

Privatizing the Benefits from Higher Education and Its Effect on Access

DANIEL GEORGIANNA AND ROBERT T. JONES

Introduction

In his annual reports to the Massachusetts State Legislature, Horace Mann, Secretary of the Massachusetts Board of Education from 1837 to 1848, stressed the importance of public education for the success of the new Republic. In contrast to the private academies, the main high schools of his time, the common schools would offer free education to all, binding a disparate population into well-informed and productive citizens of the greatest nation in history.

Most colleges and universities of his time focused on religious education, which Mann did not consider appropriate for public funding because religious education separated student-citizens rather than uniting them. But there are more than a few hints that Mann, a graduate of non-sectarian Brown University, viewed the budding secular colleges of his time as training students for personal prosperity or leadership, which Mann also didn't regard as worthy of public funding. In one of his annual reports to the Legislature, Mann wrote, "This commonwealth is pledged for the education of all its youth, up to such a point as will save them from poverty and vice, and prepare them for the adequate performance of their social and civil duties."¹

Mann didn't initiate debate over public funding for private benefit. This issue stretched back at least to the Reformation, and was one of the main themes of Adam Smith's *Wealth of Nations*, which informed most of the polemical writing of Mann's day. Smith clearly classified basic education as a public good, which should be paid from public funds, but training of students for the professions should not be paid by the public because "their parents or guardians are generally sufficiently anxious that they should be so accomplished, and are, in the most part, willing enough to lay out the expense which is necessary for that purpose."²

Although arguments for public funding of higher education often changed with the times, access is the most powerful political motivation in recent times. Most of the public sees higher education, especially public higher education, as the opportunity for all people (especially their own children) to reach their potential, which would seem to favor increases in public funding. Potential easily translates into economic earnings, however, usually measured in the difference in earning power between high school and college graduates, a private benefit, eclipsing the public benefits of economic development, public service, and access regardless of income.

Virtually all studies show that the private economic value that results from college education has risen sharply over the past 25 years. Studies also offer conclusive evidence that state spending for higher education has declined in real terms. Federal spending has declined at least relative to the cost of college, and more of this spending has gone to loans rather than to grants.

In this article, we explore the connections between the sharply rising economic returns from college education, regarded as private benefits, and the decline and redirection in public spending, seen as public costs. The public benefits from college education are ignored, even decreased, because the changes in public spending reduce access to higher education for many, diminishing economic development and widening the disparity in income. We examine recent trends in the private benefits of college education, recent trends in public spending for higher education, and the effect of the declining affordability on access to higher education for lower income groups.

Private Returns to Higher Education

There is a widely held position that benefits of a college degree accrue not only to the individual but to the society as well. In his book on the rising costs that families have to pay for college, Ronald Ehrenberg writes, “State governments need to be educated so that they understand the role that higher education plays in economic development and in boosting incomes of state residents.”³ Another school of thought holds that the benefits of a college education are private, that college education improves the earning potential of recipients by increasing the individual’s stock of human capital. In the economics literature, the motivation for funding human capital depends strictly on who receives the benefits. The crucial question in this literature is “Who has the incentive to invest in human capital?”

Gary Becker, the pioneer of the theory of human capital, provided the theoretical foundation for the individual's incentive to invest in human capital, which he argued was similar to investing in physical capital or financial assets.⁴ One will invest if the perceived rate of return on investment is sufficient; the investment in human capital makes sense if the expected discounted future income associated with increasing the stock of human capital is greater than the cost of producing the human capital. Specific skills and training of workers become assets to the firm, but similar to decisions to invest in other forms of capital, firms will only invest in human capital if sufficient returns are specific to the firm. This would tend to increase firms' investment in specific skills but not their investment in the general development of human capital that benefits the individual. As the recent trends in higher education finance show, individuals bear an increasing share of the cost of college degrees and firms increasingly finance specific training and education.

Becker gives several other reasons why students and their parents may not invest in human capital even if the net return to society is positive. There may not be enough time to recoup the costs of investment. The young have a greater incentive to invest in human capital because they have longer to collect the cost of education and training. This incentive to invest is tempered however by some other factors all investors must consider. First, while a longer time horizon allows more time to recoup costs, it also creates risk because payments far in the future are worth considerably less now due to discounting. Will the degree earned be in demand in the future? Will it pay less or more in the future? How quickly does the state of technology change? Will inflation reduce the present value of future returns below the current costs?

In addition, access to and knowledge of credit markets affect the investment decision. Seeking a college degree may be prohibitively expensive due to the size of the investment that consists of the direct cost for attending college and the opportunity cost due to the loss of earnings from the time spent in school. Becker argues that the latter is substantial and depends on wages and opportunities for high school graduates. Banks and other lenders may not be willing to finance these costs, especially lost wages, because they have little or no legal claim on the future returns to human capital. Internal or family financing must make up the difference in funding due to these capital market limitations. As a result, affluent families are more likely to invest in human capital than less affluent

ones. This practice leads to increasingly skewed distributions of skill and income and to losses in the productivity of the workforce due to the lack of training and education.

A significant body of recent studies has documented the wage premium to college-educated workers. These studies focus on the supply and demand for college graduates, including two-year college graduates and students that attended some college, and the supply and demand for high school graduates.

Katz and Murphy used data from the March Current Population Survey for years 1964-1988, and a simple model of supply and demand in labor markets, to examine the relative changes in wages.⁵ Katz and Murphy found that, during the 1960s, the wage differential between high school and college graduates increased by about 8 percent. During the 1970s the real wages of college graduates decreased by about 10 percent due mainly to increased supply of college graduates when the baby boom cohorts entered the market, while real wages of high school graduates increased, especially for higher skilled workers without a college degree. However, from 1979 to 1987 the wage differential between college graduates and high school dropouts increased by more than 14 percent and the wage differential between college graduates and high school graduates increased by almost 12 percent, due mainly to an increase in the demand for college graduates. Katz and Murphy also found significant age cohort differences. They found that young workers enjoyed a much larger college premium than did older workers. In 1987 the ratio of college to high school graduate wages was 1.82 for new college graduates. This was consistent for both men and women.

Card and Lemieux used samples of working-aged men from the United States, Canada, and the United Kingdom to estimate the wage premium.⁶ Because they focused on the returns that college degrees produce for specific age groups, they divided the data into five-year birth cohorts from 1959-1996. They found the same fluctuations in the high school-college wage gap reported by Katz and Murphy. In addition they found that during the early 1990s the wage premium for new college graduates grew even more relative to the older cohorts.⁷ Workers in all three countries enjoyed a rise in returns from college during the 1980s and 1990s that the authors attribute “to the labor market entry of cohorts with permanently higher returns to college,” and not an increase for all age cohorts.⁸ Card and Lemieux concluded that the increase in the

college premium over the period was due to increasing demand for college-educated labor.

Recent data also show that the wage premium is increasing. *Indicator 22: Annual Earnings of Young Adults from the Condition of Education 2006* used data from the Census Bureau to estimate the differences between full-time wage earning of adults between 25 and 34 years of age.⁹ The authors estimate the ratio of median annual earnings of full-time employees in the age group with various levels of education to those with a high school diploma or equivalent. In 1980, for the total population, the median wage earner with a college degree earned 26 percent more than a high school graduate. By 2004 the differential had increased to almost 70 percent. Controlling for gender the authors found that in 1980 female wage earners with bachelor degrees or higher earned 34 percent more than females with less than a high school diploma. In 2004 females with degrees earned 68 percent more than females without a high school diploma. For males the magnitude of the increase was even greater. The difference increased from 19 percent in 1980 to 67 percent in 2004. This increase in the wage premium was due both to an increase in real wages for college graduates and a decrease in real wages for high school graduates.

Recent studies of human capital present evidence that the public returns from funding education are, on the margin, less than the public expenditures on education. Vedder used data from the U.S. Bureau of the Census to estimate the impact of public spending for higher education on the variation in interstate economic growth.¹⁰ He found that both higher levels of spending and increases in spending were negatively correlated with economic growth. One explanation Vedder suggests is that the productivity of education dollars fell due to increased spending on non-faculty positions, especially administrative positions that likely contributed little to the development of human capital. Vedder suggests that the transfer in these non-human capital-producing expenditures from other purposes decreases or eliminates any public benefit to be gained through public support of higher education.

State and Federal Spending on Higher Education

Since the granting of royal charters in colonial America, public funding for higher education has followed many twists and turns along several axes of political motivation, including religious and social improvement, economic devel-

opment, political support, and equity in the form of access for less advantaged groups.¹¹ The earliest public funding for higher education was motivated by religious sentiment, supplying clergy to the colonists. Almost all of this funding came from state revenues, in some cases from dedicated tax sources.¹²

Harvard College, founded in 1639 with a private grant from John Harvard, received financial support from the Massachusetts state government until 1823.¹³ Other colonial state governments dedicated taxes on corn, tobacco, road and bridge tolls, and even sales taxes to their local colleges, usually for education of the clergy. After the Revolution, public funding for higher education was sporadic, dependent mostly on state legislatures, and usually driven by religious motivation, and in Massachusetts and a few other states, training for teachers.¹⁴ Public policy shifted to economic development with the passage in 1862 of the federal Morrill Act that provided the receipts from federal land as long-term funding for state colleges and universities. These land grant colleges focused on the useful arts of agriculture and mechanics, typified by the A&M state colleges. In Massachusetts, land grant funds were used to found Massachusetts College of Agriculture, which became University of Massachusetts, and to supplement funding for Massachusetts Institute of Technology, founded in 1861 as a private school.

After the Morrill Act, public funding shifted back to the states, driven by economic development including the spread of state-funded normal schools for training teachers and state and local funding for specific industrial training in areas such as textiles, other manufacturing, and mining.

With the passage of the federal Servicemen's Readjustment Act (the GI Bill) in 1944, public funding for higher education shifted from institutions to individuals in the form of entitlements for national service. As with the New Deal programs ten years earlier, economic development (derived from economic models based on consumer spending), fear of post-war unemployment, and political support for the Democratic Party led to payments to individuals rather than grants to institutions. Equity as wider access to higher education also played a role, over the opposition of many college and university leaders.

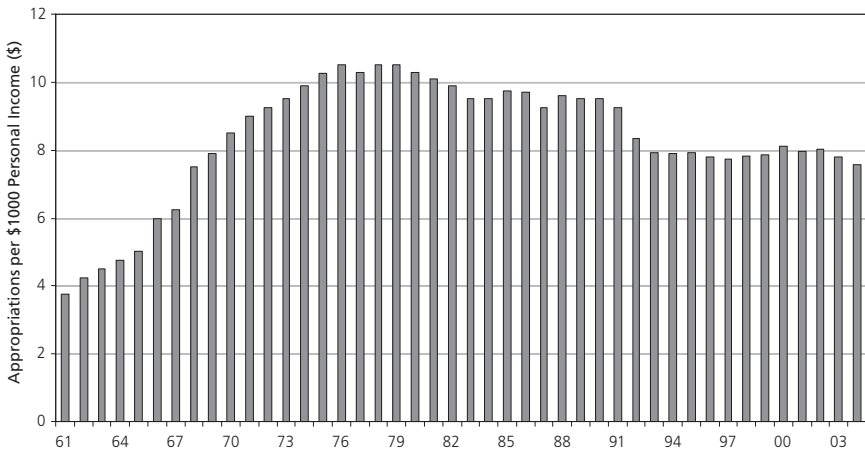
The boom in public spending for higher education during the 1960s and 1970s went far beyond a new GI Bill for Vietnam War-era veterans and was based on public support for economic development and equity. States followed the

long-term example of California in its commitment to no-cost or low-cost for its public higher education students as state after state built state and community college systems and greatly expanded direct appropriations or dedicated sales and other taxes to public higher education institutions. Federal funding focused on direct payments to students in the form of need-based grants such as the Basic Educational Opportunity Grants (later renamed Pell Grants) in 1972, College Work Study in 1964, and the Supplementary Educational Opportunity Grants in 1992. Fueled by the Civil Rights movement, much of the gains went to less advantaged students, creating a middle-class backlash that led to grant and especially federally subsidized loan programs for all.¹⁵

During the 1980s and 1990s, state appropriations followed the business cycle, falling during declines in state revenues and recovering when revenues increased, but the recoveries never returned to the previous highs as state appropriations ratcheted down to levels last reached in the late 1960s.

Figure 1 shows state spending per \$1,000 of personal income in the United States for higher education between 1961 and 2004. State spending increased sharply from 1961 to the late 1970s, peaking between \$10 and \$11 per \$1,000,

FIGURE 1: State spending for operating expenses of higher education per \$1000 of personal income



SOURCE: Zurretta and Archibald

and then started a decline in steps to the present, around \$7 per \$1,000. A large range between states is embedded in these averages, from \$17 per \$1,000 for Wyoming in 2004 to \$3 per \$1,000 for New Hampshire.

During the recent period, the focus of federal aid programs shifted from grants to loans. By 1984, student loans were almost 50 percent of all student aid, up sharply from 20 percent in 1975.¹⁶ In 2003-2004, grants had fallen to 38 percent of all student aid, while loans had risen to 56 percent of all student aid.¹⁷ Over the past 10 years, grant funding has increased by 64 percent per full-time student, while loans increased by 111 percent (both in real terms). While the increase in the cost of college was about the same as the increase in grant funding (except for community colleges where costs rose less than state appropriations), the ability of lower income families to pay for college declined because median income actually decreased for these families in real terms.¹⁸

Privatizing the Benefits from Higher Education

If a college education is so valuable, why has public spending for higher education fallen relative to its cost? We argue that the focus on the private benefits from higher education removes it from the public sphere and therefore eliminates the reason for public funding. The strands of our argument are these: the value of a college degree focuses on higher education as an asset, human capital that delivers a stream of income over the lifetime of its owner, the graduate. The returns of a college degree are carefully calculated in the economic literature and shown to compare favorably with other assets. These returns have been rising over the recent period. Therefore a college degree makes economic sense in the world of private investment, which leads to credit markets. Just as businesses borrow to invest in plant and equipment in order to increase their profits, students and their parents should borrow to finance higher education in order to increase their lifetime earnings.

Banks and other lenders are very selective in supplying funds to college students, however, because they do not regard human capital as collateral; unlike other forms of capital, banks can't foreclose on human capital. Legislators, informed by the political economy of college as a private investment, view public spending for higher education as constituent service to public colleges and universities and to parents of public higher education students. Legislators may be receptive to arguments that public colleges and universities drive economic

development, but many other industries make the same argument. During economic declines or even moderate growth, state legislators, faced with falling tax revenues (often due to tax revolts) and increasing state commitments, cut state spending for higher education. Colleges and universities raise tuition and fees to cover the shortfall, with seemingly little effect on enrollments, and state legislators see little reason to increase funding for higher education when tax revenues increase during the economic recovery.

In this section we will focus on state spending because state spending on higher education outweighs federal spending by 4 to 1, but the same logic based on private returns from higher education as private investment leads to federal funding for higher education in the form of loans rather than grants.

Much of the economic literature on recent trends in state government finance focuses on the tax revolt that began in the 1970s. In an environment of moderate or declining economic growth and increasing entitlement costs, tax cuts directly led to spending cuts in at least some areas. There is little doubt that the political strategy of “starving the beast” proved successful in reducing state and local government spending. Almost half of the states now have tax and expenditure limits on state taxes, and many states limit local spending.¹⁹ Many states also have super majority requirements for overriding these tax limitations. At least one study shows that tax and expenditure limits significantly reduced spending on public higher education.²⁰

Even states without tax limit legislation reduced spending on higher education. Virtually all states have the same shape profile as shown in Figure 1, a rise in state spending for higher education to some peak in the late 1970s or early 1980s followed by a gradual decline of 25 to 30 percent to the present. Most commentators and economic studies argued that Medicaid (due to federal matching requirements) and other priorities such as prisons replaced higher education spending throughout the business cycle.²¹ The general pattern is a decline in higher education spending during an economic downturn with no increase in spending during the following recovery.

There is little doubt that tax limitation has reduced state spending on public higher education, but it is far more difficult to connect perceptions of the private benefits from higher education to legislative action to cut appropriations for state

colleges and universities. Most analyses of reduced state spending on higher education argue that state legislatures reduced funding on higher education during cyclical downturns because state colleges and universities had other sources of revenue, namely tuition and fees. This translates in economic terminology to little need or justification for public support when students and their parents are willing to pay more because the returns on investment are so high.

There is other evidence that choosing to cut higher education spending is due to the rhetoric of private benefit from investment in a college degree. Studies of state spending have shown that state governments treated K-12 spending differently from higher education. While state spending on higher education per \$1,000 of income dropped by 25 percent between 1980 and 2004, state spending on K-12 per \$1,000 of income increased by about 10 percent over the same period.²² This is consistent with Horace Mann's characterization of K-12 education as a public good and higher education as a private good.

Effects on Access to Higher Education

Students considering college have plenty of choices in the United States: a wide array of private colleges and universities and an equally wide array of public state colleges, community colleges, and universities. These choices are limited by students' ability to learn as measured by grades, test scores, and recommendations and by students' ability to pay, which depends upon tuition, student aid, and family income. While there is strong evidence that public spending affects students' ability to learn before and during college, in this section we will consider only the effects of public spending on the ability to pay, in some cases with specific reference to the perceived privatization of benefits from higher education.

The transmission of declines in public spending on higher education to declining ability of disadvantaged groups to pay depends upon the source of public spending. The decline in direct state appropriations relative to the cost of higher education is transmitted to declining access and choice of institution through increases in tuition and fees. The decline in direct student aid to disadvantaged groups relative to increases in tuition restricts their ability to pay for these tuition increases.

There is little doubt that cuts in state spending led state colleges and universities to increase tuition. The share of operating costs paid by families declined until

the late 1970s and then increased as both private and public four-year colleges and universities adopted a business model based on attracting students who were able to pay the bills. By 1993, in order to cover the cuts in state spending, families were paying the same share of operating costs that they had paid in the early 1960s.²³ State flagship universities increased their tuition and fees more than other public higher education institutions. For every year between 1984 and 2000, tuition at state flagship universities increased by more than double the increase in the Consumer Price Index.²⁴ The increase in tuition and fees (in constant dollars) has been much higher for four-year public schools than for two-year public schools, especially from 1992 to 2005.²⁵ While the increases are less in two-year public schools than at four-year schools, the increases are still substantial, over \$1,000 per year in 2005 dollars, a far cry from no tuition or the very low tuition promised only a few years ago, and these institutions supply little student aid from their own revenues.

State flagship universities typically claim that they match high tuition with high financial aid, or in other words set aside large shares of tuition increases for financial aid to low-income students. These statements sound good, describing equity transfers that shift funds from those able to pay higher tuition to those unable to pay. There is some evidence that institutional aid increased over the recent period, but there is less evidence that funds were transferred from high-income students to low-income students. An increasing share of aid supplied by public universities and four-year colleges is now merit-based rather than need-based. Over the past decade, need-based aid has fallen from 80 percent of all aid to less than 60 percent.²⁶ Tuition tax breaks, informed by the rhetoric of private investment in human capital similar to investment tax credits, also favor middle- and high-income families. In 1993, families with annual income more than \$50,000 (31 percent of all families) received 43 percent of education tax credits and 70 percent of federal tuition tax deductions.²⁷

The pattern of cuts in state spending and the resultant increases in tuition have intensified the class structure of U.S. colleges and universities.²⁸ In both 1980 and 1994, more than half of the richest students attended private colleges and universities, while more than half of the lowest income students attended community colleges. Between the two periods, however, both private and public universities attracted more of the richest students, and more middle-income students attended public and private four-year colleges. Fewer high- and middle-income

students attended community colleges in later years, as low-income students were increasingly concentrated in community colleges. This seems to be the result of a business strategy by public and private four-year colleges using financial aid to attract middle-income students who can pay more. A fixed amount of financial aid can be spread across more middle- and upper-income students than across lower-income students who need more financial aid. Lower-income students, denied sufficient financial aid to attend four-year colleges and universities, choose community colleges because that is all they can afford.

While federal, state, and institutional grants have increased, they haven't increased enough to cover the increasing cost of college, which leaves the remainder to be paid from family savings and current income. Lower-income students, therefore, rely more heavily on government loans because neither they nor their parents can afford to pay tuition and other costs.²⁹

Public Support for Public Funding

We offer a hypothesis with some evidence that the benefits from public higher education have been privatized, leading state governments to cut spending on higher education (usually measured relative to state income), and the federal government to favor loans over grants.³⁰ The greater the private benefit, measured by the additional earnings due to higher education, the less important is public funding of higher education. Reduced public funding for higher education affects access to higher education for low income groups in two ways: declines in state funding have caused public four-year colleges and universities to raise tuition without sufficient increases in financial aid, and the increasing emphasis on merit-based aid and tax credits and federal spending on loans vs. grants has increased the debt load that low-income students carry forward.

In an era of slipping state funding, state colleges and universities have switched from a financial model of low tuition and low financial aid to high tuition and high financial aid. There are three problems with this approach. The first problem is that high financial aid looks more like retail discounting of tuition in order to charge what the market will bear than financial aid to improve access, as discussed above.³¹ The second problem with this strategy is that financial aid in college comes too late for many low-income students who have suffered through twelve years of inadequate funding. Money matters in education, especially in the early years. That's why high-income families pay so much for education.

The third problem is that high tuition and high financial aid weaken the political coalition for public funding for higher education. Parents and students paying high tuition see little reason to push state leaders for more state funding for higher education. Even if they understand the connection between funding cuts and high tuition, they know that schools will not decrease tuition and fees. Choosing a college has become shopping for the best deal. At least some parents and students paying high tuition are likely to view state appropriations to state colleges and universities as undeserved handouts. Voters without children in state colleges and universities, about 90 percent of all households, are likely to view state spending for higher education as picking their pockets.

Goan and Cunningham show evidence that college education provides public benefits and therefore merits public funding. College graduates, including those with associate degrees, are far less likely to be unemployed and require public assistance than high school graduates. They also are in better health. They vote more and volunteer more for public service.³² More importantly, a nation cannot prosper in the modern world economically, politically, or socially if most of its children from lower-income groups are denied access to the full range of higher education institutions or saddled with debt from exercising their choice.

ENDNOTES

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⁸ Card and Lemieux, p. 721.

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¹¹ We focus here on public funds for education, leaving out public funding to institutions and faculty for scientific and other investigation.

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¹³ Morison, S.E., *Three Centuries of Harvard*, Harvard Univ. Press, 1936, p. 219.

¹⁴ Horace Mann established the first Normal School for Teachers in the U.S. at Lexington, MA in 1839.

¹⁵ College Work Study was created in a section of the Economic Opportunity Act of 1964, a pillar of President Johnson's War on Poverty. The 1992 reauthorization of the Higher Education Act relaxed financial requirements for subsidized loans to include a larger segment of the middle class. See McPherson and Shapiro, *The Student Aid Game*, Princeton University Press, 1998, p. 35-36.

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¹⁷ College Board, *Trends in Student Aid, 2004*, p.4.

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¹⁹ Archibald, R. and D. Feldman, *State Higher Education Spending and the Tax Revolt*, Working Paper # 10, Economics Department, College of William and Mary, p. 1.

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²¹ Kane, T., P. Orszag, and D. Gunter, *State Fiscal Constraints and Higher Education Spending: The Role of Medicaid and the Business Cycle*, The Urban-Brookings Tax Policy Center, Discussion Paper 11, 2003, p. 23.

²² U.S. Department of Education, *Digest of Education Statistics 2005*, tables 152 and 329. Economic Report of the President, 2006, Table B27.

²³ McPherson and Shapiro, *The Student Aid Game*, p. 27.

²⁴ Zumeta, William, "State Higher Education Financing: Demand Imperatives Meet Structural, Cyclical, and Political Constraints," in *Public Funding of Higher Education*, Johns Hopkins University Press, 2005, p. 87.

²⁵ College Board, *Trends in College Pricing, 2005*, p.7.

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²⁷ Farrell, E., 'Public Colleges Tame Costs of Tuition,' *Chronicle of Higher Education*, 10/28/2005, Students p. 1.

²⁸ McPherson and Shapiro, *The Student Aid Game*, p. 44-48.

²⁹ Hearn and Holdsworth, "Federal Student Aid: The Shift from Grants to Loans," p. 52-53.

³⁰ "Unlike the earlier period, higher education is today seen as a private consumer good rather than a social good whose benefits are publicly shared. Without higher education's status as a social good, universities and colleges become just one more special interest group seeking a public handout for its own private benefit." Parsons, Michael, "Lobbying in Higher Education: Theory and Practice" in *Public Funding of Higher Education*, Johns Hopkins University Press, 2005, p. 222.

³¹ This type of market is called discriminating monopoly in economics, typified by the airlines who charge different buyers different prices in order to maximize profits.

³² For all of the above, see Goan, S. and A. Cunningham, "The Investment Payoff: A 50-State Analysis of the Public and Private Benefits of Higher Education," *American Academic*, 2006, p. 26-36.

