

Debt-Free Public Higher Education: What Would It Take?

By Luc Schuster and Colin Jones

[Updated to include an additional inflation adjustment, Nov. 11, 2015]

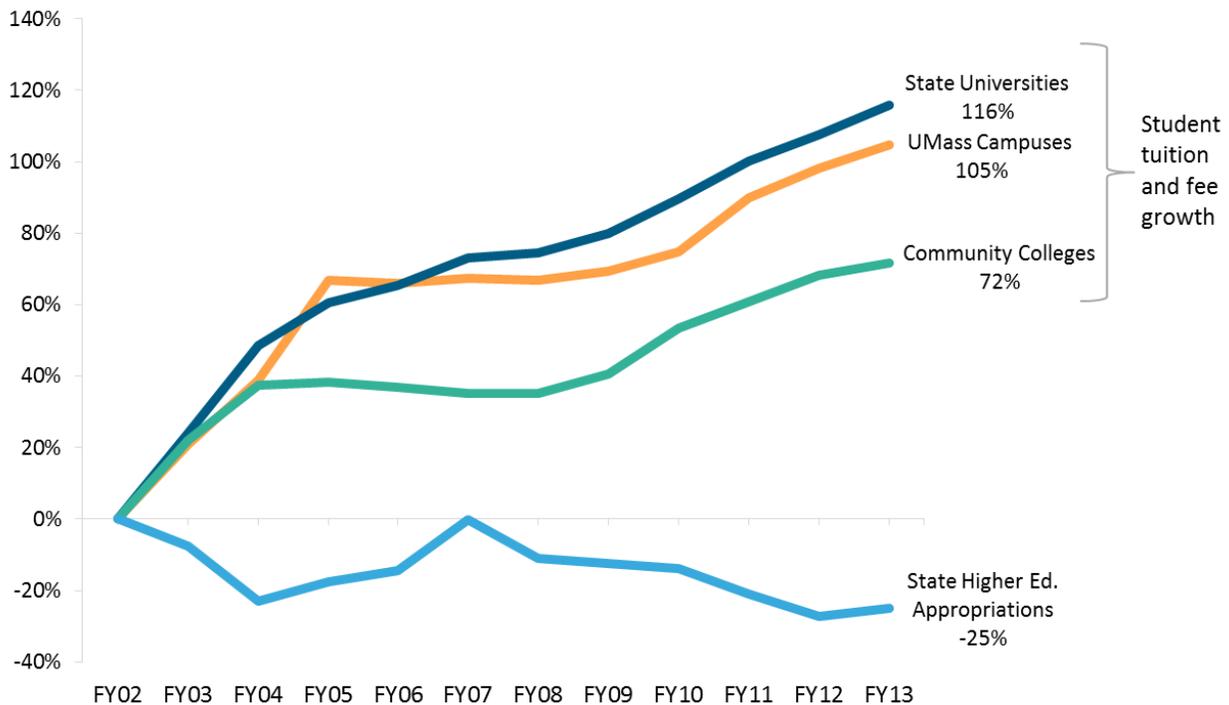
Public higher education plays a critical role in our state's education pipeline, helping cultivate informed citizens and active members of our local communities. College graduates also tend to earn significantly higher wages, better equipping them to support themselves and their families. Four-year college graduates earn roughly \$21,000 more than high school graduates, and those with two-year degrees earn roughly \$9,400 more.¹

These individual benefits lead to meaningful public benefits as well, strengthening our state's skills-based economy over the long-term. In fact, there is a strong correlation between the educational attainment of a workers in a given state and median wages in that state (see: [A Well-Educated Workforce is Key to State Prosperity](#))

Unfortunately, public higher education has grown increasingly expensive, even though it's more difficult than ever to find a good job with only a high school diploma. Massachusetts cut public support by roughly \$335 million between FY 2002 and FY 2013 (adjusted for inflation). Tuition and fees roughly doubled over the same timeframe.

Tuition & Fees Doubled While State Support Declined

Percent change in inflation adjusted terms (CPI), relative to base year (FY 2002)



Source: MA Dept. of Higher Ed. Resident Tuition and Fee (Total) Rates

What would it cost the state to eliminate tuition & fees for in-state students?

Recognizing the potential returns to investing in public higher education, President Obama announced in the 2015 State of the Union a proposal to make two-years of community college “as free and universal in America as high school is today.” This plan, which has not moved forward in Congress, would have been funded 75 percent by the federal government and 25 percent by the states. Independent of federal legislation, we could consider a state plan here in Massachusetts so that students can graduate debt-free.

After factoring in current sources of student support (e.g. state scholarships and federal Pell Grants), the net state cost of eliminating tuition and fees under three different scenarios would be:

- **\$325 million/year** to eliminate tuition and fees for all current in-state students at Community Colleges and State Universities.
- **\$524 million/year** to provide grants to cover Community College costs (tuition, fees, books, and transportation), but which could also be used to defray the costs of attending State Universities and UMass campuses.
- **\$631 million/year** to eliminate tuition and fees for all current in-state students at all campus types.

Each of these estimates calculates new state funding needed to eliminate tuition and fees only for currently enrolled students. A program of this sort would likely lead to a woodwork effect where additional students would attend these campuses since tuition and fees had been eliminated. These new students might not otherwise have been able to attend college or they might have instead attended private universities. Please see the discussion at the end of these cost option descriptions for estimates related to this woodwork effect.

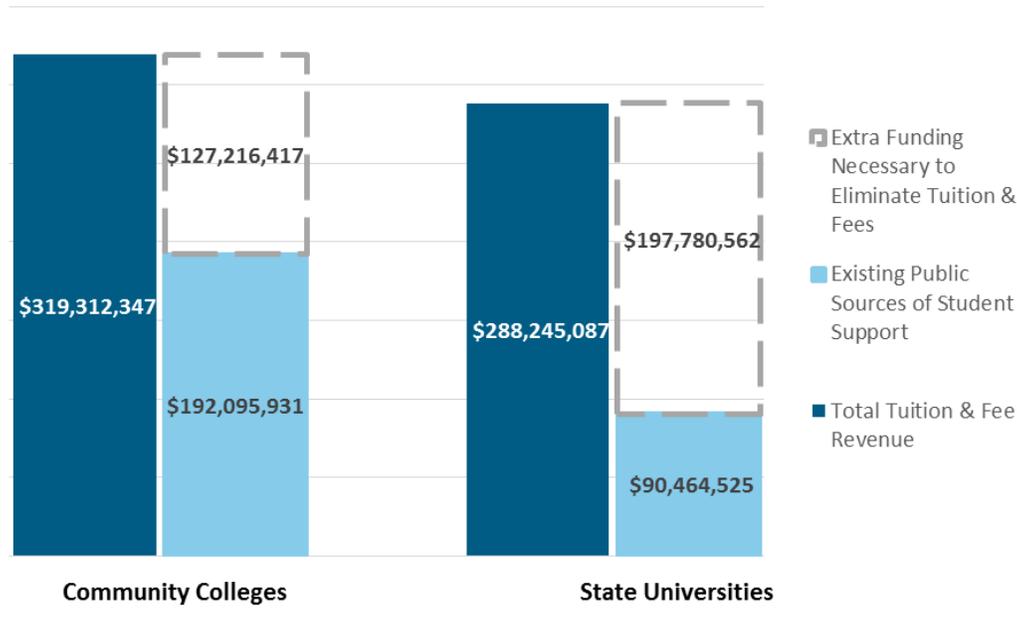
Option 1: Tuition-free Community Colleges and State Universities

Eliminating tuition and fees for Massachusetts residents attending our Community Colleges and State Universities is one option for targeting state support to those most in need. To estimate this cost, we identify the gap between current tuition and fee revenue from in-state students and existing sources of support that go directly to help students pay for their tuition and fees. The remaining difference – \$127 million for Community Colleges and \$198 million for State Universities – represents the net additional cost of eliminating tuition and fees for resident students currently attending these campuses.

The total cost of providing education at these campuses is actually higher than what is presented in the calculations below because they also receive direct state support not tied to individual students. We can set that aside for these calculations, however, since we are estimating only the net *additional* state resources needed to cover all tuition and fees.

Eliminating tuition & fees would cost about \$325 mil

Estimates for in-state students at MA community colleges and state universities, FY 2013



It is important to note that while eliminating tuition and fees would be a significant help for most students, these are not the only costs they face. Under this scenario, students would still have to come up with money to pay for books, housing, food, and other ongoing living expenses.

Option 2: Grants to cover Community College costs, but which could also be used at State Universities and UMass campuses

While directing additional state resources to Community College and State University students would support many students with real financial need, it could discourage qualified students from attending UMass since the cost for attending these campuses would remain unchanged.

One option for avoiding this disincentive is to provide a grant equal to the costs of attending Community Colleges and then allowing students the option of either: 1) using the grant to attend Community College for free; or 2) using the grant to defray the cost of attending State Universities or UMass campuses.

According to our estimates, it would cost the state roughly \$2,000 per student to eliminate tuition and fees at Community Colleges (compared to \$5,700 at State Universities and \$7,600 at UMass). But this \$2,000 would only cover tuition and fees and not other regular living expenses. The UMass Amherst Office of Financial Aid provides some benchmarks for calculating the costs of books and transportation. Taking the midpoint for each of these estimates and adding them together, we estimate a rough cost of \$1,800 per year for books and transportation.² While books and transportation are still only a portion of additional costs students have while attending college – they also have to pay for room, board, clothing, etc. – many students receive up to \$2,500/year in federal education tax credits

(see later section on this topic) and many can work part-time during the school year or full-time during the summer.

If the 138,000 resident students currently attending each of these campus types in Massachusetts received this new grant, the total cost to the state would be roughly \$524.4 million per year.

$$[(\$2,000 + \$1,800) \times 138,000] = \$524.4 \text{ million}$$

Option 3: Free public higher education at all campus types

Finally, we could provide free public higher education to Massachusetts students at all campus types. This more expansive approach would cost around \$631 million per year, as demonstrated in the table below. These estimates are calculated through a two-step process:

1. Calculating total tuition and fees currently paid by resident students (first column in table), and then;
2. Subtracting off of those totals all existing public sources of student support (middle four columns). These sources of student funding already help offset tuition and fees somewhat, so the state would only have to come up with sufficient revenue to fill the remaining gap.

It is important to note that other costs, unaccounted for here, may rise if enrollment increases significantly. Campuses may need to add classroom space, for instance, if enrollment grows beyond the capacity of their current facilities. These estimates do not account for any of these potential additional capital costs.

Net state cost estimates, FY 2013

	Resident tuition & fees	Existing Public Sources of Student Support				Net State Cost	
		Pell Grants	State Scholarships	Tuition Waivers	Institutional Financial Aid	Funding necessary to eliminate tuition & fees	w/ 20% woodwork effect
Community Colleges	\$319,312,347	\$160,665,553	\$19,802,622	\$4,641,174	\$6,986,581	\$127,216,417	\$158,945,776
State Universities	\$288,245,087	\$48,699,657	\$16,001,886	\$4,571,916	\$21,191,066	\$197,780,562	\$245,689,648
UMass	\$502,752,236	\$63,449,867	\$18,240,358	\$8,882,922	\$105,813,403	\$306,365,686	\$394,226,160
TOTAL	\$1,110,309,670					\$631,362,665	\$798,861,584

A note on each section of the above table:

- **Resident Tuition & Fees.** In order to estimate total student payments, we multiply full-time equivalent (FTE) resident enrollment by FTE tuition and fees for each campus type.
- **Pell Grants.** Federal Pell Grants flow directly to institutions that then reduce tuition and fees owed by recipient students.
- **State Scholarships.** Several existing state-funded scholarship programs already help offset tuition and fees for certain students. Many additional sources of private scholarships also exist, and these estimates do not account for them.

- **Tuition Waivers.** Campuses provide partial or full tuition and fee waivers for certain types of students – such as for students in foster care or those serving in the National Guard – and the state provides funding to meet the costs of educating them.
- **Institutional Financial Aid.** In order to help lower-income students afford college, campuses also administer financial aid programs, funded in large part by a portion of all tuition and fees. Campuses also receive private donations to fund this category of financial aid.
- **20% Woodwork Effect.** There is a real limit to how much current campus infrastructure could absorb enrollment increases, but any plan to eliminate tuition and fees is almost certain to increase demand. Here we present a 20 percent woodwork effect just as one very rough estimate.

These woodwork effect cost estimates are rough for a couple of additional reasons. First, all cost estimates in this paper set aside existing state support, since tuition and fees come to campuses as revenue on top of these direct appropriations. But since additional students would not necessarily come with proportional increases in direct campus appropriations from the state, the per student cost of additional students may be somewhat higher. Cutting in the other direction, however, is the fact that these costs are for adding students on the margin, and due to fixed costs and economies of scale, these additional students may actually cost less than students already enrolled.

A note on federal tax credits for higher education

The federal government provides a few tax credits that students can also use to help defray the cost of tuition and fees. Since these credits flow directly to taxpayers through their income tax forms, there is no reliable public data on how much federal tax credits support students at specific campuses. Therefore, this factsheet's cost estimates do not consider existing federal tax credits as an additional source to help defray the state cost of eliminating tuition and fees. For a very rough sense of scale, however, Massachusetts filers claimed roughly \$467 million in federal higher education tax credits in 2012 (for the AOTC and LLTC, described below). Roughly 50 percent of undergraduates in Massachusetts attend public campuses. So if these tax credits were claimed proportionally, then roughly \$234 million of that total would be going to support students at public campuses in Massachusetts.³

It is important to note that even if tuition and fees were eliminated under one of the plans described above, students would still be left to pay for books, housing, transportation and food. Remaining federal tax credit support could be used to help cover these ongoing living expenses.

Alternatively, the state and federal government could potentially enter into an agreement to redirect some or all of this funding to help defray the state cost of eliminating tuition and fees, and this funding is substantial enough to make a meaningful contribution. The two largest federal tax credits are the American Opportunity Tax Credit (AOTC) and the Lifelong Learning Tax Credit (LLTC). The AOTC, for instance, provides a maximum annual credit of \$2,500 for individuals whose adjusted gross income is below \$80,000 per year (or \$160,000 for those filing jointly).⁴

What are the benefits of broader access to higher education?

While eliminating or greatly reducing tuition and fees for public higher education would have upfront costs, these should be considered alongside the immediate and long-term benefits. Benefits include increased lifetime earnings, improved health and quality of life, and greater civic engagement.

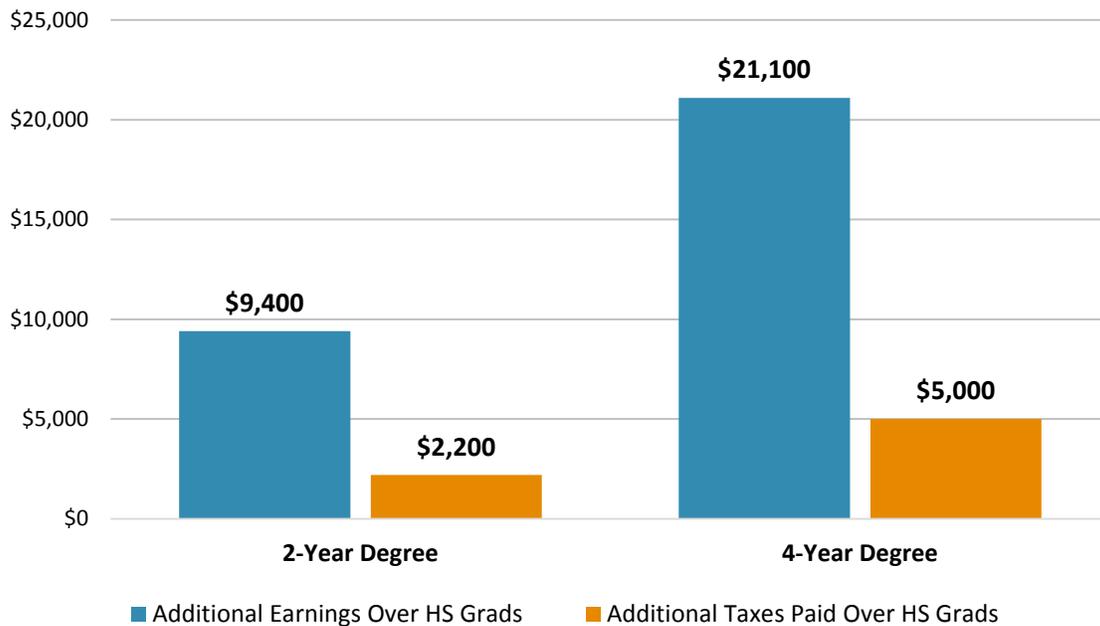
Financial Benefits

College graduates earn significantly more than those who have only graduated from high school. In 2011, four-year college graduates earned roughly \$21,000 more than high school graduates. Two-year college degree holders earned roughly \$9,400 more than high school graduates.⁵ Further, higher levels of education often go hand-in-hand with higher levels of employment, reflected in a 40 percent lower unemployment rate for college educated workers.⁶

Since college graduates tend to have higher incomes, they also pay more in taxes, helping to fund critical state services. Specifically, individuals with four-year degrees paid roughly \$5,000 more in taxes in 2011 than did high school graduates, while those with two year degrees paid roughly \$2,200 more.⁷

Workers with Higher Levels of Education Earn More, Pay More Taxes

Median annual earnings and taxes paid by college grads vs. high school grads, 2011



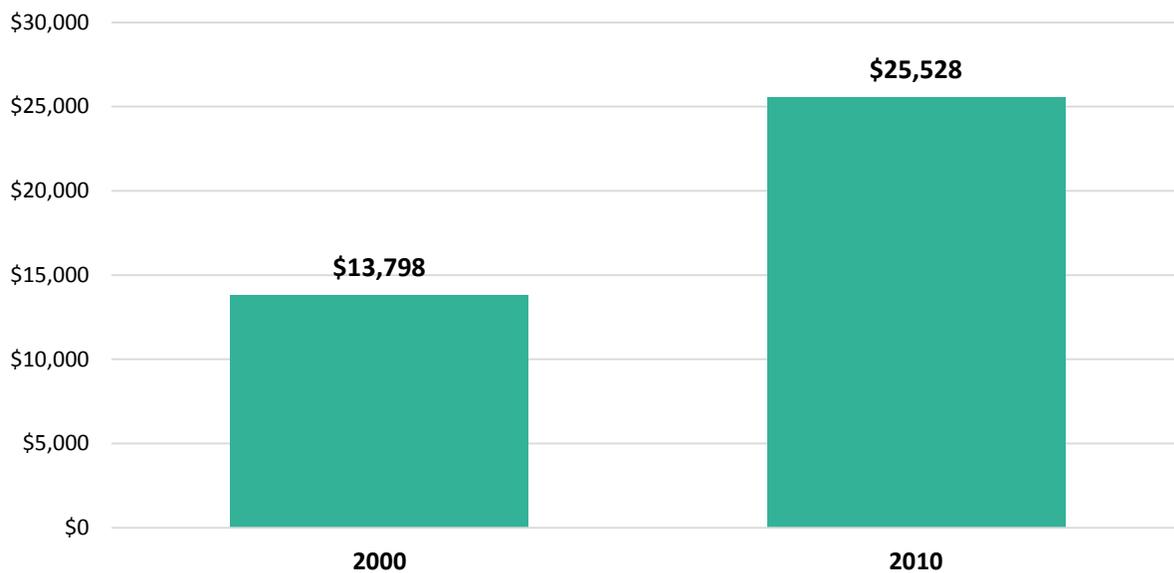
Source: Baum, Ma, & Payea, Education Pays Report, 2013

Eliminating tuition and fees would also reduce the student debt carried by Massachusetts residents, freeing up resources to flow through the state economy. Students who took on loans to attend four-year public colleges in Massachusetts incurred an average of \$25,500 in debt for four years of college in 2010.⁸ This is 85 percent higher than debt levels from 2000: \$13,798 per student. In 2010-2011, an estimated 72 percent of public higher education students took on debt to cover college expenses.⁹ This debt limits graduates' other consumer spending. Collectively across the state, student debt reduces

individual consumer spending by an estimated \$2.81 billion annually.¹⁰ This figure includes all types of student debt, both from public and private institutions and for all levels of degrees (only 40 percent of graduate and undergraduate students in Massachusetts attend the public higher education campuses).¹¹ However, since reducing debt would require additional state investments, this would divert resources that may be already creating economic activity in the Commonwealth.

Student Debt Nearly Doubled Since 2000

4 years of average student debt for those taking loans to attend MA 4-year public colleges, 2010 dollars



Source: Wilson, Causes and Consequences of Student Debt, 2015

Health, Quality of Life, & Civic Engagement Benefits

Higher levels of education are also associated with a host of positive health, quality of life, and civic participation measures. This reflects the additional capacity of those provided with more opportunities, educational and otherwise, to make positive health and life choices. For example, obesity rates are lower for college graduates than they are for high school graduates.¹² Those who have college degrees are also more likely to exercise.¹³ These health factors can play a role in decreasing health costs.

Those with more education are also generally more involved in civic life. Highly educated individuals are more likely to volunteer in community efforts and express knowledge of political issues.¹⁴ In the 2012 election, college graduates between 25 and 44 years of age were more than 20 percentage points more likely to vote than high school graduates.¹⁵

Despite the range of benefits from higher education, it is important to consider some caveats to the overall benefits. Much of the financial benefits of higher education, for example, are based on overall averages for degree holders. Not every individual who pursues higher education receives great financial or other returns.

There is substantial variation in the return on education depending on the type of college or university, the degree awarded, and whether college majors align with needs in the labor market. Generally, graduates of more selective institutions have stronger job prospects. Employment opportunities also depend on the majors students pursue, with one study showing a range of roughly 5 percent to close to 15 percent unemployment depending on the field of study.¹⁶ In recent years job sectors that have been the most in-demand include nursing, teaching, STEM, and finance. Several majors where recent graduates have had more difficulty finding jobs are within the social sciences, arts, and humanities.¹⁷

Higher Education is Part, Not All, of Building a Strong Economy

There are many reasons to support access to higher education for more people in Massachusetts. The proposals outlined above could help thousands of Massachusetts residents gain greater access to knowledge and skills to advance their civic involvement, wellness, and economic security. This in turn would have a multitude of benefits that would lift our knowledge-based economy.

It is also critical, however, to consider higher education within an array of necessary policies that can support a strong economy. The U.S. is facing a disturbing trend over the past several decades where wages have not increased along with productivity growth.¹⁸ This challenge is broader than what can be solved by higher education. Income and wage inequality is less driven by differences in education than it is by the top earners in the economy attaining vastly greater income growth than the rest of the population, which includes those with and without college education.¹⁹

College degrees alone cannot counteract these broad trends in the economy. For example, although unemployment is lower for those with college degrees, the number of college graduates unable to find work doubled during the most recent recession.²⁰ This was likely involved in the stagnation of wages for college-educated workers during this period. The most recent recession and the resulting difficult job market was a factor in the “upskilling” of many jobs, where employers made more jobs require college education due to the presence of more available graduates.²¹

However, in combination with an array of policies at the state and national levels, increasing the affordability of public higher education in Massachusetts can be part of helping all of our residents reach their potential. This in turn can more fully realize the vision of a Commonwealth with widely shared prosperity.

Endnotes/References

¹ Baum, Sandy, Jennifer Ma, and Kathleen Payea. "Education Pays 2013." *College Board*. 2013. 11

² According to the UMass Amherst Office of Financial Aid, book costs range from \$500 to \$1,000 per year (\$750 average) and transportation costs range from \$700 to \$1,400 per year (\$1,050 average). Together these averages total \$1,800 per year. For more detail, please see: <http://www.umass.edu/umfa/undergraduates/costs>

³ National Center for Education Statistics Integrated Postsecondary Education Data System (IPEDS). Using IPEDS figures for estimated total undergraduate enrollment for all Massachusetts colleges and universities, Fall 2013. <https://nces.ed.gov/ipeds/datacenter/Default.aspx>

⁴ For more information, please see the IRS's AOTC factsheet:
<http://www.irs.gov/uac/American-Opportunity-Tax-Credit>

⁵ Baum, Sandy, Jennifer Ma, and Kathleen Payea. "Education Pays 2013." *College Board*. 2013. 11

⁶ Baum, Ma, and Payea, 19 (average of Bachelor's & Associates (5.1% unemployment to 8.3% for H.S grads)

⁷ Baum, Ma, and Payea, 11

⁸ Wilson, Anastasia. "The Causes and Consequences of Mounting Student Debt in Massachusetts." *UMass Amherst Department of Economics*. 2015. 27

⁹Institute for College Access and Success. College InSight Data Center. <http://college-insight.org/#explore/go&h=d0ac6e14f3f51d90cd6b6da56f2eb07b>

¹⁰ Wilson, 42

¹¹ National Center for Education Statistics, Integrated Post-Secondary Education Data System, report on total student enrollment in Massachusetts (undergraduate and total).
<https://nces.ed.gov/ipeds/datacenter/Data.aspx>

¹² Baum, Ma, and Payea, 29

¹³ Baum, Ma, and Payea, 28

¹⁴ Baum, Ma, and Payea, 31

¹⁵ Baum, Ma, and Payea, 32

¹⁶ Carnevale, Anthony P. and Ban Cheah. "Hard Times: College Majors, Unemployment and Earnings" *Georgetown University Center on Education and the Workforce*. 2013. 4

¹⁷ Carnevale and Cheah, 5

¹⁸ Mishel, Lawrence. "Education is Not the Cure for High Unemployment or for Income Inequality." *Economic Policy Institute*. 2011. 17
<http://s4.epi.org/files/page/-/old/briefingpapers/BriefingPaper286.pdf>

¹⁹ Mishel, 16-18

²⁰ Mishel, 11

²¹ Sasser Modestino, Alicia, Daniel Shoag, and Joshua Ballance. "Upskilling: Do Employers Demand Greater Skill When Skilled Workers Are Plentiful?" *Working Papers, Federal Reserve Bank of Boston*, No. 14-17. 2014.