Cost” Between State System and Other Schools 15

 Enrollment Decline in Line with 2011 Maguire Report Projections 17

Conclusion..... 19

Appendix 20

End Notes 23

Executive Summary

The 14 four-year universities within Pennsylvania's State System of Higher Education have been a pivotal engine of upward mobility for working families in Pennsylvania for decades. Today, the role of these schools in making the American Dream a reality for a hundred thousand Pennsylvanians each generation is threatened. Deep cuts in state funding coupled with living expenses on campus that have risen faster than tuition are threatening to put State System schools beyond the financial reach of many moderate-income families.

This briefing paper presents the facts on the costs of attending State System schools over time, on the state policy decisions that drive cost trends, and on the impact of costs on enrollment, especially of children from working families. These facts do not present a pretty picture.

Our main findings:

- Pennsylvania woefully underfunds higher education, ranking 47th out of 50 states for funding per capita from the state, with funding levels per capita one third to one fifth of the levels in several other energy-rich states.
- From an already inadequate starting point, funding for all Pennsylvania higher education and the State System were cut deeply in and after the Great Recession.
 - Even Gov. Wolf's proposed 2% increase for 2017-18 will leave inflation-adjusted funding for the State System more than 25% below the 2007-08 level and a third below its 2000-01 level.
 - As a share of the state's economy (measured by Gross State Product), funding for the State System today is only 42% of its 1983-84 level. This is an astounding and short-sighted reduction in a global knowledge-based economy in which post-secondary education is critical to both individual opportunity and state economic growth.
- As state funding has plunged, tuition has increased, forcing families and students to pick up the slack. Tuition and fees now account for nearly three quarters (73%) of educational costs at State System schools compared to half that level (37%) in 1983-84.
- Total costs adjusted for inflation have risen faster for on-campus students because of large increases in the cost of room and board.
 - Room and board have increased by 76% (a hike of \$4,567 in 2016 dollars) since 2000 compared to 51% (\$3,351) for tuition and fees.
 - Total costs have risen by almost \$10,000 since 2000, from about \$15,000 to about \$25,000 per year.
 - Total costs have gone from one fifth of median family income to over one third (35%).
- As costs have risen, they have begun to impact enrollment in two ways.
 - At schools that cater the most to students from working families (with incomes in the bottom 60% of the household income distribution), total enrollment has plunged. Cheyney University is the most dramatic example: enrollment has dropped an eye-popping 57% from its 2006 peak.
 - At other State System schools, total enrollment has held steady or even grown, but the share of students from working families has fallen.
 - Both these trends speak to a simple point: the total cost of State System schools is growing beyond what families of moderate means can afford, especially if they don't want their children to go deeply into debt at the start of their career.

- Recent enrollment trends among working families validate the warnings of a consultant (Maguire) to the State System in 2011 that further increases in total costs of a few thousand dollars could sharply reduce the share of admitted students who end up enrolling in State System schools.

As a subsequent brief will detail, demographic trends since 2010 have also played a major part in driving down enrollment at State System schools, especially at campuses in western and rural Pennsylvania where the number of high-school graduates has fallen sharply.

The bottom line of this brief: state policy choices, exacerbated by institutional decisions to cater to a perceived market demand (from more affluent families) for nicer on-campus living, have begun to choke off access to State System schools for students from less affluent families. Increased state funding and a refocusing of State System schools on their historic mission of providing affordable access to four-year college for all families are needed if Pennsylvanians want public higher education to continue to promote intergenerational social mobility as opposed to intergenerational social stratification.

For those readers with interest in a specific university, this report presents funding, cost, and enrollment information for each State System campus as well as for all 14 schools as a group.

Introduction

The Pennsylvania State System of Higher Education, in the face of decreased public investment and declining enrollment, has been discussing the possibility of closing or shrinking up to five of its 14 colleges. State System schools have historically provided higher education opportunities to Pennsylvania residents for a relatively low cost. This has allowed students from working- and middle-class families to afford a four-year college, with hundreds of thousands in each generation enjoying higher incomes than their parents after graduation (see Box 1).³ Declining state investment, however, has led State System universities to rely increasingly on tuition, room and board, and other fees from families and students to stay afloat.

While much discussion of possible State System closures has focused on declining enrollment, not enough focus has been on the state's role in that decline. Act 188 of 1982 brought many of Pennsylvania's public four-year colleges under the central umbrella of the State System, "to provide high quality education at the lowest possible cost to students."⁴ Notwithstanding this mission, almost from the date of the State System's creation, the cost of attending State System schools has risen steadily as state funding has dwindled.

This report examines trends over the past 35 years in state investment in higher education in Pennsylvania, costs for in-state families, and enrollment. It is the second in a series of briefs on Pennsylvania's State System schools.

The previous brief examined the data on access and upward mobility that State System schools provide to families with incomes in the bottom 60% of households (Box 1). The forthcoming brief in the series will examine demographic impacts on enrollment – a decline in births in Pennsylvania in the early 1990s and a corresponding drop in the number of Pennsylvania high-school graduates from 2010 to 2015.

Box 1 – Pennsylvania's Great Working-Class Colleges

The first paper in this series¹ harnessed new data from *Mobility Report Cards*² to quantify the extent to which four-year colleges and universities in Pennsylvania provide a springboard for working-class students to become high-income adults.

We found that 41 percent of State System students (in 1999 to 2004) came from bottom 60% households (earning less than \$73,500 per year in 2015 dollars). Just 18% of students from Pennsylvania's 10 most elite private colleges during this period came from bottom 60% households.

Because of the State System's access for working families, a higher share of its students come from bottom 60% of families AND then moved into the top 40% of earners as adults (22% versus 14% for Pennsylvania's elite 10 private colleges).

In the period studied, public colleges (including State System and state-related universities) accounted for 59% of all Pennsylvania colleges' upward mobility "success stories" – cases in which Pennsylvania college students from a bottom 60% family moved into the top 40% of earners as adults.

In sum: if we choke off access to public colleges for families of modest means, it will drastically curtail the role of higher education in realizing the American Dream of upward mobility in Pennsylvania.

Pennsylvania Underinvests in Public Higher Education

Pennsylvania Funding for Higher Education

Pennsylvania woefully underfunds higher education compared to other states, ranking 47th out of 50 for investment per capita (at \$132.44) (Figure 1). This is about half the U.S. national average (\$259.18 per capita).

It is a third to a fifth of higher education investment per capita in three other states rich in oil and natural gas – Wyoming, North Dakota, and Alaska – in part because these states have severance taxes on resource extraction that raise funds for higher education. Pennsylvania is the only natural resource-rich state that does not have a severance tax.

While Pennsylvania has long spent less per capita on higher education than most other states, the state has also sharply decreased higher education funding over the last decade. Figure 2 and Table 1 (next page) show that higher education funding decreased over \$700 million or 30% since 2007-08.⁵ Funding from the state’s own resources dropped in 2008-09 and the two following fiscal years, but the state allocated federal funds from the American Recovery and Reinvestment Act (ARRA) to offset those cuts. In 2011-12, funding from state revenues fell further and ARRA funds ended. As a result, the funds allocated via the state budget for higher education fell from

Figure 1.

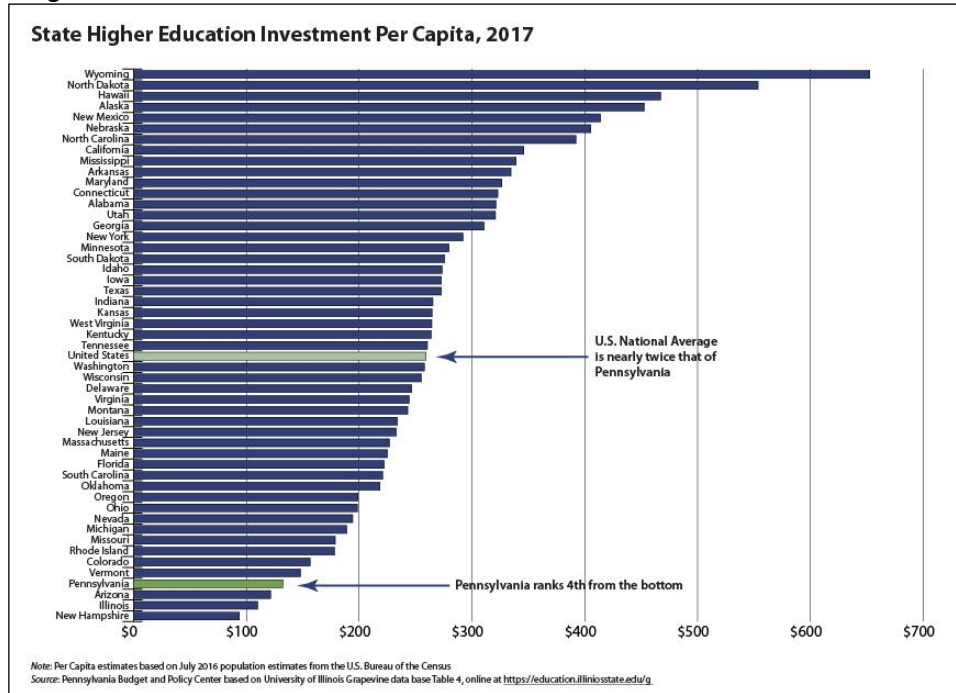
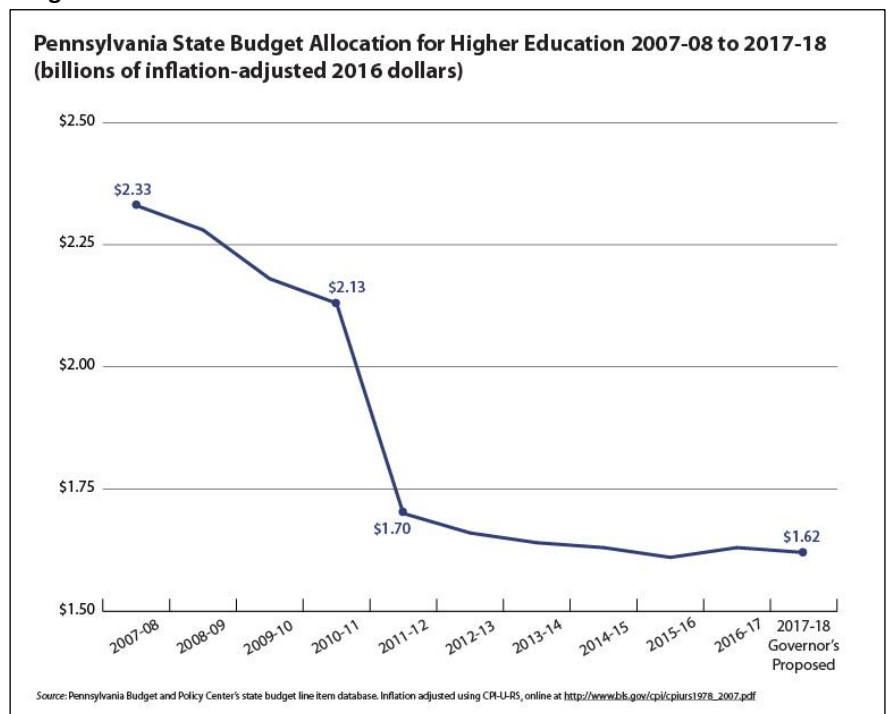


Figure 2.



\$2.13 billion to \$1.70 billion in 2011-12, a 20% drop. Adjusted for inflation, funding today remains slightly *below* the 2011-12 level. Even under Gov. Wolf’s budget proposal for 2017-18, funding in 2017-18 would remain 30% below its 2007-08 level (the last budget before the state felt the impact of the Great Recession).

Table 1.

Pennsylvania Higher Education Funding, 2007-08 to Present in Inflation-Adjusted 2016 Dollars (Thousands)				
	2007-08	2010-11	2011-12	2017-18 Governor's proposed
DOE higher education	\$1,211,108	\$1,075,923	\$799,638	\$849,710
SSHE	\$583,710	\$554,082	\$440,449	\$453,108
Thaddeus Stevens	\$12,653	\$11,972	\$11,025	\$13,273
PHEAA	\$523,200	\$485,611	\$451,332	\$308,414
Total	\$2,330,671	\$2,127,587	\$1,702,444	\$1,624,505

Source: Pennsylvania Budget and Policy Center's state budget line item database. Inflation adjusted using CPI-U-RS at http://www.bls.gov/cpi/cpiurs1978_2007.pdf

As noted by Research for Action, Pennsylvania has a decentralized postsecondary governance structure that in part reflects the state’s many long-established private colleges and universities.⁶ State government controls tuition only at State System schools and tuition is high at each type of higher education institution in Pennsylvania compared to other states. The substantial presence of private institutions also reduces the share of total funding for public higher education in two ways. Public funding for private colleges and universities includes some direct institutional support. In addition, nearly one fifth of Pennsylvania’s higher education funding goes for financial aid that may be used at private or public colleges (see the Pennsylvania Higher Education Assistance Agency line in Table 1). Thirty-five percent of Pennsylvania financial aid goes to private, four-year colleges rather than State System, state-related or community colleges.⁷

State Funding for Pennsylvania State System Universities

Figure 3 separates out funding for the Pennsylvania State System of Higher Education from the rest of Pennsylvania's state higher education funding. The figure shows that state funding for the 14 State System universities plunged during the last two recessions and has not rebounded significantly. Inflation-adjusted funding today is roughly one third (32.5%) lower than its 2000-01 peak.⁸

Relative to the size of the Pennsylvania economy, state appropriations for the State System have fallen from 1.65% of Gross State Product in 1983-84 to 0.7% in 2016-17 (Figure 4). This is a stunning decline of 58% over a 34-year period during which the global, knowledge-based economy emerged.

Given the importance of investment in education to opportunity for individuals and economic growth for the state, a cut of this scale is surely shortsighted in the extreme.⁹

Table 2 below shows state funding for individual campuses within the State System, adjusted for inflation. Between 2007-08 and 2014-15, the 14 colleges experienced declines in funding ranging from 22% at Lock Haven to over 30% at Millersville, Kutztown and Indiana. In the context of funding cuts, the number of permanent employees in State System schools has declined by 1,000 in the past seven years.¹⁰

Figure 3.

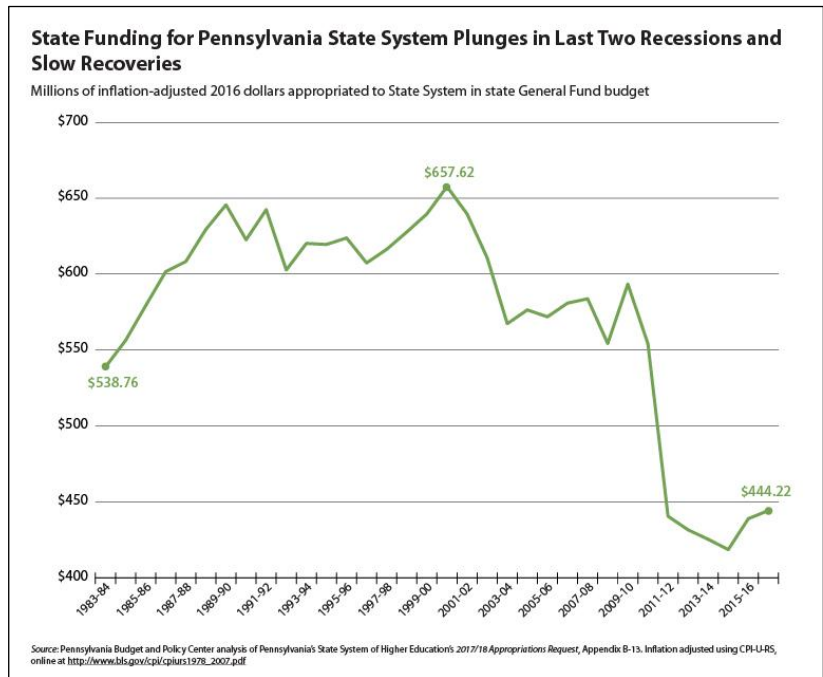


Figure 4.

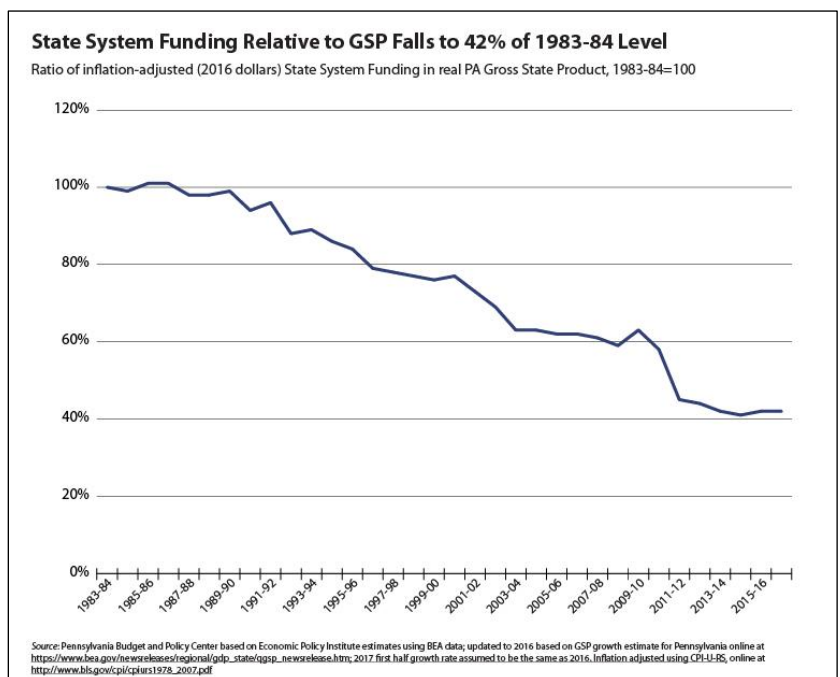


Table 2.

Pennsylvania Funding for State-Owned Universities in Inflation-Adjusted 2016 Dollars, 2007-08 to 2014-15 (millions)

University	2007-08	2010-11	2011-12	2014-15	Percent Change 2007-08 to 2014- 15
Bloomsburg	\$43.52	\$38.44	\$35.28	\$33.43	-23.2%
California	\$41.33	\$36.71	\$31.14	\$30.19	-26.9%
Cheyney	\$17.16	\$15.23	\$14.34	\$13.17	-23.3%
Clarion	\$31.87	\$27.73	\$24.93	\$23.56	-26.1%
East Stroudsburg	\$30.64	\$27.89	\$22.90	\$22.42	-26.8%
Edinboro	\$34.10	\$29.77	\$27.04	\$26.04	-23.6%
Indiana	\$75.04	\$63.53	\$54.88	\$52.23	-30.4%
Kutztown	\$48.18	\$41.81	\$37.20	\$33.39	-30.7%
Lock Haven	\$27.52	\$23.87	\$21.12	\$21.52	-21.8%
Mansfield	\$22.73	\$20.27	\$18.53	\$16.81	-26.1%
Millersville	\$45.14	\$37.39	\$32.60	\$30.60	-32.2%
Shippensburg	\$40.23	\$34.45	\$30.28	\$28.75	-28.5%
Slippery Rock	\$46.00	\$40.61	\$34.67	\$33.08	-28.1%
West Chester	\$63.80	\$57.30	\$50.63	\$48.62	-23.8%
Total	\$567.26	\$494.99	\$435.54	\$413.81	-27.1%

Source: Pennsylvania Budget and Policy Center's analysis of IPEDS data. Inflation adjusted using CPI-U-RS at http://www.bls.gov/cpi/cpiurs1978_2007.pdf

Lower State Funding Means Higher Costs and Debt for Pennsylvania Students

Pennsylvania's public four-year colleges are among the most expensive in the nation. According to the College Board, in 2016-17 Pennsylvania ranked third highest for in-state tuition and fees of public four-year colleges and universities. Pennsylvania had nearly three times the average tuition and fees (\$13,880) as natural-gas rich Wyoming, with the lowest at \$5,060.¹¹

Even when you factor in financial aid, Pennsylvania's public (including state-related) four-year colleges have the highest net cost in the mid-Atlantic region (compared to Ohio, New Jersey, Delaware, Maryland, New York, West Virginia) for all income levels.¹² The difference between Pennsylvania and these other states is most pronounced for the lowest-income bracket (\$0-\$30,000). Pennsylvania's lowest-income students, therefore, pay a disproportionately high price for going to college – nearly 20% more than those in the other states in our region.¹³

At the State System colleges specifically, tuition and other costs for Pennsylvania families have risen as state funding has gone down. In 1983-84, state appropriations accounted for 63% of the State System revenue. By 2016-17, it only accounted for 27%.¹⁴ The contribution of funding from other sources – primarily tuition and fees – today make up 73% of total educational revenue (see Figure 5).

Figure 6 adds together room and board, books and supplies, other campus expenses, tuition and fees for on-campus students to arrive at the “total cost” of attending a school in the State System. Total cost has increased by 63% since 2000, a jump of nearly \$10,000 in today’s (2016) dollars (from \$15,198 to \$24,794).¹⁵ While higher-income families may be able to absorb these costs, lower- or middle-income families will have a harder time doing so.

Figure 7 (next page) shows the increases over time in the two big-ticket items which account for 83% of total costs and 92% of the increase in total costs since 2000-01: in-state tuition and fees and on-campus room and board. We set the 2000 level of each of these costs (\$6,540 for tuition and fees and \$6,045 for room and board) equal to 100 to make it easier to see the rate of increase adjusted for inflation since then. The chart shows that annual in-state room and board increased by 76% (\$4,567 in 2016 dollars) by 2015-16, while tuition and fees increased a bit less than 51% (by \$3,351). (See Appendix Table A1 for more details on rising costs, including the smaller components of cost not shown in Figure 7.)

Figure 5.

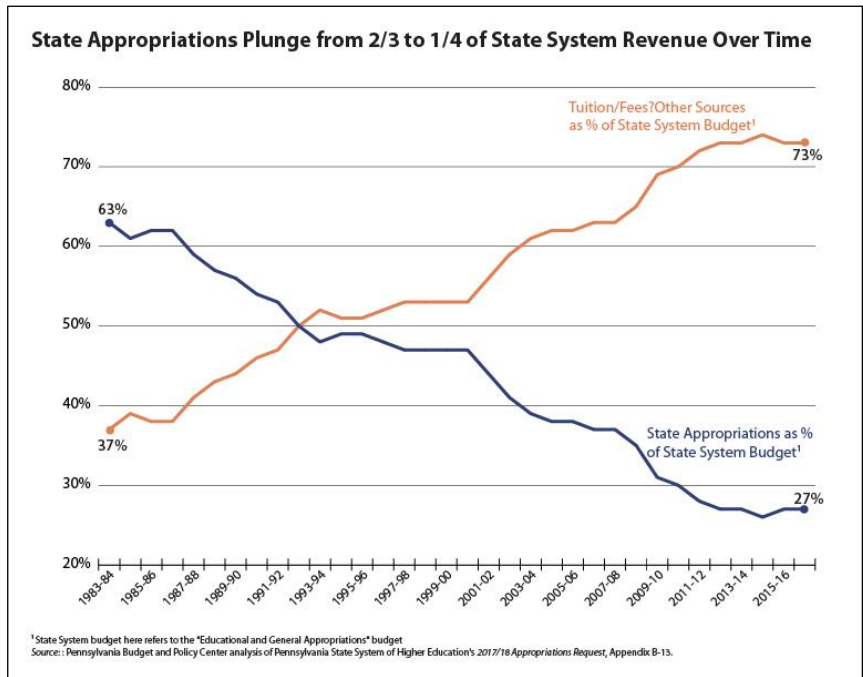


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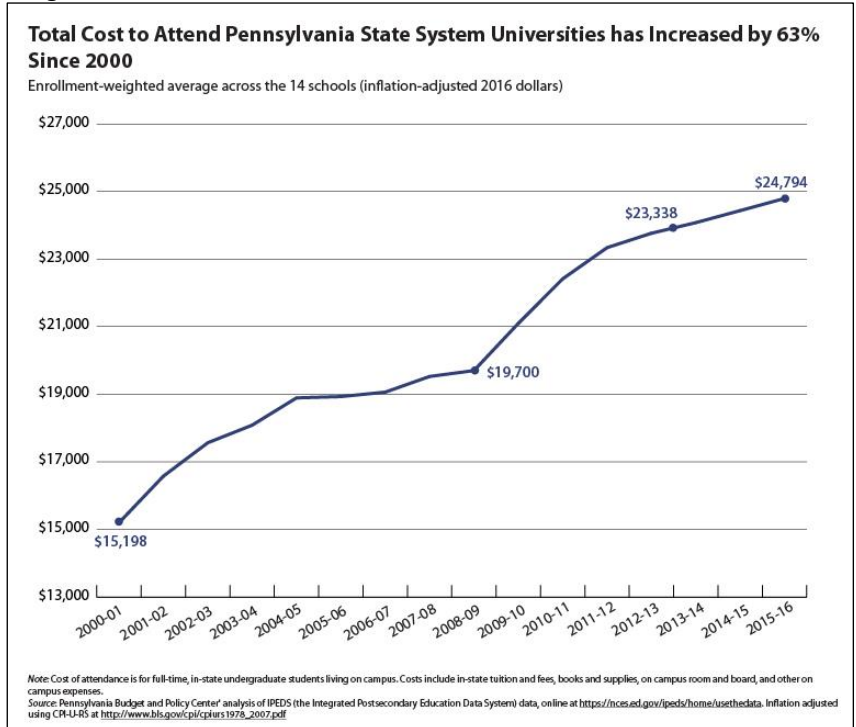


Figure 7.

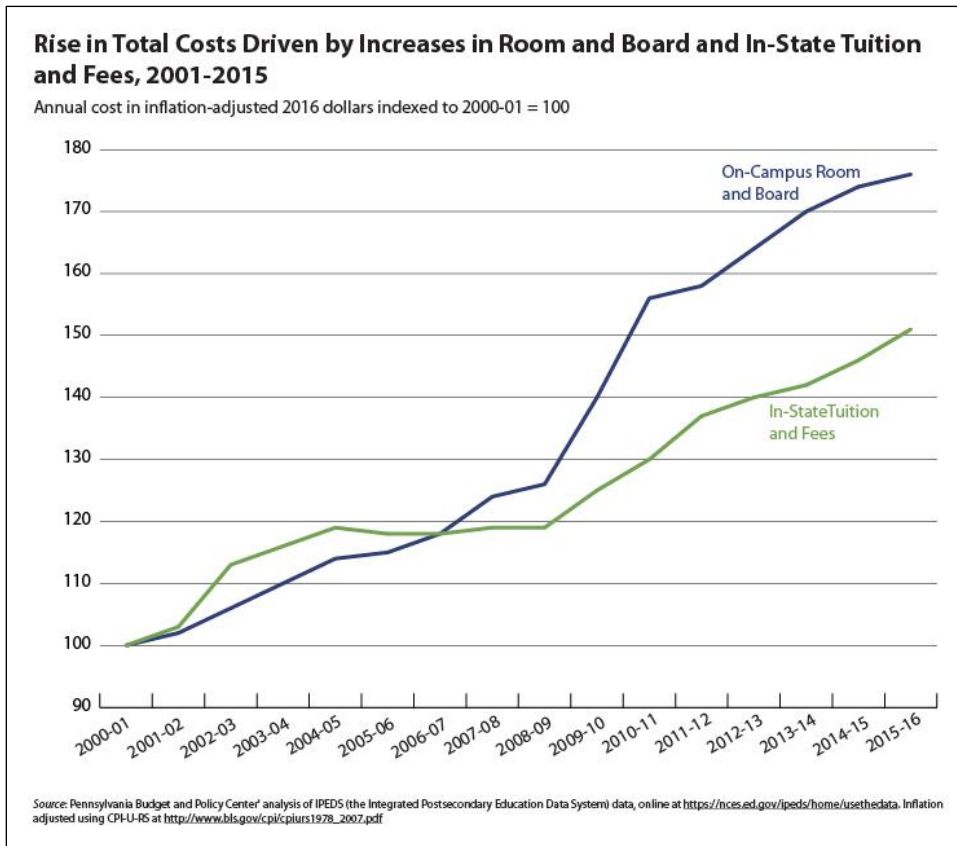


Table 3.

Room and Board Costs for Pennsylvania Universities, 2000-01, 2008-09 & 2015-16 (In Inflation-Adjusted 2016 Dollars)

College Type	2000-01	2008-09	2015-16	Percent Change	
				2000-01 to 2015-16	2008-09 to 2015-16
Private - Elite	\$7,991	\$11,666	\$13,611	70%	17%
Private - Other	\$7,660	\$9,932	\$11,673	52%	18%
State System	\$5,656	\$7,646	\$10,478	85%	37%
Public - Other	\$7,607	\$9,230	\$10,730	41%	16%

Note: Private - Elite includes 10 Pennsylvania universities: Bryn Mawr, Bucknell, Carnegie Mellon, Franklin and Marshall, Haverford, Lafayette, Lehigh, Swarthmore, University of Pennsylvania, Villanova. Private - Other includes 55 other private universities in Pennsylvania. Public-Other includes Lincoln, Pennsylvania College of Technology, PSU-Main Campus, Temple, University of Pittsburgh Main Campus.

Source: Pennsylvania Budget and Policy Center's analysis of IPEDS data. Inflation adjusted using CPI-U-RS at http://www.bls.gov/cpi/cpiurs1978_2007.pdf

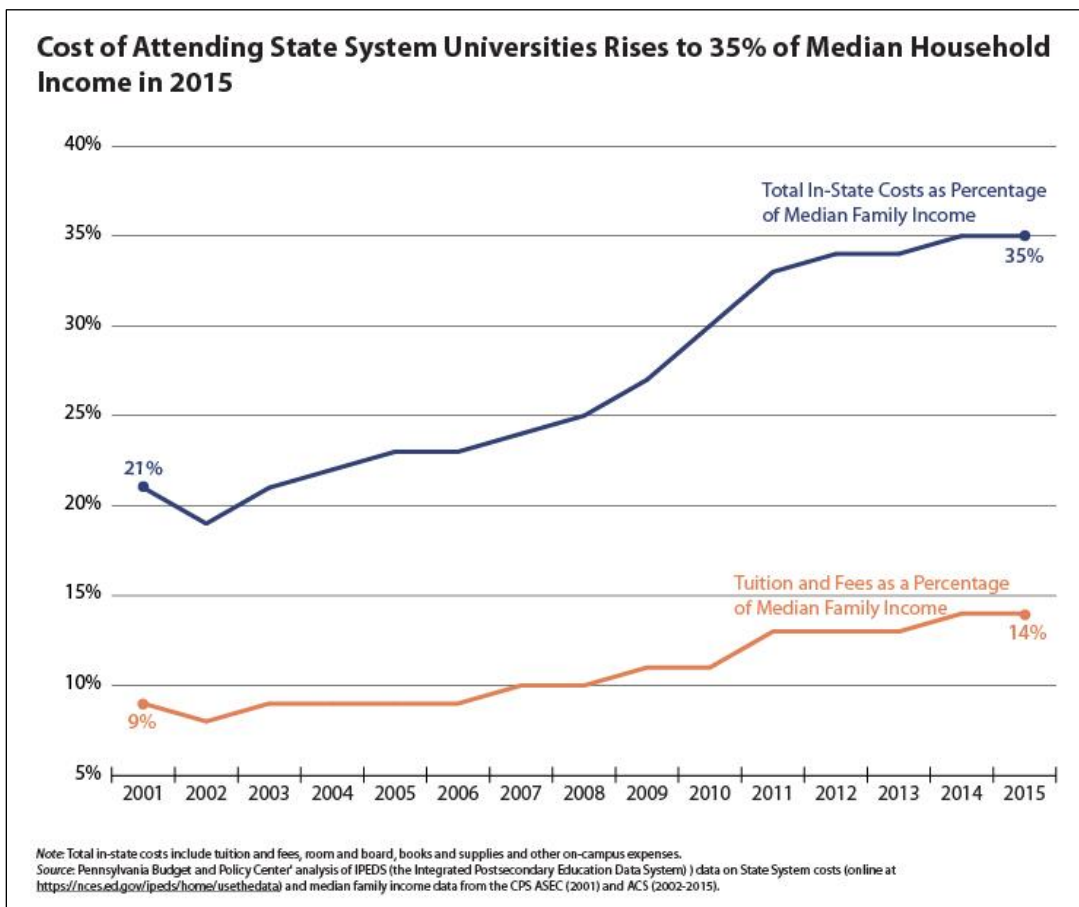
Table 3 shows the inflation-adjusted cost of room and board for State System schools in comparison to other colleges in Pennsylvania. Room and board at the State System remains cheaper than at other schools, although not by as much as it used to be. While in 2000-01, State System room and board cost

around \$2,000 less than at the other categories of schools, by 2015-16 it trailed other public schools by only about \$250. The cost of room and board at the State System increased by 85% since 2000, compared to 70% at elite private colleges and 41% at other public colleges. The higher increase in the cost of room and board at State System schools is even more stark since 2008-09 – more than twice as much as at other groups of schools. An examination by the *Pittsburgh Post-Gazette* suggested that the fast increase in room and board costs at State System schools partly reflects a common need to replace 1960s-era buildings.¹⁶ The same source also conveys a sense of State System campuses seeking to improve amenities that would attract more affluent students. The concern is that this simultaneously makes college less affordable for moderate-income families.

Either the tuition and fees increase or the room and board increase on their own might have been within the range that many middle-class families could weather. But the combination of both hikes pushed total costs up by a substantial amount relative to working families' incomes (Figure 8). Since 2015, total costs have gone from one fifth of median household income to over one third (35%).

Total cost increases between 2000 and 2015 can be seen for each of the 14 State System universities in Appendix Table A2. Cost increases ranged from 36% at Bloomsburg to 66% at Cheyney and Millersville.

Figure 8.



Box 2 – Will “Pricing Flexibility” Ratchet Up Costs at State System Schools Further?

One new trend that has the potential to impact average tuition if it becomes more common is “pricing flexibility.” Since the State System Board of Governors first reviewed “Pricing Flexibility Pilot Programs” in January 2014, it has approved 28 pilot programs that allow State System schools flexibility in pricing for different tuition arrangements.¹⁷ Some of these arrangements lower tuition, offering undergraduate tuition for military personnel at a discount, for example. But others increase tuition costs for high-demand, high-cost classes, or charge on a per-credit basis.¹⁸ Millersville, for example, now charges \$299 per credit as opposed to a flat rate for full-time students taking 12 to 18 credits per semester, reportedly generating additional revenue.¹⁹ While touted as making it more fair for those taking less credits and giving students more flexibility to attend school part time, per-credit tuition can increase costs for full-time students who graduate on time (students must take 15 credits per semester - 30 for the year - to graduate on time). For Millersville students who take 15 credits per semester and graduate in four years, charging on a per-credit basis increases annual tuition by \$1,400.²⁰ While the University says the change won’t hurt students because of increasing financial aid, the Wolf administration fears this change will reduce college attendance among low-income students.²¹

The Interaction of Cost and Enrollment at State System Schools

This section explores how cost increases have impacted enrollment at State System schools. Many other factors, including demographic changes such as the number of students graduating from high school, impact enrollment.

To fully disentangle the impact of different factors would require a complete statistical model and enough data to estimate the model. We do not attempt to estimate a full model of enrollment at each school here. We do, however, present evidence that rising total costs of attending State System schools has reduced enrollment, reinforcing the impact of demographics. Cost increases, not surprisingly, appear to have lowered enrollment more among moderate-income families (in households with incomes in the bottom 60%). Cost increases, if they continue, could become a more important factor in the future.

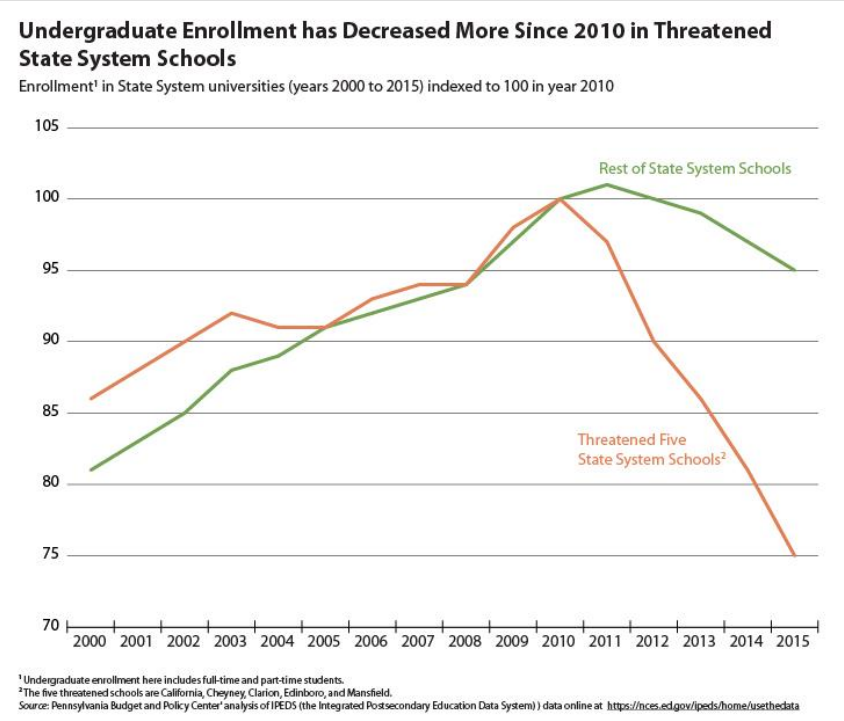
Enrollment Trends

Overall enrollment at the State System trended up throughout the 2000s from 84,554 in 2000 to a peak of around 103,000 in 2009-11, a rise of a little under 20%. (See Table A3, which also has enrollment by year from 2000 to 2015 at each individual State System school.) By 2015 State System enrollment had fallen back to 92,762, a drop of a little over 10%.

Figure 9 (next page) shows enrollment at two subsets of State System schools, with enrollment in 2010 set equal to 100 (roughly the peak of total enrollment since 2000) – in other words, enrollment in other years is shown as a percent of 2010 enrollment. The two subsets of schools are, first, the five State System schools threatened recently with potential closure or merger (California, Cheyney, Clarion, Edinboro, and Mansfield); and, second, the other nine campuses.

(Setting enrollment in 2010 equal to 100 – also known as “indexing to 2010 equals 100” – makes it easier to see how much enrollment has fallen in the past few years.) At the five threatened campuses, enrollment has plunged 25% since 2010.²² At the other campuses, enrollment has declined about 6% from its peak (which was in 2011 for this group, roughly in line with national trends).²³ Demographics played a part in these differences: four of the five threatened schools come from areas in which birth rates plunged in the early 1990s, leading to a similar drop in the number of high-school graduates starting around 2010. But rising costs also had an impact.

Figure 9.



Enrollment from Bottom 60% and Top 40% Households

U.S. Department of Education data do not provide enrollment for all students at different income levels (only for students on financial aid). The unique and powerful data base relied on in our previous brief (see Box 1 earlier) does provide data on enrollment at individual colleges from different income groups for students born from 1980 to 1991 (and who attended college from 1999 to 2013).²⁴ The last year in which almost all enrollment came from this group was 2009-10, when students born in 1991 were freshmen.²⁵

Therefore, the data available on attendance by income group mostly predates the dip in total enrollment in State System schools shown in the previous figure. Even so, as Figure 10 shows, this source reveals important differences in enrollment trends for students from families with incomes in the bottom 60% of households and those from the top 40%.

Over the 11 years from the 1980 birth cohort to the 1991 birth cohort (i.e., college entrance from 1998-99 to 2009-10), enrollment of top 40% families rose substantially at both the five threatened State System schools and the other nine campuses (40% at the nine campuses and just below 30% at the threatened five). By contrast, the run up in enrollment among bottom 60% families was smaller – less than 10% over the whole period at threatened schools after a dip in enrollment of birth-year 1991 students. This group entered college (in 2009 and 2010) at a time when many working families

Figure 10.

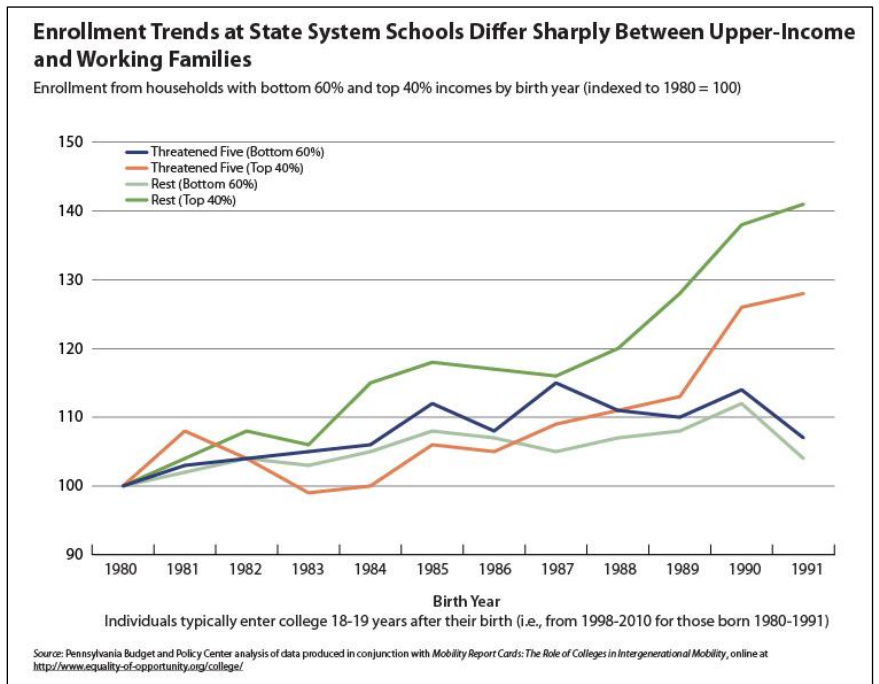
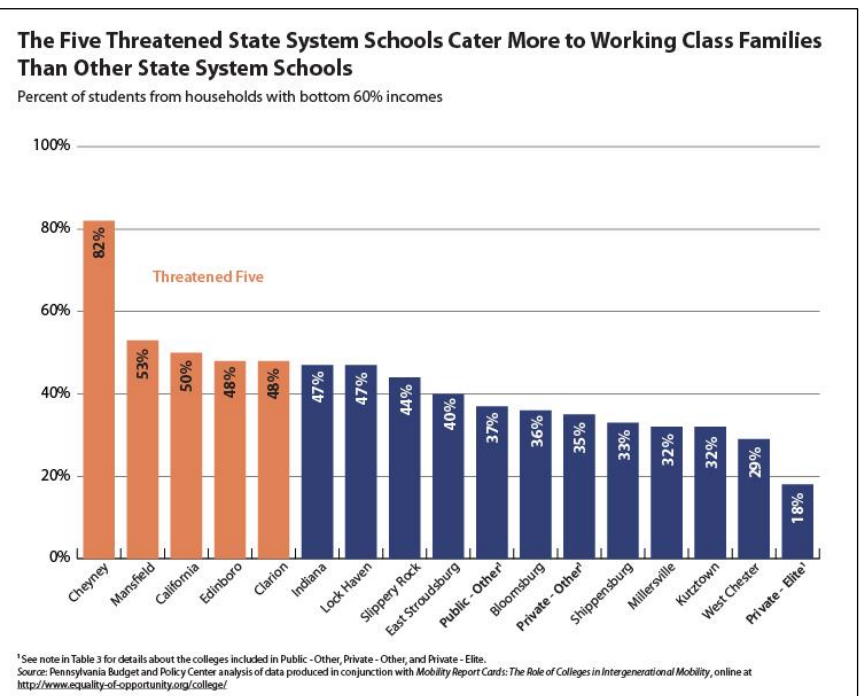


Figure 11.



experienced great economic difficulty. Because the threatened five schools cater more to bottom-60% families than their nine peer schools (Figure 11 above), the differential trends in enrollment among bottom-60% and top 40% families held down overall enrollment growth at the five schools relative to the other nine.

The Shrinking Gap in “Net Total Cost” Between State System and Other Schools

Additional perspective on changing enrollment patterns at State System schools comes from the “College Scorecard” assembled by the Obama Administration to give families better information with which to choose colleges. The Scorecard includes recent data on changes in costs and “net costs” (after grant/scholarship aid) and how this has impacted total enrollment.

In Table 4, the middle column of numbers shows that the average annual increase in inflation-adjusted net total costs at State System schools has been 3.8% per year over the five years from 2009-10 to 2014-15 – 19% over the five-year period. Other public four-year schools in Pennsylvania, primarily state-related schools, experienced a similar increase in net total costs but those schools cater less to income-constrained families and students. The table also shows that enrollment in State System schools over this period fell by half a percent annually. The two groups of private schools (both elite and other), while still more expensive at the end of the period, experienced declines annually in net total costs over this period and small increases in enrollment.

Table 4.

Average Annual Percent Change in Inflation Adjusted In-State Net Total Costs and Enrollment 2009-10 to 2014-15			
School Type ¹	Percent Change in In State Tuition and Fees	Percent Change in Average Net Total Costs ²	Percent Change in Enrollment ³
Private - Elite	1.68%	-0.82%	0.21%
Private - Other	2.51%	-0.47%	0.28%
State System	3.16%	3.80%	-0.50%
Public - Other	2.28%	3.55%	0.66%

¹ Figures are enrollment weighted average

² The average annual total cost of attendance, including tuition and fees, books and supplies, and living expenses, minus the average grant/scholarship aid. It is calculated for all full-time, first-time, degree/certificate-seeking undergraduates who receive Title IV aid. It is included in the IPEDS Student Financial Aid component. Separate metrics are calculated for public institutions and private institutions. For public institutions, this metric is limited to undergraduates who pay in-state tuition and receive Title IV aid. For private institutions, it includes all undergraduates who receive Title IV aid. The total cost of attendance depends on whether undergraduates live on campus, off campus (not with family), or off campus (with family)

³ Enrollment of undergraduate certificate/degree-seeking students

Source: Pennsylvania Budget and Policy Center's analysis of College Scorecard data, <https://collegescorecard.ed.gov/>

While the Scorecard does not include data on total enrollment by income group, it does provide data on “net total costs” for students on financial aid within different family income ranges. Using these data, Figure 12 shows changes in net total costs for students below and above \$75,000. It shows that net total costs for lower-income students increased by slightly more at State System schools and at other Pennsylvania public schools than net total costs for higher-income students.

Over the five-year period shown, net total costs in inflation-adjusted terms increased by 23% at State System schools for students from families making less than \$75,000. Net total costs for students from families making less than \$75,000 increased by less at elite private schools, while decreasing for students from families making more than \$75,000 (see Appendix Table A4). Net total costs barely changed for students attending other private schools.

Figure 12.

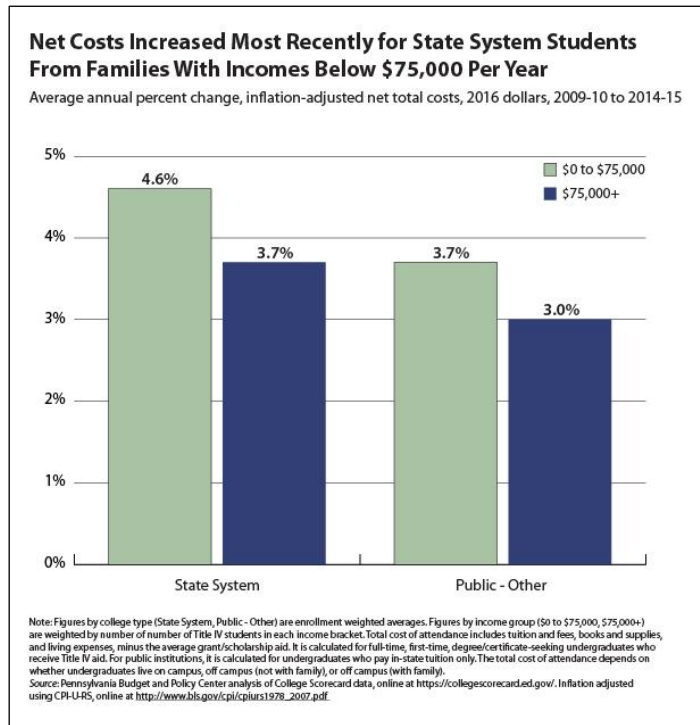
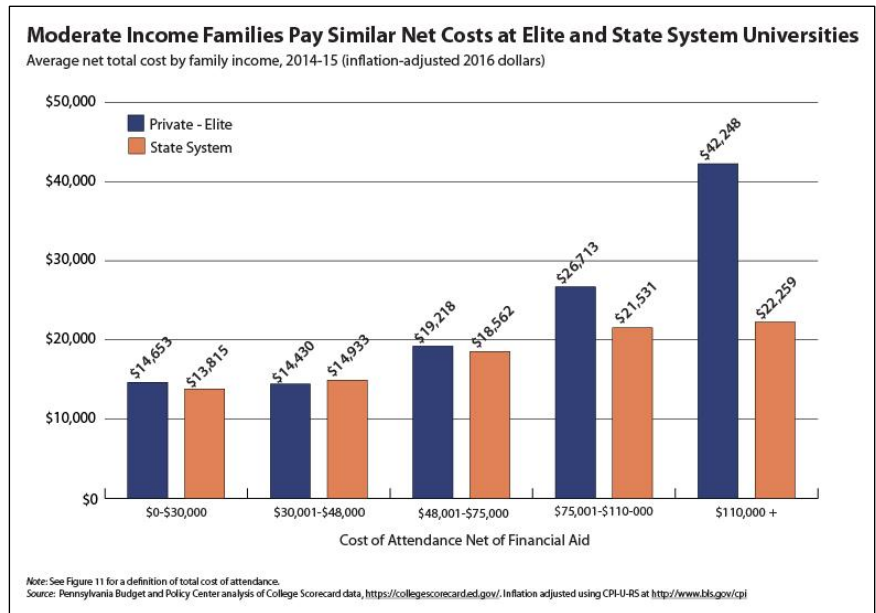


Figure 13 and Appendix Table A5 compare net total costs by family income for students who attend State System schools and private elite colleges.²⁶ Despite the immense difference in the “sticker price” (tuition and fees before any financial aid) for Pennsylvania residents between private elite colleges (\$47,782) and State System colleges (\$9,525), moderate income Pennsylvania families attending State System schools actually pay similar amounts in net costs (including living costs) as those who attend elite private schools. For the lowest income group (\$0-\$30,000/year), the net cost of attending either a State System university or private school is nearly half of the highest family income in this range (i.e., is nearly \$15,000).

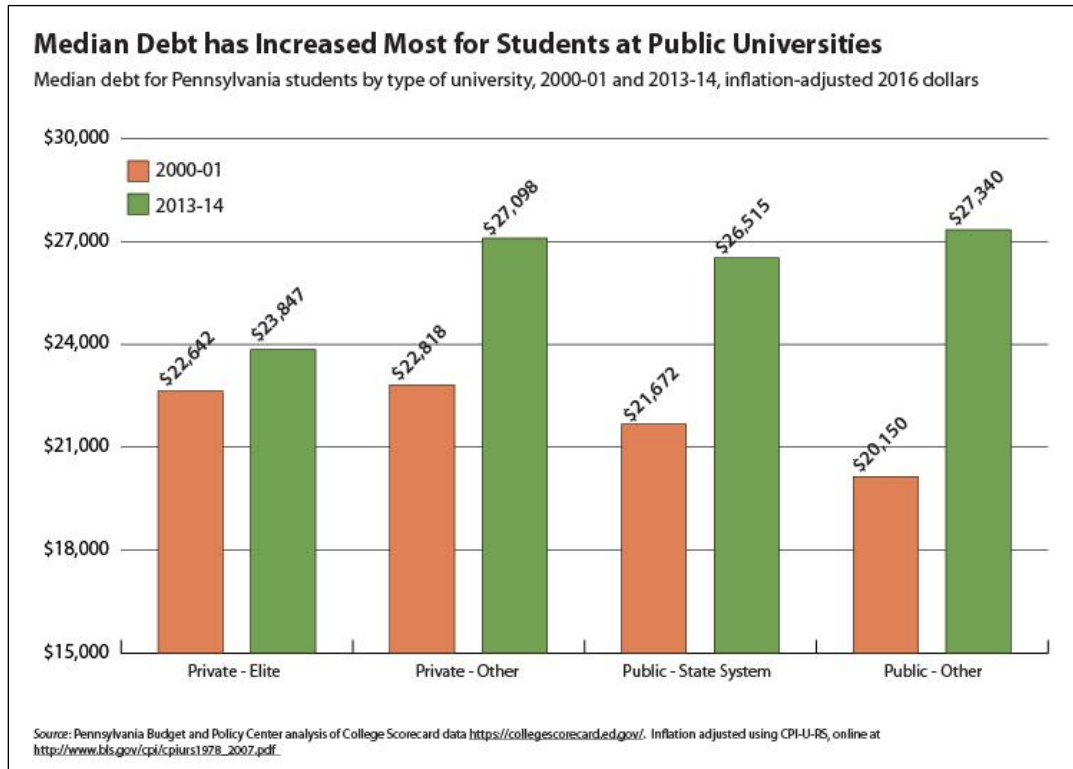
Figure 13.



These data help make sense of Figure 10 showing a recent fall in the share of State System students that come from families with incomes in the bottom 60% of households. They also help make sense of Table 4 in our previous brief, which showed a decline in the share of students from bottom 60% households

from 41% to 35% between birth-year 1980 and birth-year 1991 students. These data further make sense of the fact that student debt levels among 2013-14 graduates from the State System are now higher than debt levels among graduates from private elite schools (see Figure 14).

Figure 14.



Enrollment Decline in Line with 2011 Maguire Report Projections

That increases in total costs could drive down State System enrollment is not a surprising or new idea: when the price of a good or service goes up, the demand for it usually goes down. The State System commissioned a report by Maguire Associates in 2011 to explore, in effect, the elasticity of demand for slots at State System schools.²⁷

The Maguire report used surveys of students and parents to evaluate the sensitivity of enrollment rates among admitted students (referred to as “yield” in the report) when net cost rises in increments of \$1,000 up to \$5,000. Table 6 compares the predicted reduction in enrollment according to the 2011 Maguire report, given inflation-adjusted cost increases that occurred, with the actual reduction. Enrollment reductions at individual schools do not always match those predicted, indicative of the importance of demographics and institution-specific factors (e.g., market positioning/branding) in influencing enrollment. Across all 14 schools, however, the average reductions *are* in the ballpark of the predicted ones.²⁸

The Maguire report also documented that net cost increases have more impact on enrollment of low-income families and minority students. This finding also echoes the research literature on the price elasticity of demand at four-year colleges.²⁹

Given the demographic factors driving down enrollment since 2011 – factors not incorporated into the Maguire projections – the actual enrollment reductions experienced are lower than expected given how much total costs have increased. This raises the question of whether the full, long-term effect of those increases has yet been felt. Will that show a further decline in attendance of students of moderate-income families even if inflation-adjusted increases in total costs end?

Table 5.

Increase in Total Cost of Attendance (In Inflation-Adjusted 2016 Dollars) and Enrollment Decline at State System Universities, 2011-2015

University	Inflation-Adjusted Increase in Total Cost of Attendance ¹	Predicted Drop in Number of Admitted Students Who Attend ("Yield Reduction")	Actual Enrollment Change
Cheyney	\$2,459	-20%	-40%
Clarion	\$2,199	-15%	-22%
California	\$988	-5%	-22%
Mansfield	\$1,618	-16%	-22%
Edinboro	\$185	-1%	-21%
Lock Haven	\$3,798	-33%	-16%
Shippensburg	\$3,301	-23%	-16%
Kutztown	\$3,232	-23%	-13%
Indiana	\$1,101	-9%	-12%
Millersville	\$4,291	-35%	-8%
East Stroudsburg	-\$67	1%	-7%
Slippery Rock	\$867	-10%	-5%
Bloomsburg	\$106	-1%	-1%
West Chester	-\$677	5%	11%
Average (unweighted)	\$1,671	-13%	-14%

¹Total cost of attendance is for full-time, in-state undergraduate students living on campus. Costs include in-state tuition and fees, books, and supplies, on campus room and board, and other on campus expenses.

Source: Pennsylvania Budget and Policy analysis of IPEDS data and Maguire Associates estimates of price elasticity of enrollment in Maguire Associates, "2012 Pricing Elasticity and Brand Value Study," March 22, 2013. Inflation adjusted using CPI-U-RS at http://www.bls.gov/cpi/cpiurs1978_2007.pdf

Conclusion

Historically the Pennsylvania State System of Higher Education has provided a lower-cost, four-year college option than the other institutions of higher learning in Pennsylvania. Due to low and decreased state funding, however, costs for students have risen over time. The number and share of enrollees from working-class families has also begun to decline, especially in recent years. State System schools are becoming out-of-reach financially for some families, and many who do attend face the prospect of graduating with a sizable debt.

The five State System schools being considered for closure or mergers are the very institutions that have historically educated a disproportionate share of working-class students in our state, providing them with a skill-based ladder to upward mobility. **Rather than considering closing campuses vital to college access for moderate-income families, Pennsylvania should invest more heavily in the State System, bringing down costs for students and families.**³⁰ Only with lower costs can the state restore the role of public universities in promoting opportunity and upward mobility.

Appendix

Table A1.

Student Costs by Category, weighted average (Inflation-adjusted to 2016 dollars), 2001-2015						
Year	In-State Tuition and Fees	On-Campus room and board	On-campus, other expenses	Books and Supplies	Total	Tuition, Fees and Room & Board as Share of Total
	(1)	(2)	(3)	(4)	(5)	(1) + (2) / (5)
2000	\$6,540	\$6,045	\$2,670	\$925	\$16,180	78%
2001	\$6,756	\$6,173	\$2,691	\$956	\$16,576	78%
2002	\$7,398	\$6,427	\$2,728	\$1,011	\$17,564	79%
2003	\$7,605	\$6,653	\$2,719	\$1,107	\$18,084	79%
2004	\$7,781	\$6,902	\$3,046	\$1,164	\$18,892	78%
2005	\$7,718	\$6,981	\$3,065	\$1,167	\$18,931	78%
2006	\$7,695	\$7,125	\$3,026	\$1,216	\$19,062	78%
2007	\$7,799	\$7,500	\$3,020	\$1,207	\$19,526	78%
2008	\$7,796	\$7,603	\$3,066	\$1,235	\$19,700	78%
2009	\$8,178	\$8,444	\$3,214	\$1,260	\$21,097	79%
2010	\$8,519	\$9,404	\$3,216	\$1,275	\$22,415	80%
2011	\$8,976	\$9,522	\$3,568	\$1,272	\$23,338	79%
2012	\$9,135	\$9,888	\$3,453	\$1,287	\$23,764	80%
2013	\$9,261	\$10,281	\$3,302	\$1,234	\$24,078	81%
2014	\$9,536	\$10,540	\$3,137	\$1,220	\$24,434	82%
2015	\$9,891	\$10,612	\$3,041	\$1,250	\$24,794	83%
% increase between 2000- 2015	51%	76%	14%	35%	53%	

Source: Pennsylvania Budget and Policy Center based on IPEDS data, 2001-2015

Table A2.

Total cost increases by State System Universities, 2000-2015 (Inflation-adjusted to 2016 dollars)

	2000	2015	Percentage increase
Bloomsburg	\$16,868	\$22,890	36%
California	\$16,951	\$25,764	52%
Cheyney	\$15,506	\$25,768	66%
Clarion	\$16,324	\$24,812	52%
East Stroudsburg	\$16,168*	\$22,408	37%
Edinboro	\$15,344	\$23,141	51%
Indiana-Main Campus	\$15,383	\$25,231	64%
Kutztown	\$16,624	\$24,710	49%
Lock Haven	\$16,960	\$24,334	43%
Mansfield	\$15,831	\$25,600	62%
Millersville	\$15,994	\$26,521	66%
Shippensburg	\$16,265	\$25,827	59%
Slippery Rock	\$14,629	\$23,713	62%
West Chester	\$17,456	\$26,291	51%

*Figure is for 2001 since 2000 was not reported.

Note: Costs are for full-time, in-state students living on campus. Costs include tuition and fees, room and board, books and supplies and other on-campus costs.

Source: Pennsylvania Budget and Policy Center analysis of IPEDS data. Inflation adjusted using CPI-U-RS at http://www.bls.gov/cpi/cpiurs1978_2007.pdf

Table A3.

Total Enrollment for Undergraduate Students¹ by State System Institution, 2000-2015																
University	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Bloomsburg	6,843	7,222	7,298	7,520	7,524	7,783	7,877	7,938	8,081	8,605	9,136	9,256	9,201	9,416	9,319	9,119
California	5,003	5,076	5,127	5,392	5,455	5,943	6,299	6,690	6,925	7,206	7,419	7,417	6,681	6,450	6,076	5,785
Cheyney	1,134	1,198	1,138	1,251	1,376	1,401	1,494	1,322	1,333	1,402	1,508	1,141	1,224	1,179	997	686
Clarion	5,687	5,812	6,003	5,943	5,855	5,744	5,904	5,873	5,975	6,223	6,225	5,876	5,518	5,199	4,911	4,555
East Stroudsburg	4,732	4,967	5,150	5,121	5,409	5,596	5,890	5,959	6,099	6,391	6,372	6,656	6,355	6,186	6,203	6,167
Edinboro	6,552	6,684	6,922	7,029	6,735	6,524	6,443	6,413	6,155	6,471	6,697	6,649	6,090	5,864	5,595	5,246
Indiana	11,735	11,763	11,834	12,119	12,163	12,047	11,976	11,724	11,928	12,291	12,827	13,151	13,275	12,668	12,295	11,597
Kutztown	7,033	7,293	7,591	8,058	8,527	8,806	9,189	9,311	9,404	9,614	9,725	9,487	9,135	8,815	8,562	8,288
Lock Haven	3,839	4,081	4,394	4,696	4,875	4,977	4,890	4,982	4,988	5,044	5,115	5,029	4,969	4,855	4,521	4,220
Mansfield	2,891	3,019	3,057	3,168	3,127	2,986	2,936	2,921	2,944	3,068	2,945	2,876	2,824	2,717	2,587	2,249
Millersville	6,497	6,597	6,646	6,820	6,991	6,935	7,206	7,259	7,217	7,359	7,604	7,644	7,424	7,388	7,171	7,055
Shippensburg	5,990	6,238	6,413	6,567	6,579	6,459	6,423	6,621	6,733	6,942	7,143	7,132	6,712	6,550	6,305	6,017
Slippery Rock	6,294	6,500	6,814	7,054	7,202	7,414	7,545	7,585	7,691	7,825	8,026	7,961	7,860	7,595	7,587	7,566
West Chester	10,324	10,220	10,467	10,562	10,644	10,838	10,818	11,109	11,482	11,920	12,232	12,834	13,297	13,711	13,844	14,212
Total	84554	86670	88854	91300	92462	93453	94890	95707	96955	100361	102974	103109	100565	98593	95973	92762

¹Undergraduate students include part-time and full-time students.

Source: Pennsylvania Budget and Policy Center analysis of IPEDS data

Table A4.

School Type ¹	Average Annual Change in Net Total Costs ² by Family Income	
	\$0 to \$75,000	\$75,000 +
	Private - Elite	2.2%
Private - Other	0.0%	0.1%
State System	4.6%	3.7%
Public - Other	3.7%	3.0%

¹ Figures are enrollment weighted average

² The average annual total cost of attendance, including tuition and fees, books and supplies, and living expenses, minus the average grant/scholarship aid. It is calculated for all full-time, first-time, degree/certificate-seeking undergraduates who receive Title IV aid. It is included in the IPEDS Student Financial Aid component. Separate metrics are calculated for public institutions and private institutions. For public institutions, this metric is limited to undergraduates who pay in-state tuition and receive Title IV aid. For private institutions, it includes all undergraduates who receive Title IV aid. The total cost of attendance depends on whether undergraduates live on campus, off campus (not with family), or off campus (with family).

Source: Pennsylvania Budget and Policy Center's analysis of College Scorecard data, <https://collegescorecard.ed.gov/>. Inflation adjusted using CPI-U-RS at http://www.bls.gov/cpi/cpiurs1978_2007.pdf

End Notes

¹ Mark Price, "Pennsylvania's Great Working Class Colleges," Keystone Research Center, April 24, 2017, <https://goo.gl/TyIYRN>

² Raj Chetty, John N. Friedman, Emmanuel Saez, Nicholas Turner and Danny Yagan. *Mobility Report Cards: The Role of Colleges in Intergenerational Mobility*, January 2017, <https://goo.gl/4dvHm6>

³ 11,672 individuals born in the three birth-years from 1980 to 1982 attended State System schools (from 1999-2004), came from families with incomes in the bottom 60% of households, and had incomes in the top 40% of individuals by their early-to-mid thirties. Multiplying this figure by eight and one third yields an estimate of the number of upward mobility success stories across 25 birth-years (or a generation), based on the rule-of-thumb that there are 25 years in a generation. Eight and one-third times 11, 672 equals 97,267. In sum, roughly 100,000 individuals attending State System schools rise from the bottom 60% to the top 40% each generation. Estimates based on the research of Raj Chetty, John N. Friedman, Emmanuel Saez, Nicholas Turner and Danny Yagan and data available online at <http://www.equality-of-opportunity.org/college/>.

⁴ Pennsylvania's state-related colleges (Lincoln, Penn State, Pitt, and Temple) remain outside the State System. A copy of Act 188 can be found at <http://www.passhe.edu/inside/legal/documents/act188.pdf>

⁵ Pennsylvania also ranked 47th for educational appropriation per full time student (FTE) (at \$3,576 in 2016), above only New Hampshire, Vermont and Illinois. This investment has decreased 37% (from \$5,673 in 2016 dollars) since 2008. See State Higher Education Executive Officers Association (SHEEO), "State Higher Education Finance: FY 2016," 2017.

⁶ Ginger Stull, Mark Duffy, Austin Slaughter, Joshua Lin, "College Affordability in PA: How Did We Get Here, and What Can be Done?" Research for Action, 2016.

⁷ Stull et al., "College Affordability in PA." While Pennsylvania is above average in providing financial aid to students, this does not make up for the high cost of Pennsylvania's colleges. As we discuss below, even after you factor in financial aid, the net cost (cost minus grants) for Pennsylvania families is still highest in the region and close to the highest nationally.

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- ⁸ In 2011-12, state general fund appropriation (including ARRA funds) for the State System fell by \$70 million and other line items for the State System declined by \$20.7 million. For details, see Stephen Herzenberg, Mark Price, Mike Wood, "A Must Have for Pennsylvania Part Two: Investment in Higher Education for Growth and Opportunity," Keystone Research Center, October 2014.
- ⁹ For evidence on the contribution of higher education to economic growth and individual opportunity, see Herzenberg, Price, and Wood, "A Must Have for Pennsylvania Part Two."
- ¹⁰ Pennsylvania State System of Higher Education, "2017/18 Appropriations Request," no date.
- ¹¹ Data downloaded from: <https://trends.collegeboard.org/college-pricing/figures-tables/2016-17-state-tuition-and-fees-public-four-year-institutions-state-and-five-year-percentage>
- ¹² Net cost is total cost of attending including living expenses, minus financial aid.
- ¹³ Stull et al., "College Affordability in PA," 2016.
- ¹⁴ Figure 4 includes revenues for educational purposes and institutional administration but does not include revenue for room and board of on-campus students, discussed later.
- ¹⁵ Pennsylvania Budget and Policy Center's analysis of IPEDS data
- ¹⁶ Bill Schackner, "The Other College Debt: Upgrades put Pennsylvania schools in a bind," *Pittsburgh Post-Gazette*, October 7, 2012.
- ¹⁷ Bill Schackner, "State System wants to give universities permanent pricing flexibility," *Pittsburgh Post-Gazette*, January 26, 2017; http://www.pennlive.com/politics/index.ssf/2017/04/wolf_administration_officials.html
- ¹⁸ Pennsylvania State System of Higher Education. "Pennsylvania State System of Higher Education Pricing Flexibility Pilot Programs Overview: As Reviewed by the Board of Governors, January 23, 2014."
- ¹⁹ For details on per-credit tuition at Millersville University, see <http://www.millersville.edu/osa/tuition-fees/tuition-faq.php>. Millersville has raised \$9.1 million through this tuition model. Jan Murphy, "Wolf Administration officials take dim view of state university's per-credit tuition model," [DATE,] 2017; http://www.pennlive.com/politics/index.ssf/2017/04/wolf_administration_officials.html
- ²⁰ Tim Stuhldreher, "Millersville's per-credit tuition has raised revenue. Does it hurt students?" *Lancaster Online*, October 19, 2015.
- ²¹ Murphy, "Wolf administration officials take dim view," [DATE.] 2017.
- ²² The five threatened campuses include California, Cheyney, Clarion, Edinboro and Mansfield.
- ²³ Between 2010 and 2014, fall enrollment in U.S. degree-granting postsecondary institutions decreased by 4 percent; <https://nces.ed.gov/fastfacts/display.asp?id=98>
- ²⁴ The data base is from "Mobility Report Cards: The Role of Colleges in Intergenerational Mobility"; <http://www.equality-of-opportunity.org/college/>
- ²⁵ By 2011-12, half of enrollment comes from cohorts younger than those born in 1980-91.
- ²⁶ For both private and State System schools, the students in each income range include only those receiving Title IV aid. For State System schools, the students include only Pennsylvania students,
- ²⁷ Maguire Associates. "2012 Pricing Elasticity and Brand Value Study." Final Report, March 22, 2013.
- ²⁸ The Maguire researchers estimated that a \$1000 increase would result in a 10% drop in enrollment, which is consistent with the literature: numerous studies estimate a 0.5 to 1% drop in enrollment for an increase of \$100 in tuition). See Saif Ahmed and Anirban Ghosh. "Tuition Elasticity: Student Responsiveness to Tuition Increases." Hanover Research accessed at <http://www.hanoverresearch.com/2012/06/28/tuition-elasticity-student-responsiveness-to-tuition-increases/>; L.L. Leslie & P.T. Brinkman (1987). "Student price response in higher education: The student demand studies." *The Journal of Higher Education* (1987), 58(2), pp. 181-204; D. E. Heller. "Student price response in higher education: An update to Leslie and Brinkman." *Journal of Higher Education* (1997), 68(6), pp. 624-659.
- ²⁹ S. Baum. "College education: Who can afford it?" In M. B. Paulsen and J. C. Smart (Eds.) *The finance of higher education: Theory, research, policy & practice* (New York, NY: Agathon Press, 2001), pp. 39-52; Heller pp. 624-659; Leslie and Brinkman pp. 181-204; M.B. Paulsen. "The economics of the public sector: The nature and role of public policy in the finance of higher education." In M. B. Paulsen & J. C. Smart (Eds.) *The finance of higher education: Theory, research, policy & practice* (New York, NY: Agathon Press, 2001), pp. 95-132; J. Wetzel, D. O'Toole, & S. Peterson. "An analysis of student enrollment demand." *Economics of Education Review*, (1998, 17(1)), pp. 47-54.
- ³⁰ For discussion of the Pennsylvania Budget and Policy Center's fair-tax proposal that could raise revenue to invest in higher education and other needs, see the conclusion of Price, "Pennsylvania's Great Working Class Colleges."