

Planning for College:

*A Consumer Approach to the
Higher Education Marketplace*



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ABOUT MASSINC

Massachusetts Institute for a New Commonwealth (MassINC) is a non-partisan think tank and civic organization focused on putting the American Dream within the reach of everyone in Massachusetts. MassINC uses three distinct tools – research, journalism, and civic engagement – to fulfill its mission, each characterized by accurate data, careful analysis, and unbiased conclusions. MassINC sees its role not as an advocacy organization, but as a new kind of think tank, rigorously non-partisan, whose outcomes are measured by the influence of its products in helping to guide advocates and civic and policy leaders toward decisions consistent with MassINC’s mission, and in helping to engage citizens in understanding and seeking to influence policies that affect their lives.

ABOUT THE FAMILY FINANCIAL SKILLS INITIATIVE

The Family Financial Skills program explores new pathways to help families navigate the complex financial decisions increasingly tied to major milestones of American life. Whether selecting a health plan, paying for college, saving for retirement, or purchasing a home, middle class families shoulder dramatically more financial risk and responsibility today than in the past. This MassINC initiative looks at opportunities to advance the marketplace for family financial products with regulation, consumer protection, and financial education.

ACKNOWLEDGEMENTS

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Planning for College:

A Consumer Approach to the Higher Education Marketplace

By C. Anthony Broh¹
and Dana Ansel

FEBRUARY 2010

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February 2010

Dear Friend:

MassINC is proud to present *Planning for College: A Consumer Approach to the Higher Education Marketplace*. This report is a product of our Family Financial Skills Initiative, a MassINC program sponsored by the Highland Street Foundation, the State Street Foundation, and the Cabot Family Charitable Trust.

Our Family Financial Skills Initiative takes a hard look at the increasingly complex choices middle class Americans face today. Whether finding a suitable healthcare plan, reaching retirement savings goals, or purchasing a home, families are privately assuming more and more risk on matters that have deep public implications. Perhaps nowhere is this more apparent than with higher education.

The nation's position in a competitive global economy hinges on our ability to build a large college-educated workforce. Recognizing this imperative, President Obama has placed considerable attention on college access. In his first address to Congress, the president challenged the nation to work toward the worthy goal of once again leading the world in the proportion of adults with a college degree.

Americans are already doing their part. They go on to college in ever larger numbers each year, borrowing increasingly large sums of money to finance their education. While there are many state and federal programs to support these families, the array of difficult decisions these programs ask Americans saving and paying for college to make is overwhelming. Unfortunately, families do not have the knowledge, information, and assistance they need to sift through these choices and get the most out of their investment. Far too many make costly mistakes.

To illustrate these challenges, we outline the choices put before families pursuing higher education in what we call the *College-Bound Decision Tree*. This exercise clearly shows why new skills and a new vocabulary are needed to navigate the nation's college financing marketplace. This consumer-oriented approach to college choice can ensure that the investments students and families make in college will not place undue burden on other important life decisions, such as what career to pursue and when to marry and have children.

We are grateful to Tony Broh for his original thinking, research, and analysis. His commitment to providing students and families with better information has been the inspiration for this project. We also thank the many reviewers who strengthened this report by asking critical questions and providing helpful comments.

One final note, this is the last research project overseen by MassINC's long-time research director, Dana Ansel. Through her remarkable nine-year tenure, Dana managed the release of 18 MassINC reports. Her belief in the power of high-quality independent research as a force for change is reflected in this significant body of work. We wish her well in all her new endeavors.

As always, we welcome your feedback, and invite you to become more involved in MassINC.

Sincerely,



Greg Torres
President



Benjamin Forman
Research Director

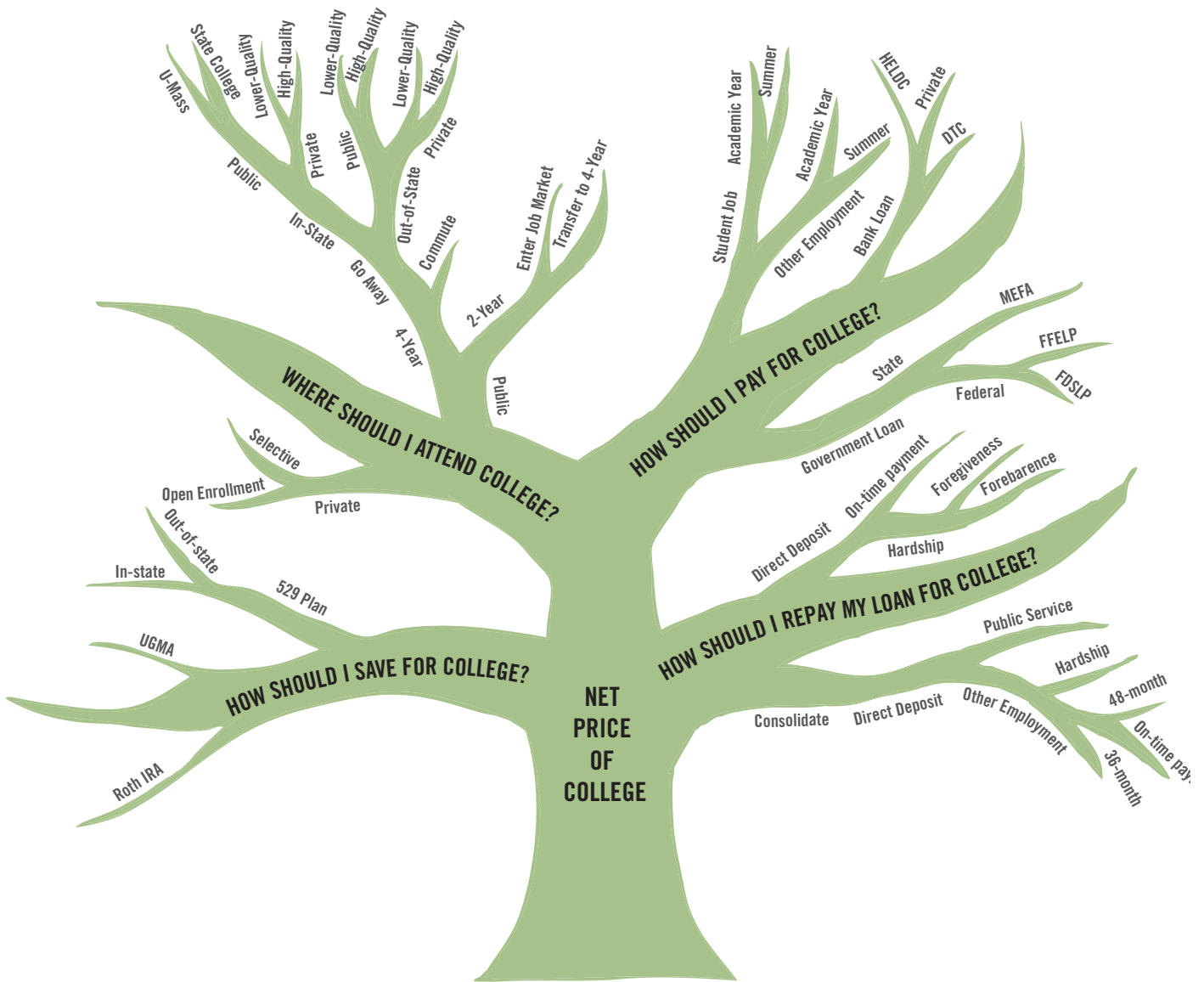


*College is not just about making a living;
it is about making a life worth living.*

DAVID WARREN
*President, National Association of Independent Colleges
and Universities*

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The College-Bound Decision Tree

EXECUTIVE SUMMARY

The place of college in the lives of current and future generations of American families has fundamentally changed. Once the privilege of a few, college is now a virtual prerequisite for joining and remaining in the ranks of the middle class. This economic reality means more students continue their schooling beyond high school each year. Today, two-thirds of all high school graduates will go on to college. A generation ago, that percentage was less than half. Ironically, concurrent with this trend of increased college going, the cost of higher education has become more difficult for Americans of all backgrounds to manage. Aside from a home purchase, a college degree is now the most significant investment many families make.

State and federal governments are doing more to help families pay for increasingly expensive college degrees. Combined with funds saved and borrowed by students and parents, these public resources support the growing number of Americans pursuing postsecondary education. But with mounting pressure on both public and family budgets expected in the coming decades, the system faces increasing stress.

While controlling the cost of college is, and has been, the subject of much attention, the rising price of higher education is tied to forces that are difficult to control without impacting quality. In contrast, helping families become more conscientious consumers is another way to stretch limited higher education resources. The advantage of this approach is it has the potential to enhance quality rather than detract from it.

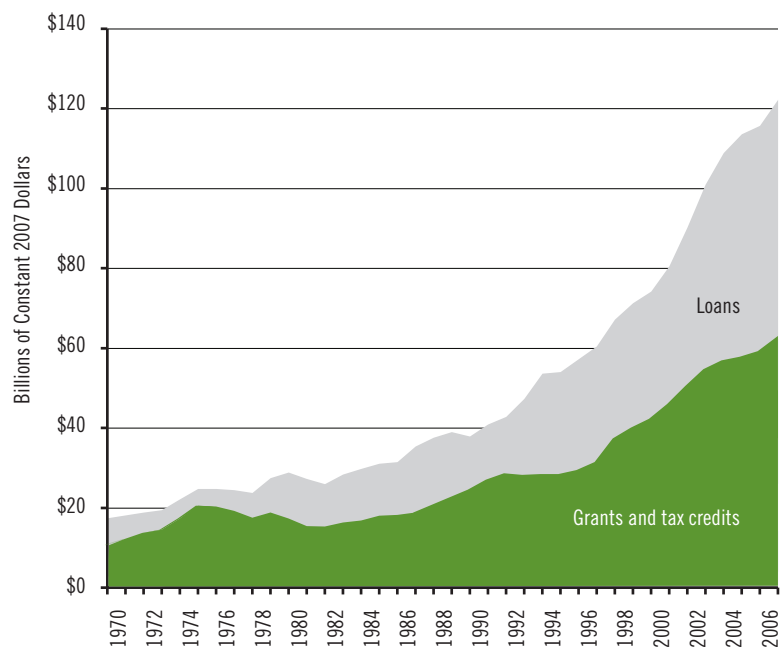
Until recently, there has been great hesitancy to encourage families to view college going as an investment. Despite these misgivings, current policies and prices are already forcing families to navigate a series of complicated financial decisions as they figure out how to save and pay for college. Positioning families to make smart

investment decisions as they negotiate this processes is critical given the increasing scarcity of both public and private resources.

To provide leaders and policymakers with an understanding of why families currently have great difficulty getting the most out of their college dollar, this report documents the complex choices that families with limited information face as they save and pay for college.¹ In what we call the “College-Bound Decision Tree,” the analysis outlines major decision-points for families as they save for college, apply for college, attend college, and pay for college.

Foremost, this report shows how families have taken on greater risk and responsibility by borrowing increasingly large sums to pay for college. In 1970, families relied on grants over loans to finance college by a ratio of two to one. Today, the ratio of grants (and newer tax credits) to loans is nearly one to one. Like in other areas

Figure ES1:
Source of Grants and Loans



Source: College Board, *Trends in Financial Aid*

of American life, this shift requires sophisticated family financial skills and reliable information to make informed decisions about the price and quality of the educational experience they are purchasing. Because most families have not developed these skills, and even those with some sophistication lack access to the requisite information, too many students and families make choices that reduce return on their own investment and other public and private dollars that support them.

One of the greatest strengths of the American approach to higher education is it allows students and families to chart their own destiny. This means students and families must bear responsibility for their own decisions and take personal responsibility to become informed. From a public policy standpoint, it also means that much is gained from helping them make sound choices.

This report supports those calling for increased transparency about price and outcomes. More readily available information will not solve all problems, but it can make a difference in a family's abilities to make informed choices. By doing so, these policy innovations can also help expand the menu of options available to families and force competing institutions to provide high-quality educational experiences more efficiently. Together, these outcomes would increase return on both private and public investment, leading to more productive graduates and an economy less burdened by families struggling with college debt.

The College-Bound Decision Tree

The long journey that college represents for middle class families today begins early in a child's life and continues well beyond graduation.² The "College-Bound Decision Tree," which we use to diagram the challenging decisions families make over the years, is reminiscent of the "Giving Tree" in Shel Silverstein's classic children's book. College provides bountiful returns that

come in both material and less tangible forms. But to keep them flowing across the generations, families must provide thoughtful stewardship. Unfortunately, as described below, many of the branches of the tree are bending under the weight of complexity and misunderstanding, making it more difficult for families to enjoy the fruits of this important resource.

Saving for College

For some parents, the long process commences with the birth of a child and the first deposits in a "college fund." The federal government offers several tax-free accounts to promote and assist savings. In 1997, Congress created Education Savings Accounts (now called Coverdell Education Savings Accounts). Legislation the following year introduced 529 plans, another tax-free vehicle to help parents save for higher education. A third savings option combines either of these savings vehicles with the tax benefits of holding investments in a child's name under the Uniform Transfer to Minors Act (UTMA).³

Choosing the best savings plan is challenging. To be clear, parents are not deciding among only three savings options; each of the 50 states has at least one 529 plan. Currently, there are a 118 different 529s that anyone can access, since the plans are not restricted to a state's own residents. A parent living in Massachusetts, for example, might choose to open a 529 plan in California. All of the plans differ in their details. They are managed by different brokerage houses, have different investment strategies, different fees, and varying records of performance. While private websites aim to help families make informed choices, parents must make decisions with complicated or incomplete information.

These early choices will have a significant affect on the amount of money a student will have available to pay for college. A family that opens a 529 plan, for instance, could earn nearly \$2,000 for every \$1,000 invested at birth. While families

put off by the complexity of 529 plans, relying instead on a typical savings account, would have less than \$1,500 for every \$1,000 deposited.

Policies and programs that encourage families to get the most out their college savings investment offer an opportunity to maximize the money families will have available to purchase quality postsecondary education. This branch of the college decision tree is particularly fertile for states and local communities, since the tax advantages gained by families who select the right savings plan are mostly federal. Working to keep more of these dollars in-state is an economical way to help residents gain additional college education resources.

Choosing Where to Apply to College and the Consequences for the Price of College

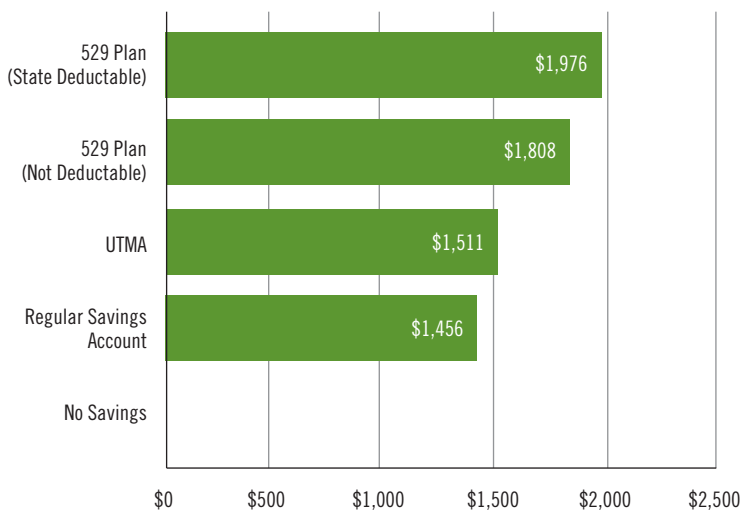
As a child approaches college age, families face the most consequential investment choices in deciding where to apply. Difficult decisions must be made about a major purchase that, more so than most, is charged with family dynamics, peer pressures, and marketing tactics. Anyone who has been through this grueling process recently will understand why even the most prepared families will have a hard time making good choices with the limited information students and parents currently have available.

Charting the Path to a Degree

Decisions about where to apply clearly affect which college a student eventually attends, the cost of their college degree, and the value of the education they receive. The student may choose a local college and plan to live at home, leading to a savings of roughly \$8,000 annually, compared with a student who lives on campus. A student might start higher education at a community college, and then transfer to a public four-year institution for an annual savings between \$5,700 and \$8,000.⁴ Not surprisingly, the decision to attend a public or a private institution affects the

Figure ES2:

After-Tax Return from Decisions about How to Save



Assumes investment of \$1,000 at birth of child with all after-tax earnings reinvested in a portfolio mix of stocks and bonds with funds drawn down over four years of college. See Susan Dynarski, "Who Benefits from the Education Saving Incentives?"

price. In 2009, the national average net price for tuition, fees, room, and board (after grants and scholarships) for a private four-year college was \$21,240, compared with \$9,810 for a public four-year college.

In the past, Massachusetts families have chosen more expensive options relative to their national peers. Data show they have been more likely to attend out-of-state and private colleges than students from other states.⁵ However, the current economic crisis, which has led to a dramatic rise in enrollments at Massachusetts state college and universities over the past year, demonstrates that families are sensitive to cost consideration as they select a path to a degree. Unfortunately, without the information needed to compare net price and quality, determining the short- and long-term value from these choices is difficult.

Comparing College Prices

Information about the actual price that a student will pay to attend college is surprisingly difficult to obtain. Hearing that private universities cost

over \$40,000 per year is common, but that figure is the published or “list price” for tuition, fees, room, and board – the dollar amount most likely to appear in guidebooks, websites, and other sources comparing institutions. That price is what students with no grant or scholarship aid will pay. In reality, many students do not pay the published price. More than half of all college students receive grant or scholarship aid; at private four-year colleges, the proportion of students with aid is around three-quarters.⁶

As a family considers different colleges, the question that they really want to know the answer to is: What price will we pay? That amount, called the “net price,” is the published price minus all of the government, institutional, and private grants

AT THE TIME OF APPLICATION, THE NET PRICE IS IMPOSSIBLE TO CALCULATE

that a student receives. While the average published price in 2009 at private four-year colleges was \$35,640, the average net price was a third lower at \$21,240.

Currently, at the time of application, the net price is impossible to calculate with certainty because it depends on the total amount of money available to support students and the characteristics of the accepted applicants, neither of which is known to the school at the time students apply. Thus, as students choose where to apply, they can only estimate from past information what price they might expect to pay for college, and even that basic information for the family’s income range is difficult to find. Moreover, this information only helps a student anticipate costs for their first year. When it comes to planning for tuition increases or financial aid packages in future years, families often have even less certainty.

It turns out to be complicated for families trying to make reasonable assumptions about how much they will likely pay to attend

a specific school.⁷ To estimate what we call the “expected net price,” an applicant must calculate an expected grant amount as well as the likelihood of getting that grant. The probability that students will receive grant support depends on: 1) their eligibility; 2) the financial aid resources of a college; and 3) the priorities and methodology that the college uses to determine a mix of grants, loans, and student work-study opportunity. All vary at different schools. While historical information about these factors is publicly available, these data are not easy to find in directly comparable formats, nor are they available for specific family-income brackets.

We estimate “expected net prices” for 15 private institutions in Massachusetts, and these calculations reveal important differences for the average financial aid recipient. While the published prices range from \$40,000 to \$50,000, the average expected net prices vary from \$27,000 to \$42,000, with the average expected net price equaling \$35,205.

In addition to variation in net price, these Massachusetts schools also differ considerably in their ability to meet the recipients’ financial needs. Some colleges provide 100 percent, but a few match less than half of their students’ needs. Equally relevant, the share of these financial aid packages from grants range from 25 to 95 percent. While some schools meet most of their students’ needs, they do it through loans rather than grants. In contrast, other schools cover a smaller share of their students’ needs, but they primarily use grants.

In this research, we make calculations for the average student, but this is the type of information that families should have readily available and for their own income level as they weigh different college choices. Although the published prices can be similar, estimated net prices for the average family are quite different, and the distribution of financial aid for families with similar incomes can also vary considerably.

Measuring the Value of the Educational Experience

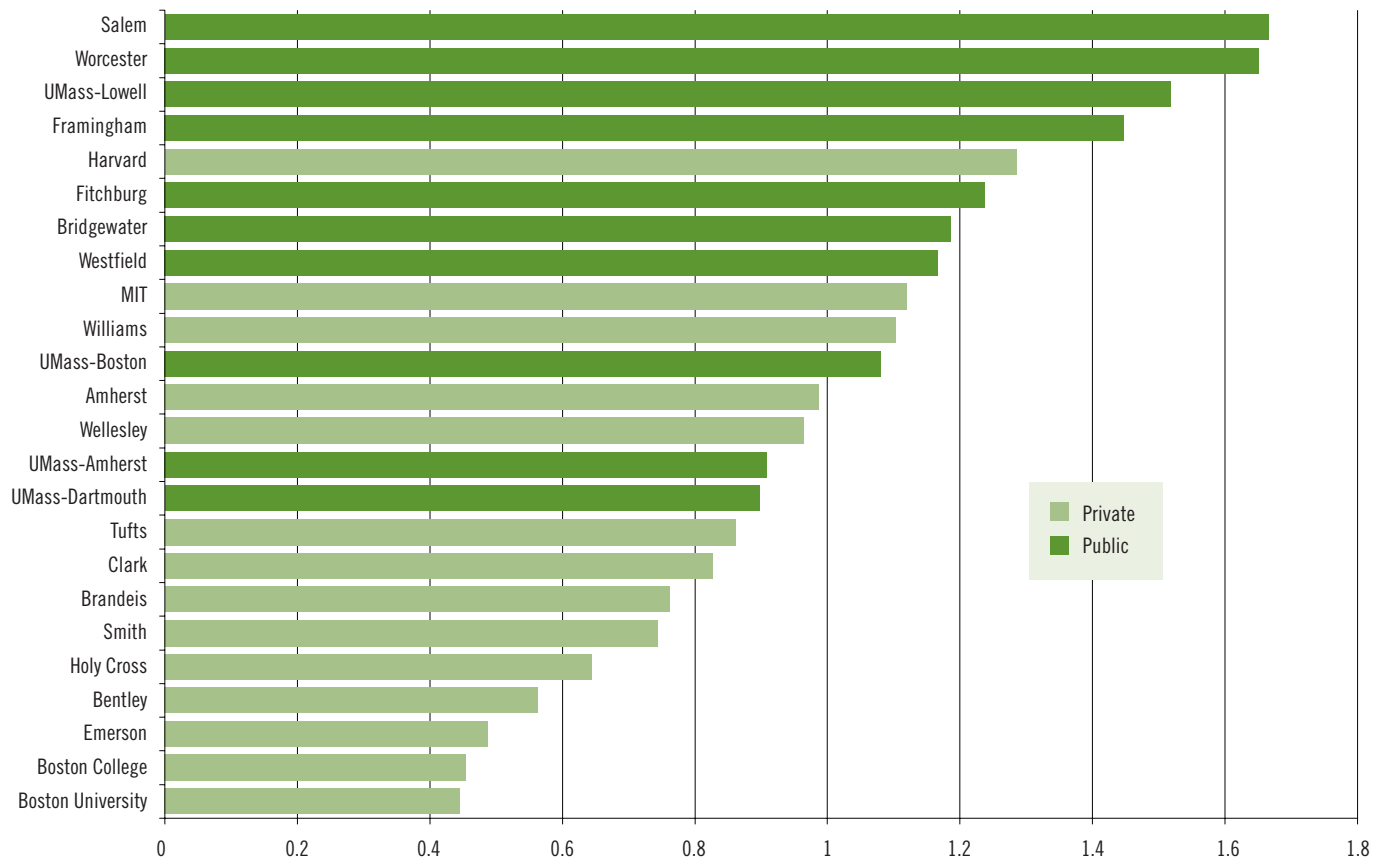
Students and families must be able to relate net price to the educational experience that they value. No single indicator measures the quality of an institution, but college administrators use some commonly accepted metrics, including the student-faculty ratio, instructional expenditures per student, and the likelihood of graduating in four years. Families should have the capacity to compare price with the characteristics that they most value in order to arrive at a college choice that offers the most “bang for the buck.”

In our research, we consider several indicators relative to the price of the institution, which allow for comparisons of value. These data are

mainly instructive; however, they do suggest that there may be considerable variation across schools on measures of value. For instance, some of the most selective private schools offer good access to faculty, one quality indicator. But they do so for a high price compared to some Massachusetts public colleges, which have higher value in terms of access to faculty relative to price. On other indicators, the opposite pattern emerges with respect to the public versus private schools (see pages 43-46).

Students and families making choices with enormous financial consequences need more nuanced data that are relevant to their backgrounds and aspirations to make informed decisions about college. Critical pieces of informa-

Figure ES3:
Index of Faculty-Student Ratio per Dollar of Expected Net Price



Source: Author's analysis of data from Peterson's Guide to Colleges and Universities

tion, like graduation rates by major or employment by occupation, will enable families to make better decisions about where to spend their college dollars.

Paying for College

As the winter of senior year in high school arrives, potential college students make their decisions about where to apply by January 1 for a springtime decision. In the beginning of April, the acceptances and rejections arrive with a mandatory reply date in May. During these short three or four weeks, families evaluate the choices before them and decide where the student will go college. Yet, even at this crucial moment, they do not have clear information about how much they will pay at one institution versus another.

Typically, colleges and universities calculate the “financial need” of a family and then offer the student a financial aid package. The absence of standardized formulas, different treatment of assets, use of professional judgment, and other idiosyncrasies can result in varying calculations

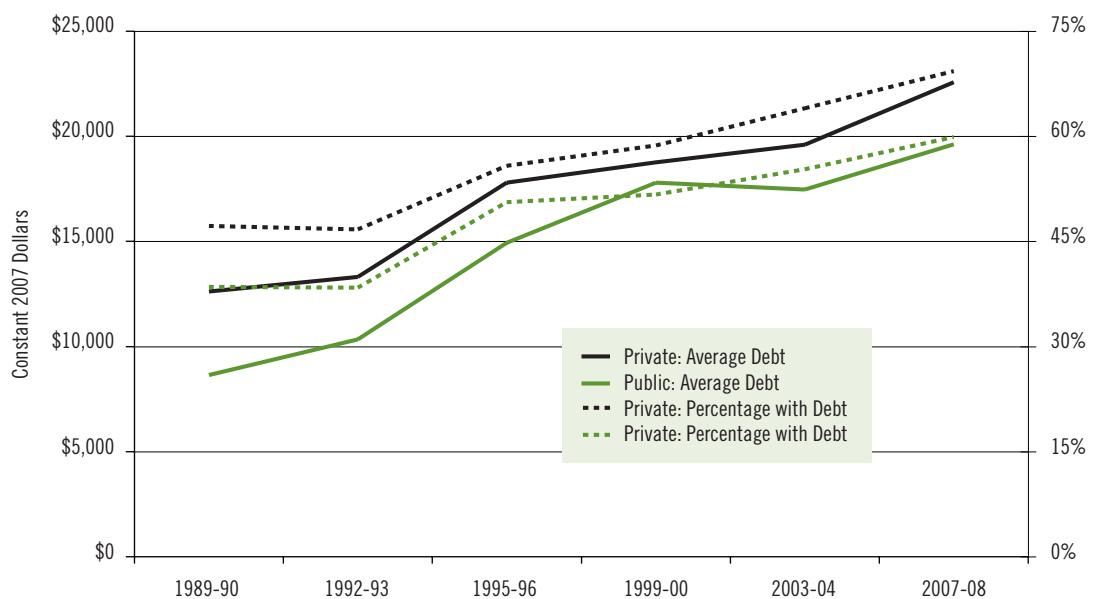
of a family’s need at each college. The variation is greatest in cases where families have assets. A financial aid package also contains a mix of different types of assistance: grants from all sources, loans, and earnings from a student job. From the college’s point of view, the package allows the student to afford their college.

From a family’s perspective, financial aid packages are not created equal. Put simply, a grant is obviously different from a loan. Both forms of aid might allow a student to attend a college, but a loan only defers payment into the future, while a grant discounts the price of attendance. Financial aid packages from two colleges might look similar, but differ considerably in their composition. One package may include a much greater share of grant aid, while another may rely on loans. Language that obscures these differences often inhibits a family’s ability to understand the actual price that they will pay to attend.

In practical terms, college students and their families should begin with information about the published price of attendance, and then subtract

Figure ES4:

Percentage with Debt and Average Debt at Graduation for Students with Stafford Loans



Source: National Post Secondary Student Aid Study

the total amount of grant aid from all sources after consultation with the school's financial aid officer. The resulting number is the net price that can be compared with other schools. Then, after they know the net price to attend college, they can also work with the financial aid offices on sources of payment – current wages, savings, federal, state, or private loans – to arrive at a mix of loans and student work-study hours that best meet their individual needs.

These choices are complex and consequential. The price of college has outpaced the rate of inflation, and grant aid has not increased enough to offset rising prices. Between 1989 and 2007, the share of undergraduate students at private four-year colleges graduating with debt increased from 47 to 64 percent. For undergraduates at public colleges, the share with debt increased from 34 to 50 percent. Today, the majority of college students at four-year institutions graduate with debt.

The amount of money that students are borrowing has also increased. In 2008, the average graduate from private institutions (with loans) left with \$22,578 in debt, up 15 percent from 2004. For the 60 percent of graduating seniors with loans at public institutions, their debt averaged \$19,616 – up 12 percent from four years earlier.

As more students go to college, borrow money to attend college, and increase the amounts they are borrowing, the number of available loan products to finance their college education has also increased. Families must sort through a wide range of loan products, understanding their varying terms, conditions, and eligibility requirements. They must also balance student versus parent loans.

Subsidized Stafford Loans and/or Perkins Loans are two of the least expensive ways to borrow money, but they have income eligibility restrictions. Several Massachusetts private colleges and universities use their own funds to make low-interest loans to students, but they too are

typically based on a family's ability to pay. "Massachusetts No Interest Loans" are an inexpensive state-sponsored alternative for those who qualify. For families who are not eligible for these loans, unsubsidized Stafford Loans are available to all students; all parents with dependent children attending college qualify for PLUS loans. Other alternatives for residents of Massachusetts are loans available through the Massachusetts Educational Financing Authority (MEFA), a state public, non-profit organization.

Home equity loans and unsecured private loans are not specifically designated for education, but they do provide additional options regularly utilized by families facing college bills. The interest on home equity loans varies with market

FAMILIES MUST SORT THROUGH A WIDE RANGE OF LOAN PRODUCTS

rates and it is tax deductible. Unsecured private loans are the most expensive and riskiest way to finance a college education. They are the equivalent of credit card debt, which is still another financing alternative that some families (inadvisably) use.

The tremendous growth in private loans since 2000 is well documented and currently the subject of well-deserved scrutiny. Private student loans for undergraduates grew to a total of \$19 billion, an annual increase of 24 percent since 1999-2000. The number of student loan borrowers increased more than sixfold during the same period to nearly 3 million undergraduate students in 2007-08. Since 2005, banks can make the loan payable directly to the borrower through Direct to Consumer (DTC) Loans. In these cases, colleges may not even know that a family received a "college" loan.

Different loan products have different origination fees, different interest rates, different loan periods, and different repayment terms. These differences complicate the choices. For home

mortgages, lenders are required to disclose an Annual Percentage Rate (APR) that considers interest payment on the basis of money that the bank actually lends the borrower. To date, there has been no such requirement for private student loans. In July 2009, the Federal Reserve Board issued new rules around disclosures that were required by the Higher Education Opportunity Act of 2008 (HEOA). The new rules go into effect in February 2010 and will – for the first time – require lenders to give potential borrowers information about key loan terms before they exercise their choice. While these new requirements are a clear step forward, some gaps remain.⁸

After college, families face still more decisions about repayment of college loans. One key choice is whether to consolidate, or refinance, their loans. Consolidating loans combines different student loans into a single loan product. Consolidation has its advantages. The most obvi-

AFTER GRADUATION, THE MANNER IN WHICH LOANS ARE REPAID AFFECTS THE OVERALL PRICE THAT STUDENTS PAY

ous is the opportunity to renegotiate the terms and conditions of the loan with a new lender. A new loan can alter the length of the loan and the monthly payments, and therefore affects the total amount of interest paid. Since loans can only be consolidated once, a borrower is committed to the lending institutions and the new terms and conditions.⁹ Thus, even after graduation, the manner in which loans are repaid affects the overall price that students pay for their college education.

Evidence of Bad Choices and Their Consequences

While every family makes decisions that they believe meet their needs, some choices are financially better than others. Currently, most families navigating the path to college have limited inde-

pendent support to help them make these decisions. With current data limitations, it is hard to measure the extent to which families make avoidable errors. There are, however, indications that the decisions of some families create unnecessary expense.

One indication is the number of students who take out private student loans without borrowing from the federal Stafford Loan program, even though Stafford Loans are less expensive and come with better repayment terms. In 2007-08, 26 percent of private loan borrowers did not take out any Stafford Loans, and more than one third (38 percent) of private loan borrowers did not max out their Stafford Loan limit.¹⁰ Thus, more than half of the students who took out private loans either bypassed the federal Stafford Loans, or borrowed less than the maximum amount allowed.

Researchers have tried to figure out why some students do not borrow from federal sources.¹¹ The most basic explanation is simply failure to apply. In order to qualify for federal financial aid, a student must submit the Free Application for Federal Student Aid (FAFSA). In 2007-08, 60 percent of students who took out private loans, and no Stafford Loans, did not submit a FAFSA form. Much has been written about the complexity of the form, which includes 102 questions and three worksheets, leading Secretary of Education Arne Duncan, to say: “You basically have to have a Ph.D. to figure that thing out.” Ironically, the FAFSA was designed to ensure that students who qualify for federal grants, work-study awards, and subsidized loans exhaust these more financially advantageous options before resorting to unsubsidized education loans. Yet, research suggests that the form’s complexity may lead students to bypass federal loans altogether, pushing them toward more costly loan products. While the Obama administration has already taken steps to revise and simplify the FAFSA form, opportunities to further

reduce complexity by populating the form with IRS data remain.

All loans to students involve risk. Unforeseen financial difficulties or changes in circumstances can prevent borrowers from meeting their loan obligations. But students who take out private loans assume even greater risk. With higher rates, missed payments quickly compound the debt load. While students with federal loans can sometimes postpone payments through an agreement between the lender and borrowers, deferring payment due to hardship is generally more difficult with private lenders.

The consequences for default are severe, and costly to the student's future creditworthiness and financial standing. Student loans, both federal and private, are not dismissed in bankruptcy proceedings; they are like child support debt, alimony, overdue taxes, and criminal fines. The current economic conditions have led to a sharp rise in the default rate, exposing the precarious position we have placed students in by allowing them to take on larger and larger amounts of debt.¹²

Increasingly, a college degree has become an economic divide between financial security and financial struggle. On average, the earnings of a college graduate are 1.8 times greater than those of a high school graduate, translating into roughly \$1.3 million dollars in additional lifetime earnings.¹³ Recognizing the value of a college degree, parents and students have shown a willingness to assume higher amounts of debt; federal loan limits have increased to respond to this demand. Some experts, however, have now begun to raise questions about the growth in student borrowing.

There is no single, agreed-upon definition of excessive debt. Lenders typically use what is called an "8 percent" rule, requiring that monthly payments not exceed 8 percent of a borrower's pre-tax income. When a State of Iowa researcher analyzed how much student loan debt is too much, he also arrived at the 8 percent figure, using a

different methodology. Based on that number, he estimated that 26 percent of borrowers have an excessive debt burden.¹⁴ While a lender's view of what is manageable might include anything short of default, borrowers probably have a different perspective. Excessive debt can limit life choices and fundamentally change family, lifestyle, and career goals.¹⁵

The serious consequences that can result from the absence of adequate information for families choosing how to save and pay for college are increasingly clear. To be sure, readily available and directly comparable information about the price of college, the quality of the educational experiences, and options for payment will not provide a panacea, but greater transparency will place families in a much better position to make smart choices.

Toward a Better Model: Students and Families as Savvy Consumers

Policymakers can help students pursue postsecondary degrees without getting buried under mountains of debt by building a new model that places families front and center as savvy higher education consumers. Fashioning a new model requires: 1) increased price transparency and certainty; 2) reduced complexity; and 3) improved information about institutional quality. With recent federal legislation and leadership from the Obama administration, momentum is building in all three of these directions. Continued attention, particularly at the state level, is required to shape these efforts into a model that delivers results.

1. Increased price transparency and certainty

First, families need easily available and comparable information about the price of attendance. While this poses significant challenges, some important progress has already been made. As part of the Higher Education Opportunity Act

(HEOA) of 2008, for instance, colleges and universities will be required to have a “price estimators” on their websites by 2011. These new tools will return information about the price of attendance, average grant awards, and net price based on minimal information about family income and a few other factors, such as age, residency, marital status, and number of siblings. When implemented, the information will inform families about how much a student might expect to pay to attend the institution.

In addition to price transparency, there is an unrealized need to introduce greater price certainty. Even after students enroll in college, they often do not know the total cost of getting a degree. Volatility is particularly problematic for students attending public institutions. In 2002, a drop in state funding in Massachusetts resulted in a 21 percent increase in UMass tuition and fees.¹⁶ The reality is the price students pay to attend a public college currently depends on the luck of how their matriculation year corresponds to the economic cycle. An economic downturn can easily derail good family financial planning. In order to provide greater equity for residents,

IN ADDITION TO PRICE TRANSPARENCY, THERE IS AN UNREALIZED NEED TO INTRODUCE GREATER PRICE CERTAINTY

who pay into the system throughout their lifetimes, states should find ways to insulate higher education budgets from economic cycles.

Tuition spikes also hit students at private colleges. One solution would be to give students – at the time of admission – a four-year cap on the price to attend. Alternatively, to reduce front-loading and a larger, discouraging price tag that this approach might produce, schools could guarantee not to raise tuition for entering classes by more than a set annual percentage.

The timing of price information is also a critical issue. Many schools do not announce

the price of attendance until after the application deadline, and some schools do not reveal their price until after the date that admitted students must make a deposit for enrollment. If information about price is going to play a role in shaping where students apply to college, it must be available a year earlier than the current practice of expecting high school seniors to apply without knowing the price.

2. *Reduced complexity*

As economists have demonstrated convincingly, simplification of the process could reduce strain on teens and parents making sensitive and difficult choices with a profound impact on their futures. The FAFSA form is an excellent case study of the effect of complexity. If eligible families skip filing a FAFSA, which estimates suggest each year more than a million do, they are not able to access federal loan programs.¹⁷ The Obama administration recently announced significant progress in this area, doing away with 22 questions and 17 web screens, and eliminating the need for low-income students to respond to complicated questions about family assets.¹⁸ While this reform does not go quite as far as abolishing the FAFSA all together, as recommended by the Rethinking Student Aid Study Group, it does represent progress in the right direction. Populating the FAFSA electronically with tax data from the IRS remains a worthy objective that leaders should press to achieve.

Both state and federal governments must pursue other opportunities to reduce the complex decisions that families trying to make smart decisions about college confront. Government should work to inform parents early. Information about saving for college, for instance, could be sent to families that add dependents to their tax filing. State and federal websites could provide clearer information, particularly with regard to 529 plans. The College Foundation of North Carolina (CFNC) website, which provides details

about the state's 529 plan, interest calculators, links to student and parent loan applications, and other planning tools, offers one early model.

Massachusetts has announced plans to launch a similar website. Developing and marketing this central clearinghouse for information will reinforce important steps the state has already made. The Department of Higher Education, for example, recently launched an impressive website to help students understand and prepare for the process of transferring credits between public institutions.¹⁹

3. Improved information about institutional quality

Families need reliable measures about the educational experience that colleges and universities offer. While the US Department of Education is providing increasingly consistent and accessible indicators, such as graduation rates, this branch of the college-bound decision remains the weakest.

To be sure, existing sources, including popular published guide books and websites, provide information about numerous college characteristics, but many indicators of student success are not captured fully. Much of the available data is not audited for accuracy, and information is rarely presented relative to the price of college. Even where good information is available, there are still gaps. Important points of comparison – like graduation rates for different subgroups and majors – are difficult to find. Families also lack reliable information on employment of graduates in different fields. With families taking on more risk to pay for college, they deserve reliable and comparable information about the quality of the educational experience they are purchasing. The Massachusetts Board of Higher Education should take a leading role in making these indicators available for state public institutions.

Improvements in the availability of information on price and quality will not be sufficient

to help families navigate complicated choices.²⁰ There is a real role for experts to help families make the best choices. Today, families get much of their advice about college from financial aid officers and private loan officers, professionals with a vested interest in the outcome of their decision. While they do not necessarily give bad advice, families need access to people who understand the rules and nuances of the higher education system and who do not have a stake in their decisions. There is a real shortage of guidance counselors, who can often fill this role. Policymakers, foundations, and nonprofits should explore opportunities to offer all families access to impartial professionals who can guide families through complicated decisions. New technologies, such as webchats, provide untapped opportunities to connect many more families with the support they need at a relatively low cost.

Making information readily available and directly comparable will help families, but equally important, it can lead to improvements within higher education. Consumers who know more are in a better position to ask for more. Schools that have a history of low graduation rates relative to their peer institutions will face additional pressure to address the issue or risk losing students. Greater transparency can also lead to further innovations, such as no-frills campuses, and better integrated student-oriented transfer programs.

While this report argues for a consumer-focused approach to college that can lead to savings and more efficient spending by empowering students and families, it does not relieve the burden on colleges, particularly during these challenging economic times, to redouble cost containment efforts. Now more than ever, colleges and universities must pursue full utilization of consortiums for purchasing and sharing resources. In Massachusetts, which has a high number of public campuses relative to the size of the state, consolidation should be reconsidered

to reduce administrative costs. An independent campus consolidation commission could be created to accomplish this difficult task.

Parents and students recognize the value of a college degree. With support from public programs, they save and borrow large sums of money to invest in their futures. Families choosing a college and figuring out how to pay for it face much more complex decisions than students and parents faced a generation ago. Unfortunately, as they make one of the biggest investments in their lives, they remain largely

on their own, working with incomplete information. Some commonsense changes could give families the facts they need to make smart decisions. Providing access to improved information will not only help individual families, it will also serve as a catalyst for reform and innovation in higher education, helping the nation achieve President Obama's laudable goal of restoring America's place as the world leader in the proportion of adults with college degrees.

ES Endnotes

1. We rely on a variety of data sources including the National Postsecondary Student Aid Survey (NPSAS), Integrated Post secondary Data System (IPEDS), College Board, *Kiplinger's Personal finance Magazine*, *Peterson's* online college search, Massachusetts Office of Student Financial Aid Assistance, and National Bureau of Economic Research.
2. Our focus is primarily on traditional age college students, who enter college immediately after high school graduation. However, our recommendations for a new model that is consumer-oriented would benefit all college students – traditional and nontraditional.
3. In this research, we raise questions about the decision-making process that families go through as they decide to save for and pay for college. None of this information should be construed as specific advice, but rather as a more general discussion of the issues and the types of information to which families should have easy access.
4. While this option may appear financially appealing, very few students take this path to a B.A. degree. Of students entering two-year colleges, 71 percent say they are seeking a B.A. degree, but one study found that 11 percent of two-year college students were actually taking courses that would lead to a B.A. degree. See Ellen Bradburn, US Department of Education, Office of Education Research and Improvement, NCES 2001-197, May 2001.
5. For more information on enrollment trends, see "Paying for College: The Rising Cost of Higher Education." Boston, MA: MAssINC, 2006.
6. "Paying for College: The Rising Cost of Higher Education," ES Table 4, p. 11.
7. The differences between the published and net price are greater for private colleges and universities. The same issues exist at public schools but to a lesser extent. Families who are only considering public institutions are better able to make an informed estimate of the price they will pay.
8. For more on the new disclosure requirements, see "Summary of New Disclosure Requirements for Private Student Loans," The Institute for College Access & Success, The Project on Student Debt, August 2009.
9. Reconsolidation may be possible when accompanied by a new loan.
10. These numbers come from an analysis of the National Postsecondary Student Aid Study (NPSAS) that was done by The Project on Student Debt. See "Private Loans: Facts and Trends," August 2009.
11. Mark Kantrowitz (2009), "Characteristics of Private Student Loan Borrowers Who Do Not Use Federal Education Loans," June 7.
12. Ironically, lending institutions receive their highest fees for bringing a borrower of an education loan out of default, giving very little incentive for preventing the borrower (i.e. refinancing the loan or postponing payments) from going into default in the first place.
13. Includes college graduates with a bachelor's degree or higher. This figure also discounts income, which college graduates typically earn disproportionately in the future, by 3 percent. See Sandy Baum and Jennifer Ma (2007), *Education Pays 2007*. Washington, DC: The College Board, p. 44.
14. Keith Greiner (1996) "How Much Student Loan Debt is Too Much?" *Journal of Student Financial Aid* 26, No. 1, Winter, pp. 7-16.
15. For a discussion about developing measures of borrowers' stress, see Patricia Sherschel, "Student Indebtedness: Are Borrowers Pushing the Limits?" USAGroup Foundation New Agenda Series, Vol. 1, Number 2, November 1998, p. 17.
16. *Paying for College*, ES Table 6, p. 13.
17. American Council on Education, "Missed Opportunities Revisited: New Information on Students Who Do Not Apply for Financial Aid," Issue Brief, February 2006.
18. See "A Simpler Application for Student Aid," Accessed at <http://www.edgoblogs.org/duncan/2010/01/a-simpler-application-for-student-aid/>, January 11, 2010.
19. The MassTransfer website includes information for both students and families as well as advisors. See <http://www.mass.edu/masstransfer/>
20. Recent research shows how simplifying the FAFSA process and providing direct help with the application led to increased college enrollment. See Eric Bettinger *et al.*, "The Role of Simplification and Information in College Decisions: Results from the H&R Block FAFSA Experiment," NBER Working Paper, September 2009.

THE COLLEGE-BOUND DECISION TREE: 1980 AND NOW

The year 1980 was pivotal for higher education, and a good moment in time for comparison as we reflect on the broad changes in education policy under debate at the beginning of this new decade. In 1980, the US Department of Education was elevated to the cabinet level. That same year, reauthorization of the Higher Education Act resulted in the first federal loan program for parents of college students, and the federal low-income grant program was renamed to the now familiar “Pell Grants.”²

The number of students utilizing these resources was far fewer in 1980. Two- and four-year institutions enrolled just 6.3 million students. But over time these programs helped expand college access. Projections suggest 10 million students will enroll in colleges and universities for the fall of 2010, and the actual number will likely be larger if unemployment rates do not rebound by then.

WITH INCREASING RELIANCE ON DEBT, THE DECISIONS FAMILIES MAKE DON'T LEAVE WITH GRADUATION

Growing enrollments mean more families are thinking about paying for a college education – a process illustrated in this report as the “College-Bound Decision Tree.” Parents start making monetary judgments in a child’s infancy. Some begin the financial decisions when they start saving for a newborn child’s college education; other parents make implicit decisions by not saving. Later, families will make choices with enormous financial consequences when they select a college. They will also make decisions about how to pay for school, choosing from an assortment of government and other sources of financial aid including grants, loans, and work-study jobs. All of these options require timely decisions that affect both college opportunity and the price that a family

ultimately pays for a child’s college education. With increasing reliance on debt, the decisions families make don’t “leave” with graduation.

Unfortunately, programs designed to provide support for ever larger numbers of students have evolved faster than the infrastructure families need to understand their choices. The language that financial aid officers use to explain these programs is often highly technical and unfamiliar to parents and students. The admissions process has not adjusted to help families make informed financial decisions (e.g., the price of tuition is often not announced in time for adequate financial planning). And specific information about many attributes of an institution that a family values – availability of faculty, curriculum, academic strength, and degree completion – are available only in non-comparable formats.

In order to provide higher education leaders and policymakers with a better picture of how the growing array of public and private programs designed to help students obtain postsecondary degrees interact, this report focuses on the family as a consumer. It describes several financial choices that families make from the time a child is born until they repay all of the college loans. These decisions can increase or reduce the price of college from almost a free education to far more than the published price. Efforts to help families make smart decisions as they tackle these complex decisions will give more students opportunities to continue their schooling, and achieve their educational aspirations. Equally important, improvements in these systems will allow more students to pursue meaningful careers, less encumbered by the accumulating debt that increasingly burdens many recent graduates and their families.

I. THE ECONOMIC ENVIRONMENT FOR GOING TO COLLEGE

The number of young people going to college within one year of high school graduation substantially increased between 1980 and today. Half of US high school graduates immediately enrolled in college in 1980; over the last two and a half decades, the percentage has grown to nearly two-thirds. Whereas the gains in the two decades prior to 1980 were driven almost entirely by increases in women, Figure 1 shows that both men and women have been going to college at higher rates since then.

Figure 2 charts this growth in absolute terms. Enrollment in two- and four-year degree granting institutions increased from 6.4 million in 1980 to 9.6 million in 2006.³ Overall, college enrollments have expanded by about 1.5 percent annually since 1980. Continued growth in enrollments is expected over the next decade, but at a somewhat slower 1 percent rate based on population trends. Enrollment in two- and four-year degree granting institutions is projected to cross the 10 million mark in 2010. However,

the recent downturn in the economy may cause enrollments to grow even faster, especially at community colleges, as people who cannot find work use the time to enhance their credentials.

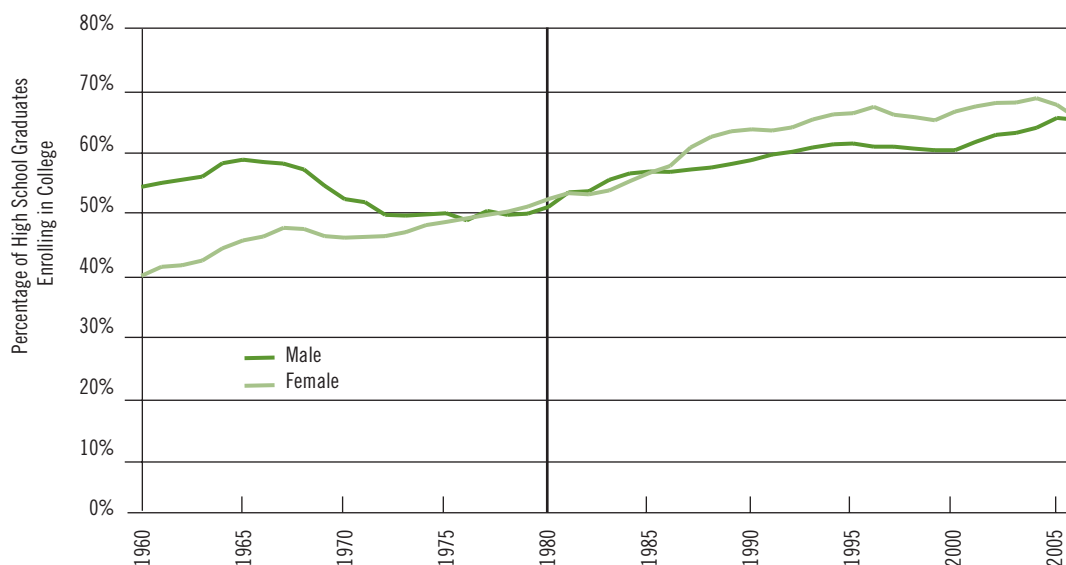
Economists speculate that so many more students are going to college because of the so-called “college dividend” (i.e., increased salary associated with greater amounts of education). Harvard economists Claudia Goldin and Law-

**ENROLLMENT IS PROJECTED
TO CROSS THE 10 MILLION MARK
IN 2010**

rence Katz have calculated the annual growth rate in wages for those who graduated from high school and those who went on to college. In their analysis, 1980 provides, once again, an important demarcation. According to Goldin and Katz, the “rapid growth of the supply of college equivalents from 1915 to 1980 operated to depress the college wage premium, despite strong secular

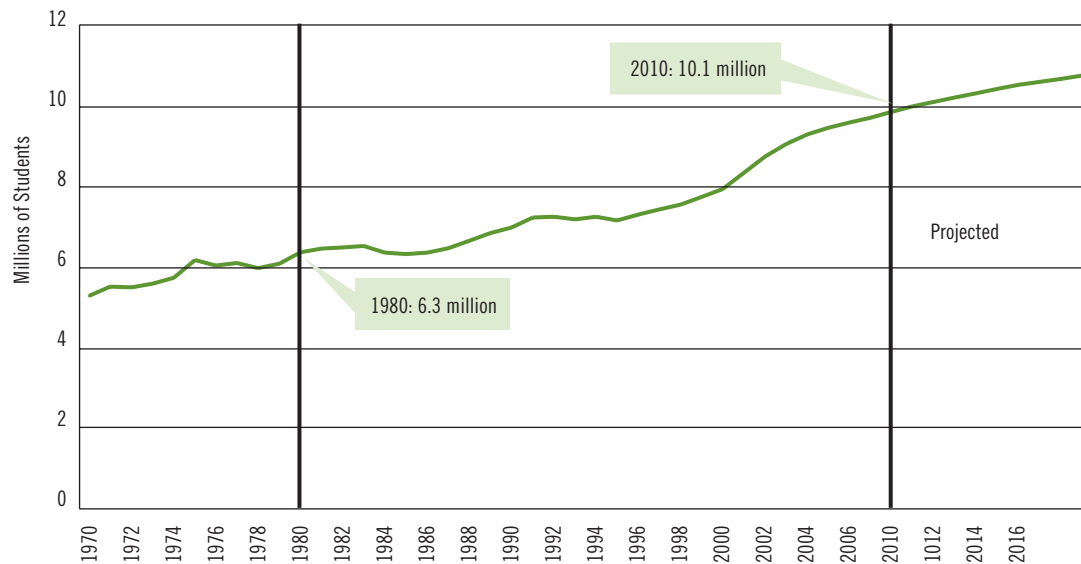
Figure 1:

College Going Rate of High School Graduates (Five-Year Moving Average)



Source: National Center for Education Statistics

Figure 2:
Fall Undergraduate Enrollment with Projections (Two- and Four-Year Degree Granting Institutions)



Source: National Center for Education Statistics (includes public and private, full- and part-time)

growth in the relative demand for college equivalents.”⁴ In other words, jobs that required a college degree grew more closely to the number of college graduates prior to 1980 than in subsequent years.

Since then, the number of college graduates has not kept pace with the demands of the job market, which has driven up wages relative to those without a degree. The disappearance of many clerical positions due to advances in technology has placed an even higher premium on the complex problem-solving skills students develop in college.⁵ Those at the top of the income scale with a college degree have benefited disproportionately to everyone else in the past three decades – a phenomenon that was not true for the first three-quarters of the 20th century.⁶ Young people discover this change when they search for jobs with only a high school diploma.

Unfortunately, the price of attendance also grew rapidly between 1980 and now. To understand the true magnitude of this change, researchers differentiate between the so-called “published price” and “net price.” The former

describes the publicized tuition, fees, room, and board for a residential college that students with no financial aid pay for attendance.⁷ These are the dollar amounts that are announced on an annual basis and generally the subject of news reports in the fall of each year. The published price is typically compared to other economic indicators, such as family income or government statistics that consider inflation and other price increases over the year. According to the College Board, in 2008, the average published price for tuition and fees for in-state students at public four-year institutions was \$6,585.⁸ The comparable figure for private institutions, which generally receive most of the media attention about pricing, was \$25,143. Frequent references to the high published price of private college can make postsecondary education appear beyond the means of a large portion of the US population.

The “net price” for college is the amount a student pays after receiving grants and scholarships as part of a financial aid package.⁹ This reduction in price may be based upon the student’s ability to pay, as well as non-economic

factors, such as academic achievement, athletic ability, or other student traits that colleges find desirable. Grants and scholarships are available from both state and federal government sources.

In 2007-08, the federal government spent \$22.3 billion on all grant programs and \$72.9 billion on loans. Both programs increased in 2009 in constant dollars – grants by 11 percent and loans by 15 percent.¹⁰

Massachusetts provided \$1.2 billion in grants to students from low and moderate-income families in 2007-08, and made almost half a billion dollars in loans. Unfortunately, state budgetary challenges have created uncertainty around this important source of funding. Massachusetts was one of just 14 states with declines in the 2009 higher education budget.¹¹

Private organizations, such as the National Merit Scholarship Foundation, also help students pay for college. The Foundation has awarded \$1.3 billion to 335,000 students since it was founded in 1955. The \$2,500 National Merit scholarship is allocated geographically on the basis of Preliminary SAT (PSAT) exam scores and supporting documents. As such, it is not based on the financial circumstances of the college applicant. Recently, the University of California System and the University of Texas stopped sponsoring National Merit Scholars at their institutions, choosing to divert these resources to students with demonstrated financial need.¹²

Other private organizations with wider missions also provide important support for students pursuing college degrees. The Gates Millennium Scholars Program, administered by the United Negro College Fund, annually awards 1,000 scholarships that are good for each year of college until graduation to low-income minority students without restriction to the school that the recipient attends. Community service and religious organizations, such as the Rotary Clubs and Kiwanis Clubs, award scholarships, often to low-income students who have demon-

strated academic promise and leadership abilities. Employers, most notably colleges and universities themselves, often include a portion of tuition and fees for children of employees as part of their benefit package. Many businesses also have education programs, where employees can enroll in courses related to their job. The federal tax code gives favorable treatment to this kind of employer compensation.

The fastest growing source of grant money is colleges and universities themselves. They typically reduce the published price to students with financial need – a practice known as “discounting” – and sometimes for those with outstanding academic or athletic records, called merit and athletic scholarships respectively. The type of discount or scholarship awarded reflects the school’s enrollment priorities for attracting students using a variety of criteria including academic and athletic prowess, institutional finances, and racial, ethnic, and geographic diversity.

Colleges and universities that depend heavily on tuition and fees to fund their operations carefully monitor the “discount rate,” which is the percentage reduction in revenue that would have come from all students paying the published price. They balance their desire for certain types of students who pay a lower price with the amount of money they require to run their operations. They may find that enrolling a student who is paying a reduced price is better than having a vacancy that produces no revenue. Thus, the balance between generating revenue and enrolling the students the institution wants is a delicate one left to “enrollment managers,” generally at the vice-presidential level.

Even schools with large endowments to help pay for operations that base their financial aid packages purely on the financial circumstances of the family often practice “preferential packaging,” which reduces the published price with larger grants for the students they particularly

Figure 3:

Published Price vs. Net Price



Source: The College Board

want to enroll.

Some schools will combine financial and non-financial criteria for determining aid. For example, a portion of an institutional grant that is awarded because of a family’s financial circumstances may be described as a scholarship so the student has a sense of academic accomplishment. In other instances, almost the opposite occurs, when students awarded the maximum amount of financial aid learn that additional academic scholarships from outside the institution are subtracted from the university’s grant award. Other common practices also mix the purpose of awarding grants to students such that neither economic nor non-economic circumstances alone is sufficient to predict the amount of grants or scholarships available from an institution. Some schools, for instance, suggest that athletic scholarships disproportionately go to students from low-income families. As a result of these practices, net price can be difficult to calculate.

For whatever reason colleges and universi-

ties give grants and scholarships, the average net price adjusted for inflation has risen at a much slower pace than most people realize, and certainly less than news stories that emphasize the published price would indicate.

Figure 3 displays the difference between the published price and the net price at public and private two- and four-year institutions in the United States for tuition, fees, room, and board. Controlling for inflation between 1990 and 2007, the average published price at private four-year institutions grew from \$22,260 to \$35,640, a 3.1 percent annual growth rate.¹³ The average net price increased at 1.3 percent annually over the same period, from \$17,450 to \$21,200. For public institutions, the growth rates were slightly higher. Between 1990 and 2007, the average published price grew from \$8,380 to \$15,210, an average annual rate of nearly 4.1 percent; the net price increased by roughly 2.2 percent annually, from \$7,120 to \$9,860. In short, grants and scholarships at both private and public institu-

tions have increasingly softened the rise in college tuition, fees, room, and board.

Nevertheless, the increasing published price, as well as the more slowly increasing net price, dissuades many students from applying to some of the colleges in the nation with the most lucrative financial aid packages.¹⁴ Here in Massachusetts, for example, Amherst, Harvard, MIT, and Williams provide financial aid to students with family income in the top 10 percent of the nation – \$180,000 and higher. Indeed, a student that is admitted to one of these schools from a family with income less than \$50,000 could go for a lower price than attending the University of Massachusetts at Amherst. The students must, however, meet rigorous admission requirements that are often slanted toward students who attended expensive high schools or come from families that might afford foreign travel or striking extracurricular activities for their child. This adds to the perception that these colleges, and perhaps all other private schools, are not affordable.

Net price is not the only consideration. Financial aid comes in the form of loans as well as scholarship and grants. The difference, of course, is grants and scholarships – also called “gift-aid” by the institutions – reduce the price of attending the school, while loans must be repaid with interest. How large a loan to take, who should take the loan, and the terms of the lending institution are all factors that affect decisions about what college to attend and how to pay for it.

Paying for college also depends upon money in hand, whether from savings or current wages. The net price for college is more affordable when students come from a family with high enough income to pay the tuition and fees as they arrive from the bursar’s office or from savings that allow lump sum payments to the institution. Financial resources and decisions about their use from the time a child is born – to save, not to save, the choice of savings instrument – affect the college options.

While a campus job, often supported by the federal government through the Work-Study Program, is another form of financial aid, this report does not analyze this component, since wages are a portion of the total family income factored into the notion of college affordability.

Taken together, the trends between 1980 and today produce pressures on families, on the decisions they make about their children attending college, and on the available resources for financing education. The increased financial benefit of going to college, along with numerous other benefits that are not described in this report, has resulted in an increase in college enrollments. An ever increasing percentage of high school

THE INCREASING PUBLISHED PRICE DISSUADES STUDENTS FROM APPLYING TO SOME OF THE COLLEGES IN THE NATION WITH THE MOST LUCRATIVE FINANCIAL AID PACKAGES

graduates go to college. With real family incomes increasing relatively little for all but the highest earners, during a period of increasing net price, parents of college students must seek a variety of payment options.¹⁵

Parents and their children need better information about the price of colleges and the benefits of selecting one school over another, along with a model for making these decisions. Like buying a house or obtaining health care, the information is complicated, scarce, and difficult to interpret. Understanding the complex landscape of financial aid and education-related tax incentives is necessary in order to develop an appreciation for the complex decisions students and their families must make when investing in a college education.

II. PLANTING SEEDS: A HISTORY OF FINANCIAL AID PROGRAMS

Like the seeds of a tree, financial aid is best understood as having at least three components: (1) grants, tax credits, and scholarships that reduce the published price for tuition, fees, room, and board; (2) work-study jobs that allow students to pay some of the bills through current wages; and (3) loans that postpone payment into the future.¹⁶

Grants and scholarships are economically

the most advantageous since they directly reduce the published price for the student.¹⁷ A job's financial importance for reducing the college price coincides with wages. While the income earned is generally minimal relative to the total costs of attending college, many financial aid administrators believe that work-study jobs have an important role because they help engage students in paying for college. Loans spread the costs out to make them more manageable, but they also increase the overall price of attendance according to the interest rate, which may be reduced through a subsidy, such as delayed payments or forgiveness.

State and federal programs that provide all three of these components of financial aid are displayed in Table 1.¹⁸ Each program affects the amount of money that a student receives to help pay for college, but only grants and tax credits reduce the price of a college education for the family.

Grants. The seeds of a family subsidy from the government for higher education were sewn in the Servicemen's Readjustment Act of 1944, better known as "The G.I. Bill." The influx of soldiers returning from global wars and enrolling in college changed the expectations about government's role in helping families pay for college.

As part of the Higher Education Act of 1965, Congress established a grant program that provided monies to colleges for distribution to low-income students. Currently known as *Federal Supplemental Education Opportunity Grants (FSEOG)*, the program allowed college administrators to award grants according to campus-based priorities for students with exceptional financial need.

Although colleges and universities that participate in the program use FSEOG monies today to make college affordable for students from low and moderate-income families, the original

Table 1:

Federal and Massachusetts Financial Assistance Programs for College

	FEDERAL PROGRAMS	COMMONWEALTH OF MASSACHUSETTS (SELECTED PROGRAMS)
Grants	Federal Supplemental Educational Opportunity Grant (FSEOG)	Gilbert Matching Student Grant
	Pell Grant	Need-Based Tuition Waiver, Massachusetts Cash Grant, MASSGrant
	Science and Mathematics Access to Retain Talent (SMART)	Math and Science Teachers Scholarship
	Academic Competitiveness Grants (ACG)	Christian Herter Scholarship
	TEACH Grant	Foster Child Grant
	Hope & Life Long Learning Tax Credits	Early Childhood Education Scholarship
Tax Credits	Hope Scholarship	
	Lifelong Learning	
Jobs	Federal Work Study Program	
Loans	Subsidized Stafford	Massachusetts No Interest Loan
	Perkins	MEFA Undergraduate Loans*
	Unsubsidized Stafford	
	Parent Loans for Undergraduate Students (PLUS) ¹⁹	

* MEFA is a non-profit authority established by the state

program was designed to ensure that students' choice about what school to attend was motivated by academic preferences rather than the price of attendance. That is, an income "supplement" to the family ensured choice equally to all regardless of their ability to pay.²¹ By allowing financial aid administrators on participating campuses to award up to \$4,000 dollars to low and moderate-income students, FSEOG helps provide opportunity to its recipients, but the funding and the number of participating schools are so small that it is no longer sufficient to ensure choice among all postsecondary institutions.

In 1972, the late Senator Claiborne Pell introduced legislation to provide subsidies directly to college students from low-income families. Pell Grants, as they eventually became known,²² are today the largest Federal grant program. As a footnote to history, colleges and universities originally opposed this program, preferring distribution of funds through the campus federal aid programs like FSEOG, rather than federally defined payment to the students. Colleges lost that argument, and today the program establishes a formula for income and financial assets that the federal government modifies periodically to determine a student's eligibility for federal financial aid. Since their inception, Pell Grants have gone to a 108 million individuals, who have received a total of \$250 billion.

Pell Grants can provide up to \$5,550 to low-income students for the 2010-11 academic year. Although the formula for eligibility considers all family assets, 98 percent of the students that receive a Pell Grant come from families that report less than \$50,000 of Adjusted Gross Income on their 1040 tax form.

Pell Grants depend entirely on a student's economic circumstances, helping make college affordable for those with low-income. In 2005, Congress added special incentives for Pell Grant-eligible students by creating two new programs designed to address national priorities. These

are notable as the first federal monies based on merit.²³ Academic Competitiveness Grants (ACG) reward high academic performance for low-income students, and Science and Math Access to Retain Talent Grants (SMART) encourage low-income students to major in so-called STEM fields, i.e. science, technology, engineering, and math. Academic Competitiveness Grants make available up to \$750 in the first year, and up to \$1,300 in the second year of college; SMART grants provide up to \$4,000 in the third and fourth year of undergraduate study.

LOANS SPREAD THE COSTS OUT BUT THEY ALSO INCREASE THE OVERALL PRICE OF ATTENDANCE

Both programs are small – \$230 million and \$350 million in 2008, respectively – and reflect movement away from purely financial criteria for federal grant eligibility.

Tax Credits. President Clinton's 1997 flagship higher education budget established the first federal tax savings programs. These were designed for both traditional students, who enroll in college following high school, and for older students paying for continuing education. The tax credits allow students or their families to reduce their income tax payments in 2009 by a maximum of \$2,500²⁴ for Hope Scholarships and a maximum of \$2,000 for Lifelong Learning tax credits. Both programs have family or student income limits for eligibility, but these amounts are typically more than twice the highest income eligibility for Pell Grants. Until the stimulus bill in 2009, only those with an income tax burden higher than the amount of the credits received a benefit, resulting in much of the money from the program going to middle-income families. Under new provisions, 40 percent (i.e., \$1,000 for Hope Scholarships and \$800 for Lifelong Learning) is refundable to all eligible taxpayers regardless of their tax burden.

States also have grant monies available for college students, which generally require submission of the same forms as federal programs to determine eligibility. Massachusetts's Office of Financial Assistance administered approximately 120,000 grants, scholarships, and tuition waivers based upon a family's ability to pay in 2008. The three largest programs, the Mass Grant, Massachusetts Cash Grant, and Need-Based Tuition Waiver, provide financial assistance to reduce the published price of college for students attending Massachusetts institutions. Mass Grants are available not only to residents attending public institutions, but some are also accessible to students attending private institutions participating in the state-funded program, and to non-residents attending Massachusetts colleges and

CAMPUS ADMINISTRATORS OFTEN CONSIDER STUDENT WORK IN COLLEGE AS PART OF THE CONTRACT FOR HELPING PAY THE PRICE OF ATTENDANCE

universities.²⁵ The programs, individually or in combination, can result in full payment of tuition and fees for the neediest students. The state will provide more than \$1 billion in the coming fiscal year to help students pay for college.

Jobs. The concept of government support for a job while going to school – or “work-study” as it is known today – began in 1935 with the National Youth Administration (NYA). The program funded housing centers and employed both boys and girls who were enrolled in high school and college. NYA projects were often coordinated with other New Deal programs emblematic of the economic recovery programs of the 1930s.

For a short period of time, Lyndon Johnson was the head of the Texas NYA, which provides a historical link to the Economic Opportunity Act that he signed in 1964 as part of his own stimulus to the economy. The current Federal Work

Study Program provides a subsidy to college campuses that place students in a job as part of their financial aid. The federal government pays as much as 80 cents on the dollar while placing some restrictions on both the school and the students on how its portion can be spent. Some students voluntarily replace this portion of their financial aid with a loan since they think of work-study as payment for services – the government subsidy and institutional definition as “financial aid” notwithstanding – and would prefer to delay payment of their college bills to concentrate on academic work. Campus administrators, on the other hand, often consider student work in college as part of the contract for helping pay the price of attendance. In any case, the Federal Work Study Program is relatively small compared to other forms of federal assistance, such as Pell Grant expenditures. In the analysis for this paper, it has been combined with other “campus-based programs” so numbers add to 100 percent, even though it is clearly not grants to students.

Loans. The National Defense Act of 1958, created to encourage enrollments in science, began the first federal student aid program directed at low-income students. Like other financial aid programs to come, the government dispersed monies to the campus for payment to eligible students as part of an overall aid package. Thus, the amount of the award was (and is) determined by the local campus and the student's financial circumstances. The program became known as Perkins Loans in 1986 with a current maximum of \$4,000 per year at 5 percent interest rate.

The Higher Education Act of 1965 originated the Guaranteed Student Loan (GSL) program, providing loans to students through private banks, but guaranteed by the full faith and credit of the United States government. GSL provided loans only to low-income students until 1978, when it was divided into two programs, one with and one without income or financial restric-

tions. Thus, the federal loan program needed a method of determining financial eligibility, and established a formula and specific instructions for evaluating family assets.

The Guaranteed Student Loan Program was renamed Stafford Loans, the name it carries today for the two different types of loans. Unsubsidized Stafford Loans have no family income requirements, and have been available for the past few years at a fixed 6.8 percent interest rate. Subsidized Stafford Loans are available to low and moderate-income students with a lower fixed interest rate that will eventually decline to 3.4 percent over the next few years. Both programs have limits that increase slightly each year with a lifetime borrowing maximum that is currently \$31,000. The subsidy for a Stafford Loan affects the actual interest rate calculation, which begins either a short time after the loan is made when unsubsidized, or following graduation and a six month grace period with the government paying the interest during enrollment when subsidized.

The 1980 reauthorization of the Higher Education Act created PLUS Loans for the parents of college students. Congress has removed a dollar limit to this program, and fixed the rate at either 7.9 percent or 8.5 percent, depending on the school's participation in different types of loan programs. The tax deductibility of home mortgages usually makes a second mortgage an inexpensive alternative for parents to finance college, depending on the prevailing interest rates.

An important consideration for students when they are no longer enrolled in college is the possibility of consolidating all federal education loans into a single payment schedule. Since 1983, students have been allowed to renegotiate their federal loans into a single package – at first with one of the lending institutions that held an existing loan and now with any bank. A few years ago, when interest rates dropped below the congressionally determined fixed-rate for Stafford and Perkins loans, students exploited this

opportunity by consolidating their loans at an even lower rate and bailed out their parents who cancelled their PLUS Loans. Although this particular loophole was eliminated, consolidation of college loans remains an important, but often misunderstood, financial decision for families.

In addition to federal assistance programs that help pay for college after enrollment, 529 plans, which get their name from that section of the federal tax code, and Coverdell Education Savings Accounts encourage families to pay for college before the student enrolls. A 529 Savings Plan allows investments in a savings account to grow tax-free and to be withdrawn tax-free so long as the money pays for postsecondary education. The states administer 529 plans and manage the investment products that are available to the public regardless of residence.²⁶ Several states allow the investment in a 529 plan to pay future tuition at the current price – called “prepaid tuition plans.” A group of 270 private colleges have taken this approach to 529 plans, although the recent downturn in the economy affecting endowment growth and state spending is placing all pre-paid tuition programs in jeopardy. At the end of 2008, the state-administered 529 plans had roughly \$127 billion in assets.

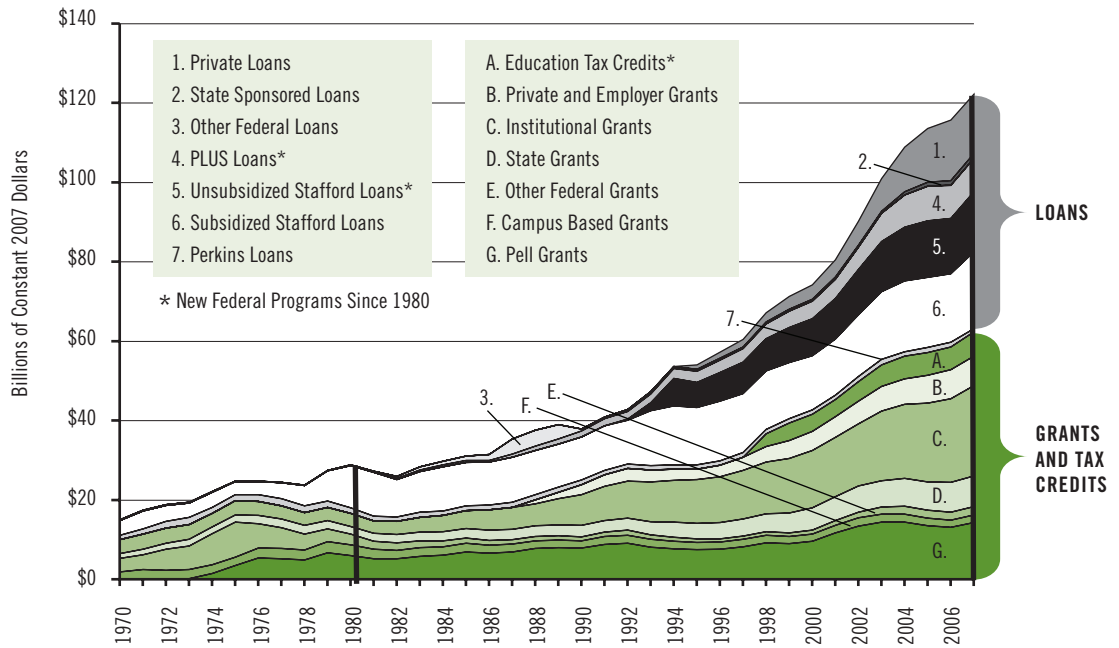
Coverdell Education Savings Accounts are like 529 plans where the money can grow and be withdrawn tax-free for education. Parents can reduce their income taxes by transferring funds to a Coverdell Account in their child's name. A portion of annual earnings is tax-free, a portion at low tax rate, but another portion – known as the “kiddie tax” – is taxed at the rate the parents would normally pay.

Changes in the financial aid policy that colleges and universities use to determine the amount of aid a student receives transfer the savings in both 529 and Coverdell accounts in the child's name back to the total family assets, so the student is not perversely penalized for the family's thrift.²⁷

Figure 4 displays the changing mix of these

Figure 4:

Source of Grants and Loans



Source: College Board, *Trends in Financial Aid*

funding programs over the past four decades, beginning five years after passage of the Higher Education Act of 1965, which provided the authorization for many of the federal programs. The most important observation is the increase in total financial aid funding in constant (2007) dollars. Expenditures of \$28 billion in 1980 have grown to \$122 billion in 2007 for undergraduate education – a 5.8 percent annual increase.

Figure 4 also illustrates how both grants and loans have grown between the base year 1980 and current expenditures for postsecondary aid programs. Grant and tax credit programs, displayed in green, increased from \$16.6 billion to \$62.3 billion; loans, displayed in gray, increased from \$12.2 billion to \$59.9 billion. Increases in several programs explain the change. Expenditures on Pell Grants grew from \$6.0 billion in 1980 to \$14.4 billion in 2007; Subsidized Stafford Loans grew from \$10.6 billion to \$19.3 billion. In general, the programs targeted toward low and moderate-income students grew more

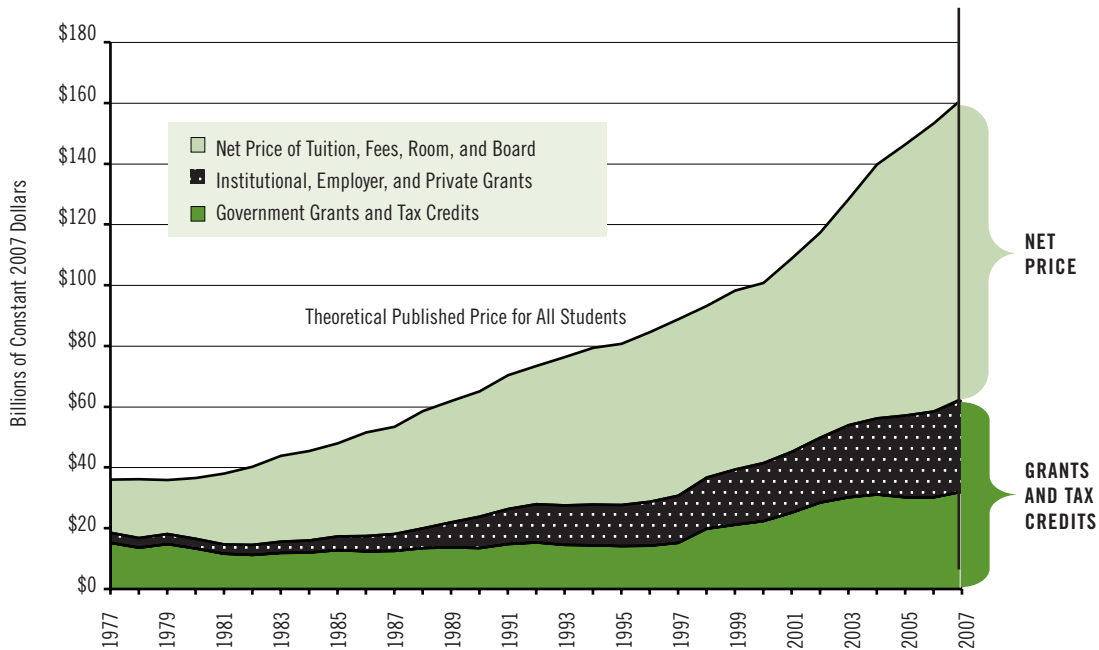
slowly than programs directed at the general population of all students.

Many of the programs that began after the 1980 base year have grown more rapidly than older programs. PLUS Loans began in 1980 as a relatively small program and had expanded to \$8.4 billion by 2007. The 1992 Amendments to the Higher Education Act created Unsubsidized Stafford Loans that grew to \$15.1 billion. Together these two loan programs, one for parents and one for students without financial “means-tested” eligibility requirements, are now larger than the need-based Subsidized Stafford Loan program.

Generally these innovations favor making monies available for middle class families rather than focusing exclusively on helping students from families with low or moderate-incomes. That philosophical, if not political, position is consistent with the creation of the newest form of federal assistance in 1997, tax credits. Hope Scholarships and Life Long Learning Tax Cred-

Figure 5:

Theoretical Price for Tuition, Fees, Room, and Board if All Students Paid Published Price



Source: Author's analysis of College Board data

its are available to married couples with family income up to \$96,000 and \$116,000, respectively. Federal spending on these tax credits has increased 4.7 percent annually to just over \$6 billion in 2007.

But looking at financial aid alone does not give a complete picture of the changes since 1980 in paying for college. As described previously, the difference between the published price and the net price is central to understanding the amount of money that a student actually pays for attending college. Examining the shift in financial aid at the aggregate level also requires a comparison of the net price as a national aggregate.

The net price for college at the national aggregate level is only a theoretical concept since colleges and universities never actually collect the full published price for all students. Consider a hypothetical case: A student decides to attend a college with a published price of \$40,000 and receives \$10,000 in grant aid from the institution. The net price for the student is \$30,000.

Let's assume that 100 students attend this school and they all get the same financial aid award with the school paying the grants (ignoring grants from other sources in this example). The amount of money that the school has for its budget is $100 \times \$30,000$, or \$3 million. The \$1 million that the 100 students received in grants is simply uncollected tuition. Schools that are dependent on tuition for operations would call this a 25 percent discount rate since the difference between the amount of money collected from the net price and the theoretical amount of money it would have collected if everyone paid the published price is exactly one-fourth of the revenue.²⁸

College Board data allow calculation of the financial aid that went to colleges and universities from grants that the government paid, and grants that the institution, employers, and private sources paid. By multiplying these figures by the total number of full-time equivalent enrolled students, it is possible to calculate potential revenues from a total published price for all colleges

and universities.

Figure 5 displays the data from this exercise for the past three decades. The information is important because it records change in the resources that are available to students to meet the rising price of higher education. Note that the available grant monies for college have risen dramatically in constant 2007 dollars. However, the help that the government and institutional sources provide has not kept pace with the increasing net price. It is also critical to recognize that once relatively small compared to public support, grants from institutions, employers, and private sources have increased even more dramatically over the period. These private funds are now approaching the government investment in grants. Had institutions of higher education themselves not reduced the published price and relied entirely on government sources, increases in the net price would have been far more dramatic and out-of-reach financially for a far greater number of students than occurs today.

Regardless of government subsidies and good faith efforts by institutions to help pay for college, the trend for grant and loan programs is clear: families are borrowing increasing amounts of money for higher education. Grants in 1980 paid 70 percent of the price of attendance for financial aid students; today they pay only half. As indicated earlier, the growing importance of a college degree in today's labor market means that families will seek available financing.

With the net price of college increasing and the array of programs and policies to help covers these growing costs, students must make increasingly complex financial decisions about which schools their family can afford and how they will pay the bills – from past, current, or future assets. These decisions begin early in life and extend to years beyond graduation. They are best represented as the “College-Bound Decision Tree.”

III. THE COLLEGE-BOUND DECISION TREE

The rapid increase in net price since 1980, compared to the available resources from government and institutions, places increasing pressure on families to consider the methods and financial products they use to pay for college. Obviously, the easiest way to pay for college for families that can afford it is from savings or current wages – a luxury for a small population. Because the government gives a tax incentive for savings prior to enrolling in college, these families can decrease their price by paying with tax-free rather than taxed dollars. The choice to attend a public or private college, in-state or out-of-state, far or near, are also choices that affect the total price. For those that need or seek assistance, grants are preferable to loans when they are available. Grants reduce the total price by the amount of the grant; loan programs have varying interest rates and payment terms that differentially increase the total price a family pays according to the terms of the loan. Some of the financial choices are obvious, such as minimizing the amount of loans; others are more subtle, such as selecting savings plans and loan repayment options. Families, though, are making multiple financial decisions that affect the price of attendance.

In general, college aid of all kinds is a “good deal” for students and cost-effective for government, although President Obama had a difficult time making that case during the debate over his economic stimulus package in February 2009. A few years ago, economist Susan Dynarski examined a now-extinct Social Security program that provided financial assistance to the children of deceased parents to measure the overall impact of government’s investment in a child’s college education.²⁹ The termination of the program in 1982 created a natural experiment comparing college students who were eligible for aid while the program existed and those who were eligible but received no benefit after the program ended.

The influx of money to the pre-1982 families increased the college-going rate by 3.8 percent, increased the overall average years of education by one year, and returned two dollars in lifetime earnings for every one dollar that the government spent on the program. This is the kind of return on investment numbers that both Democrat and Republican members of Congress were reviewing favorably in the American Recovery and Reinvestment Act in February, 2009.

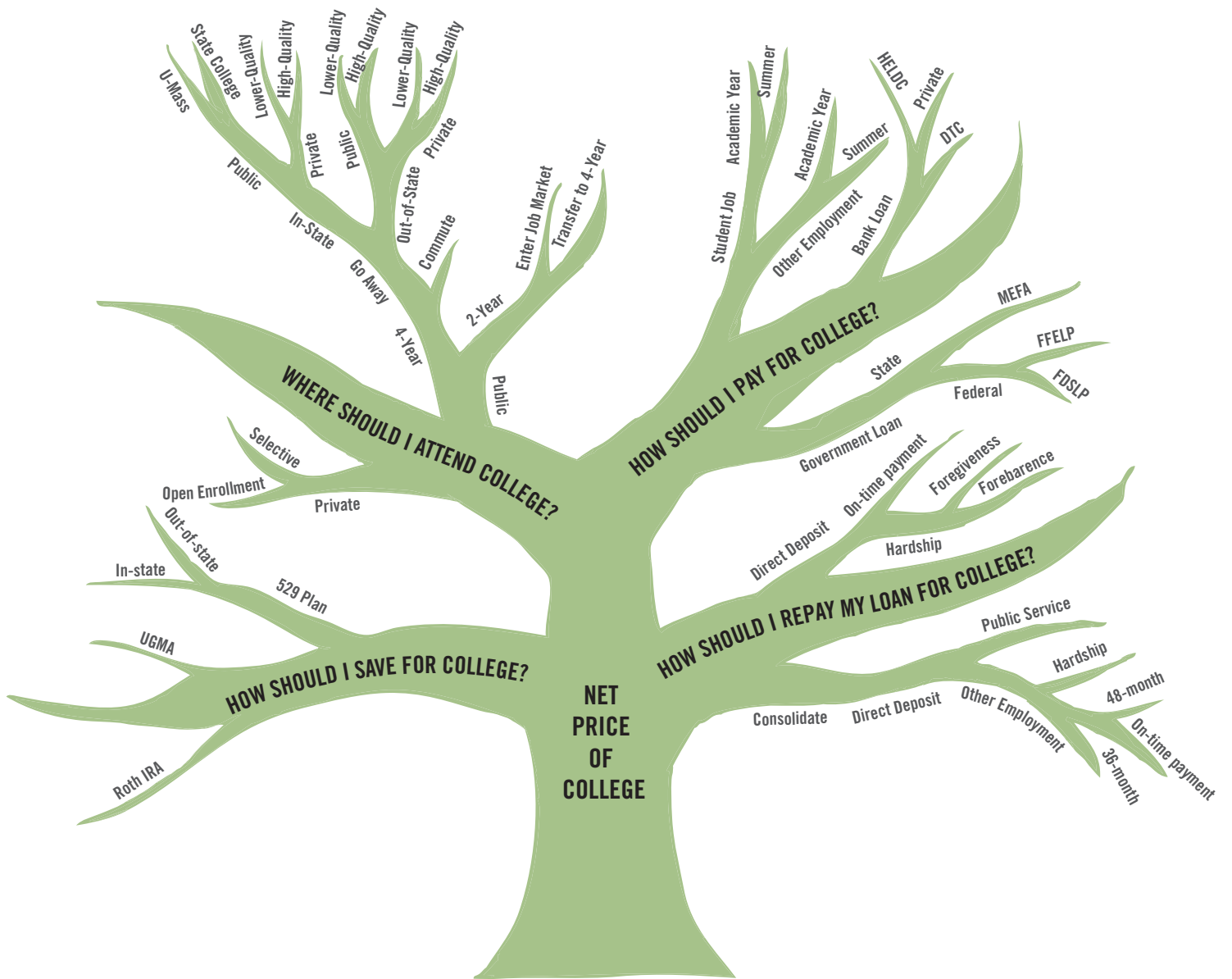
Figure 6 displays several financial decisions that families make – implicitly or explicitly – in paying for their child’s college education. Many families are neither aware nor informed about the kinds of options that policymakers describe. Indeed, many of the decisions require complicated calculations that, in many cases, are

FAMILIES ARE MAKING MULTIPLE FINANCIAL DECISIONS THAT AFFECT THE PRICE OF ATTENDANCE

beyond the available information and the money management capacity of most Americans.

Many family decisions begin before a child enrolls in college. The net price or the trunk of the College-Bound Decision Tree has a branching question for these families: “How should I save for college?” Another branch grows from the tree when the child is applying to college. Most college applicants consider a limited number of options when asking “Where should I attend college?” Because it is the source of government and private spending, the question that receives the most media attention is “How should I pay for college?” The answer to this question includes a myriad of possibilities that include grants, jobs, and loans. Loans grow, both figuratively and literally, into a repayment requirement after college. Thus, another branch of the tree reflects the options about “How should I repay my loans for college?”

Figure 6:
The College-Bound Decision Tree



How should I save for college?

As the tree branch in Figure 6 displays, decisions about paying for college begin before application to college; for some families they begin with the birth of the child. Coverdell Savings Accounts were created in 1997 and 529 plans in 1998; they allow savings to grow tax-free as long as it is used for a college education.³⁰ The way the family spends or saves is an early decision affecting the overall price of a college education. Obviously, not all families have disposable income that allows them to put money into savings, but only one-third of the families with incomes of \$150,000 or more that are saving for college take advantage of the tax benefit that comes with a 529 plan.³¹

So what happens if a family of four with annual income of \$50,000 income puts \$1,000 dollars in savings into one of these plans? First, the \$1,000 of income is taxed with federal income tax, social security, Medicare, and state income tax before it goes into savings.³² Thus, the \$1,000 of income that goes into a 529 plan or any other after-tax savings account is really only \$717.³³

Besides putting no money into savings, a baseline for comparison is the family that deposits its \$717 into a regular savings account, which would be taxed each year. Using the current income tax brackets and some reasonable assumptions about returns on investment, Professor Dynarski calculates the return from this deposit in a regular savings account after taxes at \$1,456, as displayed in Figure 7.

Another alternative is to give the money to the child to put into a savings account. Under the provisions of the Uniform Transfer to Minors Act (UTMA), the parents could hold securities and other investments in their child's name and, in Massachusetts, remain custodian until the child reaches 21 years old. Under UTMA, the first \$900 of income from the account are tax-free and the next \$1,800 are taxed at a rate lower than the parents.' Using this strategy for college

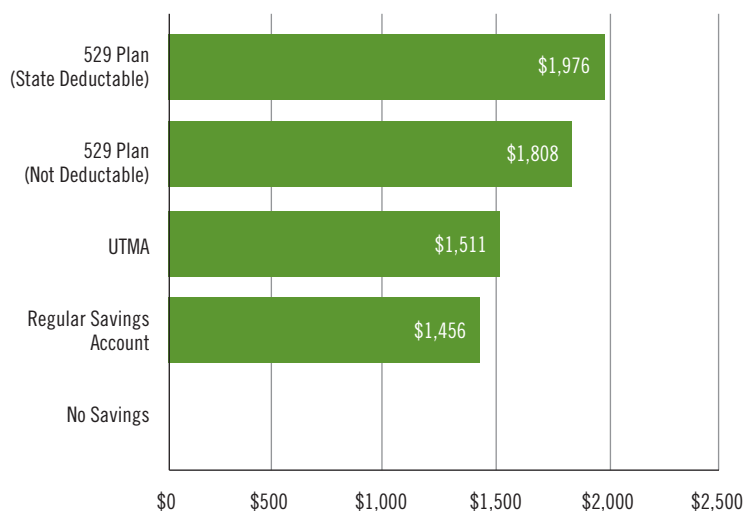
savings produces an after-tax return of \$1,511.

The best deal, however, is 529 and Coverdell plans, which did not exist as a savings vehicle in 1980. As mentioned, these deposits grow federal tax-free, and the money can be withdrawn tax-free as long as it is used for college expenses. Most, but not all, states exempt dividends and distributions from state income taxes, and some provide a tax credit for contributions. Massachusetts law, for example, exempts distributions of the Fidelity-managed U Fund College Investment Plan, which is a pre-paid tuition plan, from state income taxes. The after-tax return of a 529 plan for a Massachusetts resident in this example is \$1,976. An Alabama resident investing in the Massachusetts funds, however, would receive a smaller after-tax return of \$1,808 due to state taxes.³⁴ For reasons that are not discussed in this report, the tax advantage is greatest with increasing levels of family income; for low-income families other savings vehicles might provide greater financial advantages than a 529 plan.³⁵

Each state has one or more 529 plans, although a person need not be a resident to

Figure 7:

After-Tax Return from Decisions about How to Save



Assumes investment of \$1,000 at birth of child with all after-tax earnings reinvested in a portfolio mix of stocks and bonds with funds drawn down over four years of college. See Susan Dynarski, "Who Benefits from the Education Saving Incentives?"

invest. Plans are typically managed by the nation's large brokerage houses. Fidelity Investments, for example, manages the 529 plans in California, Delaware, Massachusetts, and New Hampshire; Vanguard, also one of the largest, manages Hawaii, Iowa, Missouri, New York, North Dakota, Nevada, and Pennsylvania. Investors can participate in the plans either through direct purchase or through a brokerage house that also markets the fund. Both the states and the fund managers charge fees for their service, which affect the return on investment for the consumer. These state fees vary from zero for one of the Texas funds to 0.25 percent in Virginia; Massachusetts UFund has a 0.15 percent fee. The fund manager fees range from zero to 1 percent. The cost to the investor for fees on a \$10,000 investment for 10 years varies in 529 plans from \$0 to \$2,444.³⁶

Like any investment, 529 plans vary in their security, investment strategy, and performance. The oldest funds, which have now been around for 10 years, have annual returns that vary from 3.9 to 6.7 percent. Like the market itself, the funds have performed poorly in the past year

529 PLANS VARY IN THEIR SECURITY, INVESTMENT STRATEGY, AND PERFORMANCE

with losses that range from 4.3 to 20.5 percent. These overall gains and losses from any individual fund, however, vary with decisions open to the investor. For example, most of the funds change the allocation between stocks and bonds with the age of the student. Someone who selects one of these 529 accounts for a college-age student would have at most 20 percent invested in securities during the past year, so most of the investment would not have declined as much as the stock market.³⁷ Alternatively, some of the 529 funds allow "self-directed" investment strategies like the typical 401(k). Obviously, gains and losses for this type of fund would depend upon

the owner's investment strategy. The 118 plans also differ in minimum contributions, access, service, amount of assets, state restrictions, and other factors.³⁸

The treatment of 529 plans in federal financial aid policy is complicated by who owns the account and the different treatment of the asset in federal, state, and institutional policies.³⁹ A 2006 law made a 529 plan in a child's name count as a parental asset in calculating the amount of federal financial aid received. Shifting this asset from child to parent lowers the financial aid "tax" on 529 savings. For example, \$10,000 in a 529 plan would reduce financial aid by \$2,000; \$10,000 in the parent's name would reduce financial aid by only \$564. Of course, these reductions could be in the form of either loans or grants; the impact on net price still depends on the institution.

In sum, the first decision that parents make about paying for college is to save or not to save. Financial circumstances obviously affect the ability of the family to put disposable income or to transfer savings to an UTMA, Coverdell, or 529 plan. But doing so can reduce the price that the family pays through federal and state tax avoidance beginning when a child is born until the final year of college. In theory, a family that placed \$55,000 in a 529 plan today for their newborn child could reduce the published price of a private college education by roughly one-half, and pay the full in-state price for UMass-Amherst, if the money were in either of the Massachusetts U Funds.⁴⁰ Deciding to save for college as well as where to apply to college is, therefore, an important financial decision. Unfortunately, savings affects choice and is often overlooked without knowledge of the necessity to decide.

Where should I apply to College?

A *Boston Globe* headline reflects the decision that many Massachusetts residents have made for the 2009-10 academic year: "Applications Soar at Public Colleges: Local Campuses Offer

Lower Prices.” In the current economic downturn, students are deciding between public and private four-year schools with their eye on the published price. Tuition, fees, room, and board at UMass-Amherst are \$24,805 in 2009-10, but less at UMass Lowell (\$21,602). This compares with the published price at private colleges in Massachusetts, such as Amherst (\$49,678), Bentley (\$48,618), Brandeis (\$50,739), Emerson (\$42,998), Harvard (\$49,684), MIT (\$50,292), and Smith (\$51,180).

Students seem to be making another price-sensitive decision about where to apply to college by staying closer to home. While applications were up at UMass-Amherst, colleges that attract students regionally reported increases at even higher levels. Westfield State saw a 40 percent increase in applicants over the previous year; Massachusetts College of Liberal Arts in North Adams was up 60 percent. Applications rose 75 percent at the Massachusetts College of Art and Design, in part due to a new program allowing New York residents to pay in-state tuition, a different form of staying close to home.

This phenomenon in 2009 was not limited to the east. In California, students flooded two-year colleges with lower tuition than the California State system and the University of California system. San Diego Community College was so crowded for the 2009 spring term that more than 5,000 students were unable to enroll in required courses.⁴¹

This “crowding out” results from course cancellations, local budget cuts, and loss of funding in states hit hard by the downturn in the economy. California’s expenditures for fiscal year 2009 have not kept pace with inflation, and the squeeze is so severe that the state’s flagship institution at Berkeley has cut enrollment by 6 percent.⁴² The University of Wisconsin at Madison announced that enrollment in required courses like organic chemistry, biology, and economics also exceeded available spaces. Massachusetts,

too, faced budget cuts and is one of fourteen states that is projected to spend less in 2009 for higher education than it did the previous year.⁴³

These anecdotes suggest that families are actively making choices about where to send their children to college with demand exceeding capacity. The mix of institutions suggests that the choices are complex – more complex than a comparison of the published price, which is often the first information that families consider. The difference between published price and net price has already been mentioned, but schools also differ in quality of instruction, size, funding source, and available degrees, to mention only a few characteristics that affect a decision about what school to attend. These factors are as important today, if not more so, than they were in 1980.

An Expected Net Price Model for Comparison

In order to sort through all these decisions, families need to know how much they should expect to pay for an education at various institutions. Unfortunately, the figures currently available do not give families a good understanding of price to begin comparing schools. In order to make these choices, families need a better model of expected net price.

How much a family has to pay starts with the published price of attendance, which includes tuition, required fees, and room and board for residential colleges.⁴⁴ Reduction in the published price from financial aid, typically even more difficult to find on the college website, is measured against the total price of attendance. Reduction comes from government, institutional, or private grants and scholarships to produce the net price, which is the amount that a student with a grant or scholarship actually pays to the institution.

While jobs and loans are monies from current and future assets that can help pay the bills for college, they do not reduce the price of atten-

dance for the family. Grants and scholarships are the only component that reduces the published price. When a reduction is based on a family's financial circumstances, this report refers to it as a grant; reductions based on other factors are referenced as a scholarship. This nomenclature is not universal among college administrators or funding programs, but it is useful in differentiating what financial aid officers call need-based aid and merit aid. A grant is need-based aid; a scholarship is merit aid.⁴⁵

Thus, the net price of an institution depends on whether the student receives a grant, a scholarship, neither, or both. For those receiving both a grant and a scholarship, the concepts are somewhat blurred and often confusing to families. For example, a student may receive grant aid based upon the family's financial circumstances, but the financial aid office may still refer to a portion of the money as a "scholarship" to make the applicant feel that the college rewarded academic, extracurricular, or some other praiseworthy characteristic. Insiders generally refer to this reduction in the price of attendance as "merit within need" to indicate that the aid is based upon financial circumstance.

Analyzing scholarships that are merit within need creates a big headache for researchers and for families. In the first place, colleges and universities use different formulas to determine need. A family may learn that its financial circumstances will result in a financial aid package worth one amount at one college and a different amount at another college. But secondly, the financial aid package at the two schools may also have different percentages of "gift aid," resulting in a higher percentage of loans and work-study in one package than the other. Thus, separating the monies attributed to grants and scholarships, when both amounts are within the institutionally determined formula and award policy, is difficult.

The solution to this conceptual problem is to refer to both grants and scholarships that are

within some agreed upon determination of aid from financial circumstances as "grants." Thus, "scholarships" are only those reductions in the price of attendance that are not due to the family's financial circumstances.

Stated more formally, the net price of college for a family is:⁴⁶

$$\text{Net Price}_{\text{Grants}} = \text{POA} - \text{Grants}$$

or

$$\text{Net Price}_{\text{Scholarships}} = \text{POA} - \text{Scholarships}$$

where, $\text{Net Price}_{\text{Grants}}$ is the net price of a person receiving a grant.

POA is the published price of attendance. Grants are reductions due to a family's financial circumstances.

$\text{Net Price}_{\text{Scholarships}}$ is the net price of a person receiving a scholarship.

Scholarships are reductions due only to non-financial circumstances.

The price of attendance is generally known to applicants. Applicants also know whether or not they will apply for grants and scholarships. However, since grants and scholarships from all sources are not determined until applicants contact a school, they do not know whether they will eventually pay the published price or the net price, which means they cannot adequately compare colleges and make informed decisions about where to apply.

Not surprisingly, colleges and universities would like to have applicants focusing on attending the school rather than the net price. Schools tend to describe the quality of the education at their institution in recruitment programs, web sites, and publications. Much less focus is placed on financial aid policies. An Internet search of most schools confirms that the published price is often buried deep in the institution's website. Some professionals suggest a "three click rule," but few schools follow that advice.

Recognizing that the lack of information about pricing can dissuade students from applying, several of the wealthiest colleges and universities initiated programs to simplify their message. One strategy is to advertise net price according to income levels. In 2004, Harvard announced that it would replace all loans with grants for families with income below \$40,000; it subsequently raised the income level, and also promised that the net price would be no more than 10 percent of family income up to \$180,000. Amherst College has a similar program for families with income up to \$200,000. Not surprisingly, most schools have fewer financial resources and are therefore reluctant to make financial aid commitments without the more formal “needs analysis” of the family’s full financial resources. Nevertheless, describing net price according to income levels is a consumer-friendly message.

The second solution is to provide financial aid estimators that are easy to use and do not commit an institution to the calculation. Yale, Princeton, and Williams currently have estimators on their websites that run on institutionally-based formulas. However, the required information is complex for many families and beyond the capacity of most high school seniors. The Williams College calculator, for example, has 11 screens with 44 questions, and worksheets that have as many as 28 questions. It requests information about medical and dental expenditures, tuition of siblings, IRS exemptions, and IRS deductions with worksheets about mortgage payments and deductions for IRA, SEP, and Keogh contributions. This information is necessary for an institutional financial aid calculation, and it achieves a level of transparency to demystify which assets are important. It does not, however, provide easy access to the net price a family might pay for a child to attend Williams.

Conceptually, the best uniform information across schools for any “typical” applicant is

an estimate of the average net price for all students who attend the institution.⁴⁷ This amount is calculated by weighting the net price that three groups of students pay: (1) students who receive a grant;⁴⁸ (2) students who receive a scholarship; and (3) students who receive no grant or scholarship.⁴⁹ Stated more formally,

$$\text{Expected Net Price} = (P_g)(\text{Net Price}_{\text{Grants}}) + (P_s)(\text{Net Price}_{\text{Scholarships}}) + (P_n)(\text{POA})$$

where, P_g is the proportion of all undergraduates that received a grant.

$\text{Net Price}_{\text{Grants}}$ is the average net price of a person receiving a grant.

P_s is the proportion of all undergraduates that received a scholarship, but not a grant.

$\text{Net Price}_{\text{Scholarships}}$ is the average net price of a person receiving a scholarship.

P_n is the proportion of all undergraduates receiving neither a grant nor a scholarship.

POA is the published price of attendance.

Making price comparisons for several Massachusetts colleges and universities

The price comparison for a resident of Massachusetts requires data about each of the components in the expected net price model. Table 2 displays this information for several private colleges and universities and four-year public colleges and universities in Massachusetts. The list of private schools was selected from a list of the “Best Values in Private Colleges” that *Kiplinger’s Personal Finance* magazine published in its December 2009 issue. The public school data reflect comparable information about all four-year institutions in Massachusetts from *Peterson’s Guide to Colleges and Universities*, the data source for the *Kiplinger* article.⁵⁰ Graduation rates and scholarship data came from the US Department of Edu-

cation, National Center for Education Statistics “College Navigator” website.⁵¹

The most obvious observation from the table is the well-known difference between the price

of attendance for private and public institutions. The average POA at this set of private institutions is over three times the POA of the state institutions. This difference is generally the focus of

Table 2:
Calculation of Expected Net Price for Selected Massachusetts Colleges and Universities

	PERCENT OF GRANT-AIDED STUDENTS	AVERAGE NET PRICE FOR GRANT-AIDED STUDENTS	PERCENT OF SCHOLARSHIP-AIDED STUDENTS	AVERAGE NET PRICE FOR SCHOLARSHIP-AIDED STUDENTS	PERCENT OF NON-AIDED STUDENTS	PRICE OF ATTENDANCE	EXPECTED NET PRICE
PRIVATE SCHOOLS							
Amherst	51%	\$13,907	0%	\$49,678	49%	\$49,678	\$31,435
Bentley	46%	\$28,885	18%	\$33,080	36%	\$48,618	\$36,744
Boston College	38%	\$26,761	3%	\$34,412	59%	\$52,308	\$42,063
Boston University	43%	\$30,246	13%	\$33,015	44%	\$51,228	\$39,838
Brandeis	25%	\$26,712	38%	\$28,291	37%	\$50,739	\$36,202
Clark	23%	\$20,938	54%	\$28,398	23%	\$42,870	\$30,011
Emerson	41%	\$28,730	6%	\$30,511	53%	\$42,998	\$36,399
Harvard	60%	\$12,834	0%	\$49,684	40%	\$49,684	\$27,574
Holy Cross	38%	\$24,418	8%	\$27,442	54%	\$50,042	\$38,497
MIT	62%	\$20,234	0%	\$50,292	38%	\$50,292	\$31,656
Smith	45%	\$21,777	17%	\$45,960	38%	\$51,180	\$37,061
Tufts	39%	\$24,299	2%	\$51,389	59%	\$51,889	\$41,119
Wellesley	57%	\$18,219	0%	\$50,594	43%	\$50,594	\$32,140
Williams	51%	\$14,305	0%	\$50,680	49%	\$50,680	\$32,129
Average Private	44%	\$22,305	11%	\$40,245	44%	\$49,486	\$35,205
PUBLIC SCHOOLS							
Bridgewater	63%	\$9,860	1%	\$8,322	36%	\$13,089	\$11,009
Fitchburg	50%	\$10,585	2%	\$13,194	48%	\$14,532	\$12,528
Framingham	62%	\$10,165	3%	\$11,607	35%	\$13,650	\$11,425
Salem	60%	\$8,198	0%	\$11,271	40%	\$12,498	\$9,932
UMass-Amherst	62%	\$12,196	5%	\$17,299	33%	\$20,378	\$15,166
UMass-Boston*	56%	\$11,636	2%	\$14,466	42%	\$17,959	\$14,340
UMass-Dartmouth	59%	\$12,835	5%	\$16,667	36%	\$19,308	\$15,361
UMass-Lowell	75%	\$11,479	7%	\$13,774	18%	\$16,700	\$12,570
Westfield	49%	\$10,271	1%	\$10,867	50%	\$14,744	\$12,514
Worcester	67%	\$7,988	0%	\$12,240	33%	\$12,240	\$9,391
Average Public	60%	\$10,521	3%	\$12,971	37%	\$15,510	\$12,424

*For comparability, room and board calculated as average of all public institutions.
Source: Author’s analysis of data from Peterson’s Guide of Colleges & Universities and US Dept. of Education

media attention each year in October, when the College Board announces the change in tuition, fees, room, and board from the previous year. It is probably also the best-known difference between the prices of private and public schools. That difference is, however, smaller after consideration of financial aid. On average, private institutions are still far more expensive, but the expected net price for private schools is somewhat less than three times public schools. Recalling that these differences are averages, the reduction for various income bands is a different story; unfortunately, the relevant data across income bands are not currently available for families that are considering the price of college.

A related observation from this table is the large variations in the published price of attendance and the expected net price for both private and public schools. This information is particularly important for families that would like to compare prices. Harvard's expected net price approaches half of the published price of attendance. Amherst, MIT, Clark, Wellesley, and Williams are all roughly one-third less expensive for the average student than their published price suggests. All of these schools have something in common: relatively large endowments per student to fund their financial aid programs.

On the other hand, the price reduction from price of attendance to expected net price is surprisingly large for several public institutions. Worcester State College, the UMass-Amherst and UMass-Lowell have "discount rates" that are similar to several private colleges and universities. The net price is roughly one-fourth less than the price of attendance at these public schools and roughly equivalent in reduction to Bentley, Brandeis, Holy Cross, and Smith. Indeed, these publics actually reduce their published price at a higher percentage than some private colleges and universities.

Table 2 also displays the differences in financial aid strategies for various schools. Pub-

lic institutions have a much higher percentage of students receiving grant money than private institutions. The primary reason is the availability of government grants. In general, public institutions have roughly twice the percentage of aid recipients receiving Pell Grants as aid recipients at Massachusetts private institutions. Additionally, the 110,000 grants (and tuition waivers) awarded by the state primarily go to students at public institutions. Thus, a higher percentage of total students at public institutions are receiving grants than students at private institutions.

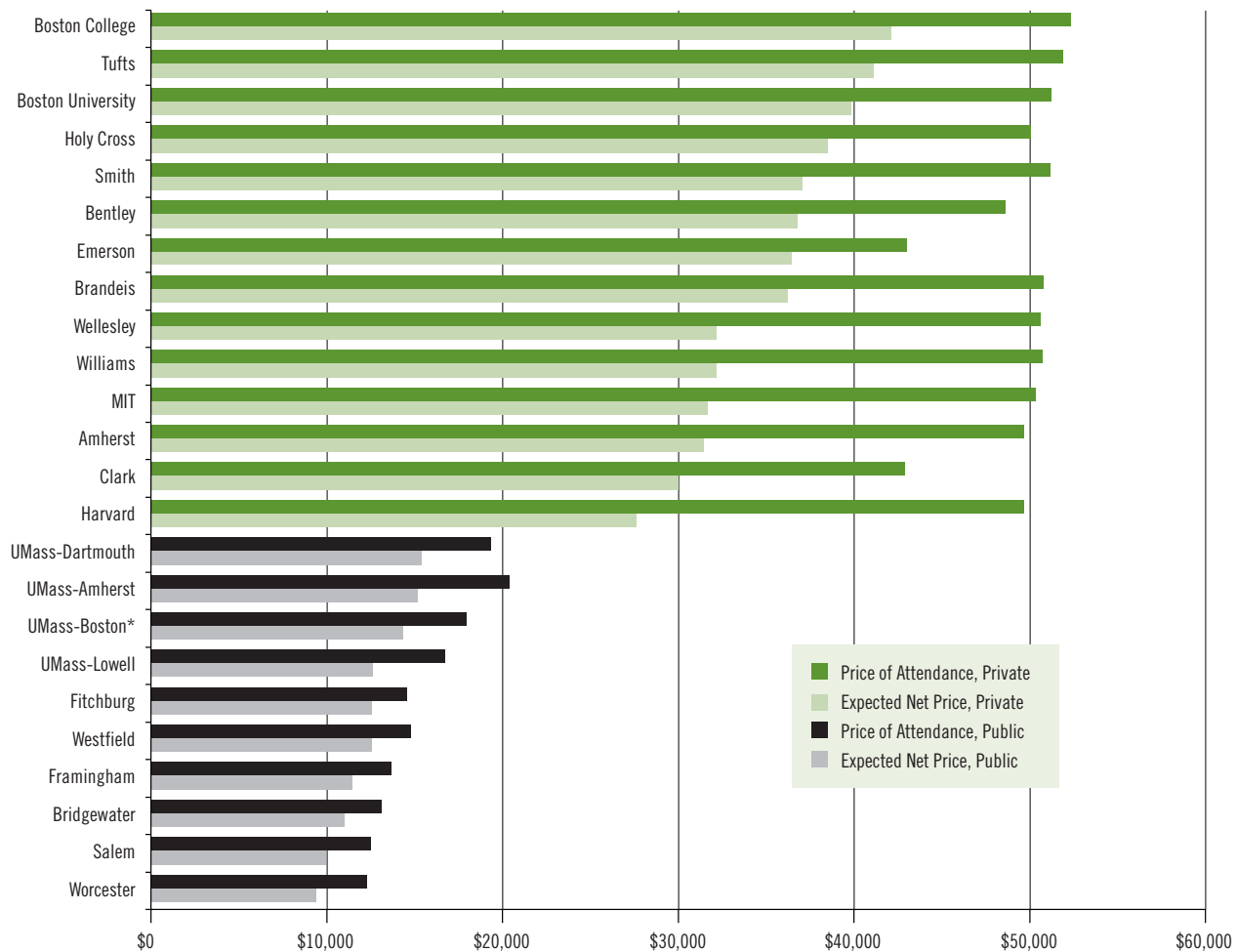
Scholarships display the reverse pattern. Massachusetts awards only 10,000 scholarships, almost entirely through the John and Abigail Adams program, which rewards high scores on the state MCAS exam. On the other hand, several private institutions use their own scholarship monies to attract students who might otherwise go to a different school. More than half of the students at Clark, for example, receive some form of tuition reduction for non-financial reasons. Brandeis has more than a third; Bentley and Smith have about one-in-six students on scholarship. Economists warn that growth in this competitive use of scholarship monies between institutions can eventually bankrupt funding for grant monies.⁵²

Note that some schools offer no scholarships; financial aid at these institutions is based only on the family's financial circumstances. Amherst, Harvard, MIT, Wellesley, and Williams take this approach. They all practice so-called "need-blind" admissions, meaning that the school has a policy of not considering whether an applicant is applying for financial aid when making a decision to admit or deny. According to their policies, students are admitted based upon academic or other credentials and the institution will work with the family to ensure the availability of financial resources to pay for college.

The system of "need-blind admissions" used at all Ivy League schools, and many of the

Figure 8:

Published Price of Attendance and Expected Net Price for Selected Massachusetts Colleges and Universities



Source: Author's analysis of data from Peterson's Guide to Colleges and Universities

most selective colleges, encourages applicants to separate the decision about where to apply and the price of attendance. While they promise to help all admitted students pay for college and they do so with quite generous financial aid packages, they generally do not advertise a net price for applicants. This leaves applicants making their best guess through available information. One suspects that many potential applicants never explore the grants that are available since information about their specific financial circumstances is not easy to find or they are not provided with easy calculations. The problem is

exacerbated by early admission programs with a deadline that forces many applicants to decide on a college within a few weeks of becoming a high school senior and without adequate time for comparison shopping.

Figure 8 shows the price of attendance and the expected net price. The green and gray bars visually display the difference between the average prices at private and public institutions. The lighter shade bars show expected net price, or how much colleges discount their price to the average student through grants and scholarships. The graph displays wide variation in price

ing and financial aid policies. Emerson College, for example, publishes one of the lowest prices of attendance among the private schools in this analysis at \$42,998. It is roughly in the middle of private schools with an expected net price of \$36,399, largely because it needs smaller grants to pay the lower tuition and fees. Boston College, Tufts, and Boston University have the highest expected net price even though their average grants are among the most generous among these schools, because they start with a higher price of attendance.

Because the expected net price includes the average amount of grants and scholarships that an institution provides for students, it is a better indicator of the amount a typical student will pay than the published price of attendance.

There are a great number of differences among private institutions in the price of attendance, but there are even larger variations in expected net price. One reason is that many of the wealthiest private colleges and universities offer very large grants to low-income students. They also offer grants to wealthier students, who would not be eligible for financial aid at most other schools. This practice blurs the economic impact of grants and scholarships. For a less wealthy school to attract applicants that might receive grants based on their family income of, say, \$180,000 to \$200,000 – the policy at Amherst or Harvard – they must make exceptions from a policy of offering money only for financial circumstances. Thus, they compete for highly qualified academic students with scholarships that reduce the net price to an equivalent amount for the family.

Conversely, the wealthiest schools themselves sometimes make adjustments to their financial aid packages based upon non-financial criteria. The practice is called “preferential packaging.” They substitute grants for loans to highly desirable students, which can result in students from the same financial circumstances paying

different net prices. Savvy families that understand this policy can often get one school to match the grant from a similar school. This can lead to both schools escalating the size of their grants the following year, resulting in rising college costs for essentially the same type of student. Colleges fight this process by raising the price of attendance in a never-ending spiral of increases that outpaces inflation on an annual basis.

In an empirical analysis of the net price, SAT scores, and family income at public and private colleges and universities in the 1990s, economists Michael McPherson and Morton Schapiro describe the trend in grants and scholarships as follows:

...the principle of awarding financial aid strictly in relation to ability to pay is becoming an increasingly less important factor in the distribution of aid in America's private colleges and universities. For the best endowed and most selective private colleges and universities, need-blind admissions, full-need funding of admitted students, and minimal use of merit aid remain important and valuable principles. For most other private institutions, such policies are simply unaffordable and the competitive pressures that lead to discounting for affluent students are extremely difficult to resist.⁵³

Since the publication of their findings, competitive pressures on even the wealthiest institutions have led to discounting for affluent students, albeit less than the discounting for low-income students. The McPherson and Schapiro analysis also describes financial aid at public colleges and universities. These data suggest that “institutionally awarded grants have become more sensitive to SAT scores across all income groups.”⁵⁴ One reason is that state programs and public institutions themselves are shifting money away from financial circumstances as a criterion for grants toward institutional preferences for certain types of students.⁵⁵ In short, at both public and private colleges and universities grants are looking more

like scholarships and vice versa.

For these reasons, the expected net price calculations in this report combine net price for grant recipients, net price for scholarship recipients, and the net price for those receiving neither (which is equivalent to the price of attendance). The discount in tuition, fees, room, and board – for whatever priorities the institution has in attracting students – is simply a reduction in the price of attendance for aided students.

Three decades ago, virtually all grants were directed toward students from low-income families, with the National Merit Scholarship Program as a highly visible exception. Even the G.I. Bill provided aid for returning veterans who, themselves, were less likely to be financially established than other college students. From the perspective of a family trying to determine the price of attendance, the options were much simpler. Middle class and more affluent families had no expectation of financial aid, unless they had a child with rare academic skills; financial

THREE DECADES AGO, VIRTUALLY ALL GRANTS WERE DIRECTED TOWARD STUDENTS FROM LOW-INCOME FAMILIES

circumstances excluded all but low-income families from receiving a grant. For most families the expected net price was the same as the price of attendance.

Today, with the blurring of grants and scholarships, the most important factor in determining expected net price is the income of the family, which varies in gradations from zero dollars to more than \$50,000 per year. What families need to know in deciding where to apply to college is the dollar differences in tuition, fees, room, and board for each income gradation so they can match their own financial circumstances to a net price they can afford to pay. The Higher Education Opportunity Act of 2008 begins to address this issue and is discussed at the end of this report.

Deciding where to apply based on expected net price and quality of the educational experience

So why would anyone apply to a college or university that has a higher expected net price than another institution? The answer is that families place a value on different characteristics of a college or university. More expensive institutions typically have more instructors per student, for example, than institutions that cannot afford a large faculty. Since access to faculty is presumed to enhance learning, a high faculty-to-student ratio affects the educational experience.⁵⁶

Research shows that the educational background of students at a school may also affect the academic performance of students. In a groundbreaking study at Williams College, three economists looked at the grades of roommates with different admission test scores.⁵⁷ Using several data sets, their work showed that students at the top of the SAT test range showed little difference in their grade point average when they roomed with a student with lower scores. However, students with middle-range SAT scores were adversely affected when they roomed with a student from the bottom of the SAT test range.

The importance of having good students interact with each other, what economists call “peer effects,” has long been a basic tenet of higher education. In 1909, then president of Princeton Woodrow Wilson described the dynamics of intellectual life for students in his often quoted Phi Beta Kappa address:

The real intellectual life of a body of undergraduates, if there be any, manifests itself, not in the classroom, but in what they do and talk of and set before themselves as their favorite objects between classes and lectures. You will see the true life of a college...where youths get together and let themselves go upon their favorite themes – in the effect their studies have upon them when no compulsion of any kind is on them, and they are not thinking to be called to a reckoning of what

they know.⁵⁸

The empirical research on Wilson’s proclamation is limited, but scholars have observed and explained peer effects not only at Williams, but also among fraternity members at Dartmouth College, and disadvantaged students at Berea College.⁵⁹ While most of this published work focuses on college grades, research at Italian universities demonstrates the importance of peers on both academic performance and first-year salaries after graduation.⁶⁰

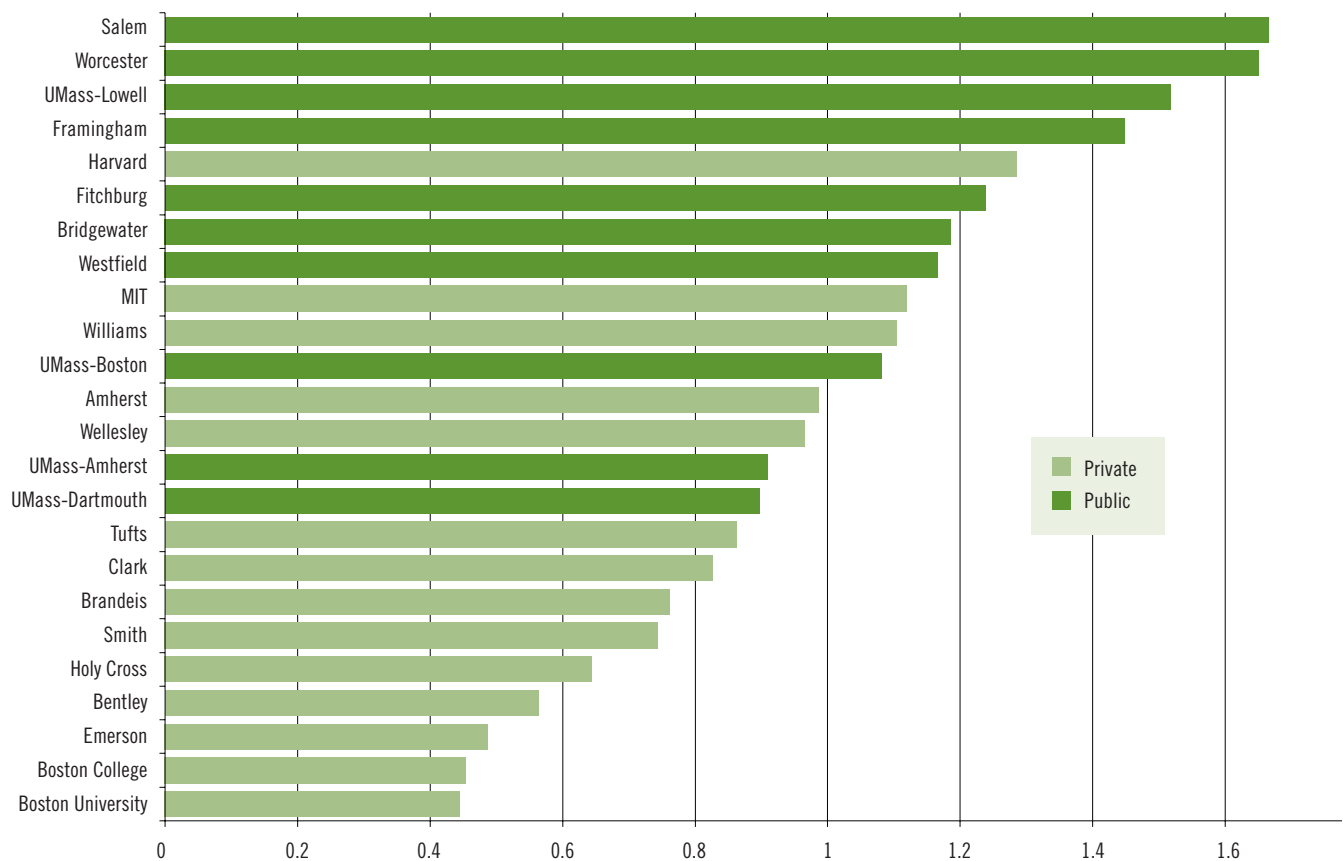
For virtually all students (and certainly their parents who also care about salaries), obtaining a college degree is the objective of attending. That some schools offer a greater chance to meet that goal is also a function of the institution. Because indicators of learning are so few, the graduation

rate of an institution is sometimes used synonymously with quality, a so-called outcome measure of success. The federal government monitors graduation rates and, although it has not yet done so, has proposed tying institutional eligibility for receiving funding for federal aid to minimum graduation rates. The NCAA also monitors graduation rates with a goal that college athletes graduate in percentages that approximate the institution’s graduation rate – although the enforcement of this provision is so lax that it is ineffective in monitoring the academic performance of athletes.⁶¹ Nevertheless, graduation rates, along with faculty-student ratios and the academic prowess of peers, are all indicators that families use to estimate an institution’s value.

To model the decision of college applicants,

Figure 9a:

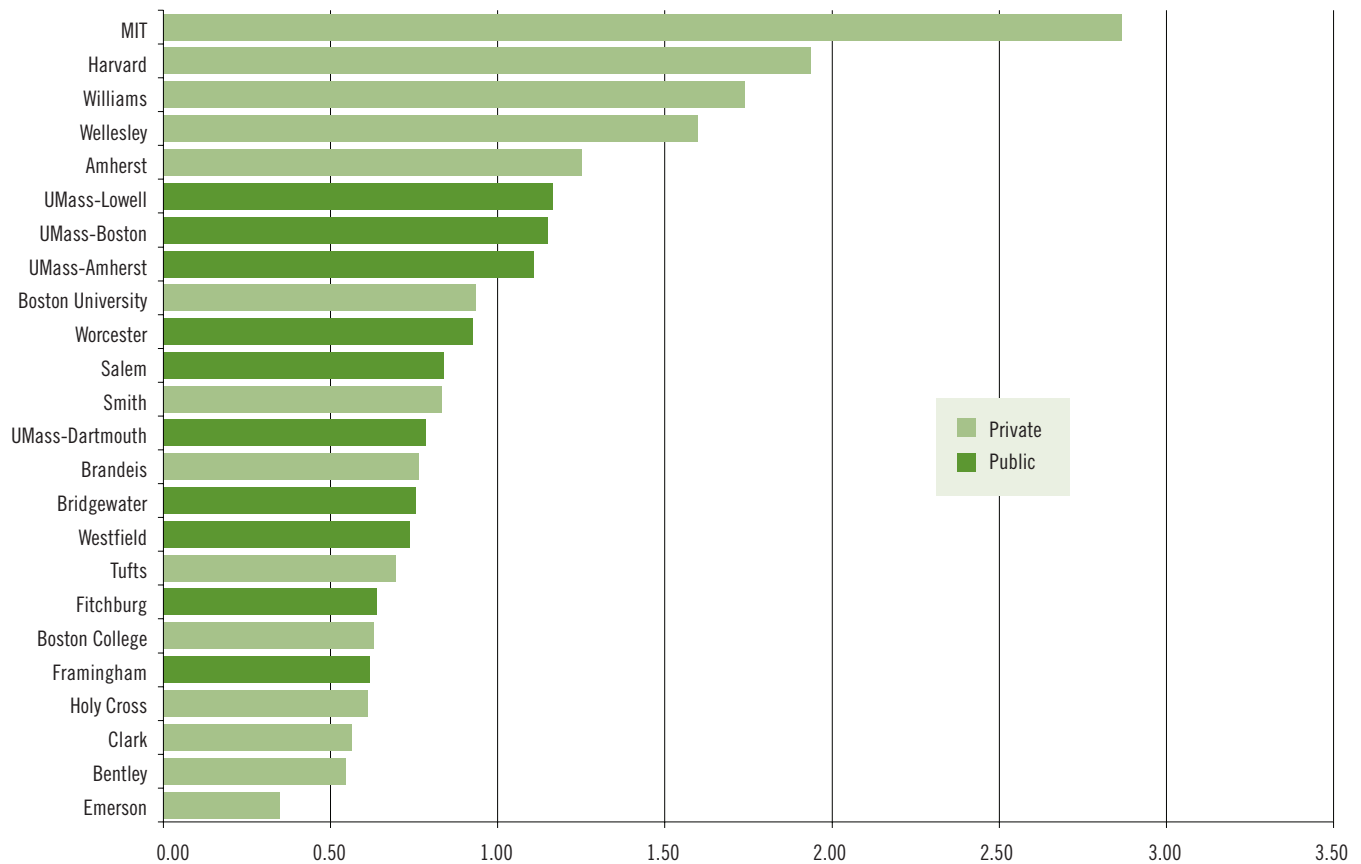
Index of Faculty-Student Ratio per Dollar of Expected Net Price



Source: Author’s analysis of data from Peterson’s Guide to Colleges and Universities

Figure 9b:

Index of Instructional Expenditures per Dollar of Expected Net Price



Source: Author's analysis of data from US Dept. of Education

we devised four indicators from publicly available sources that measure the quality of an education that a prospective student might receive from the expected net price of the school. Figures 9a-d presents these commonly used measures of quality as a ratio of expected net price. This critical information is rarely available for students and families comparing colleges and universities.

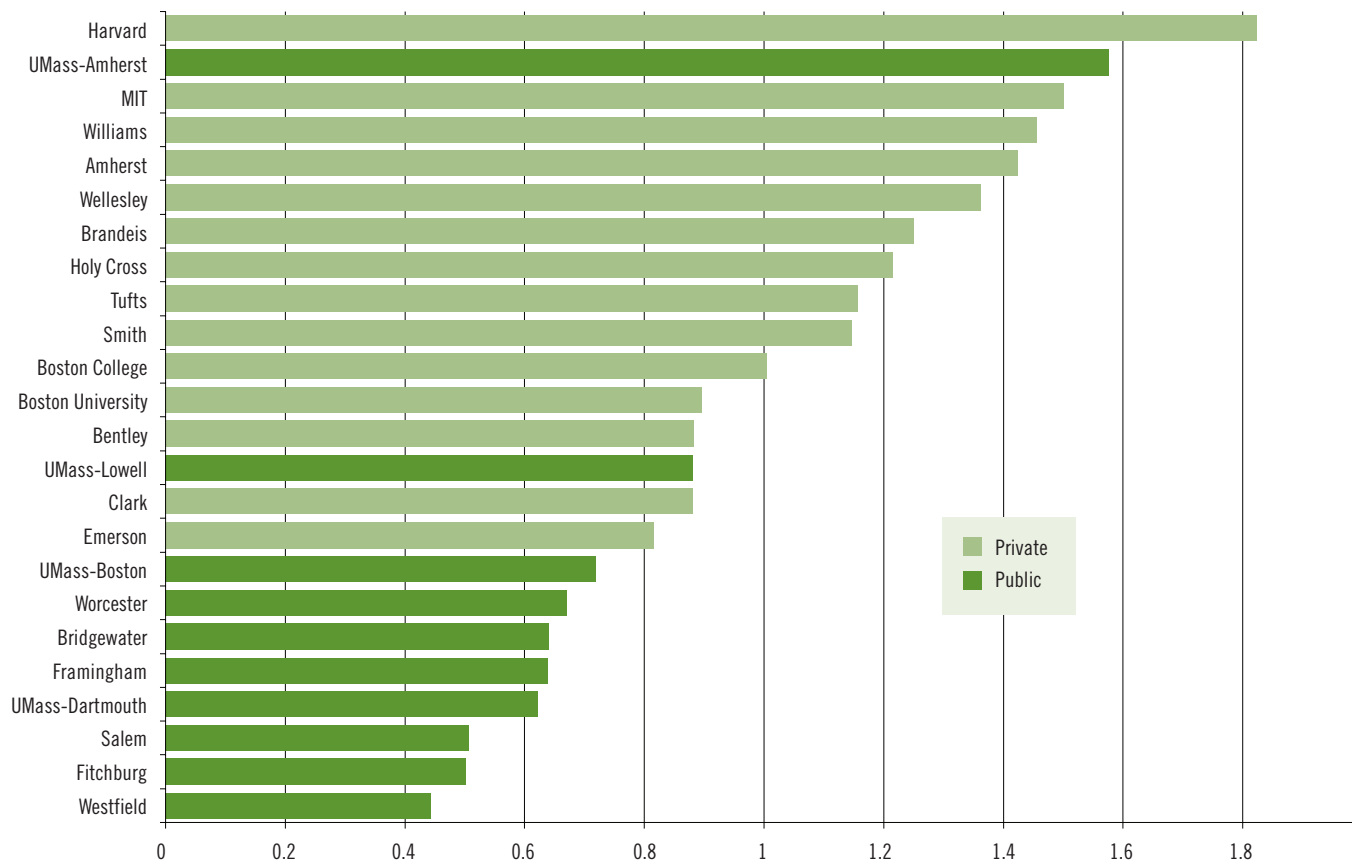
To follow the methodology in these graphs, consider a school with a student-faculty ratio of one faculty member for each 10 students that costs \$10,000, and a school with one faculty member for each 100 students that costs only \$1,000. These schools would have an equivalent student-faculty ratio per dollar of expected

net price. Because these ratios are difficult to interpret as standard units, in the charts they are indexed to the average across the 24 schools.

This analysis tells a different story than the more traditional version of a school's expected net price shown earlier. On the one hand, Harvard and other private colleges and universities with relatively high expected net price provide quality through access to faculty – a well-known feature of the schools. On the other hand, several public colleges rank higher than many of the more selective privates in access to faculty per dollar spent. Salem, Worcester, UMass-Lowell, and Framingham are all higher than Harvard, and there are several other public institutions that are higher than MIT. What the data suggest

Figure 9c:

Index of SAT Scores above 600 per Dollar of Expected Net Price



Source: Author's analysis of data from the College Board

is that a student with limited resources calculating access to faculty commensurate with the price may find a bargain that is not restricted to highly selective colleges and universities.

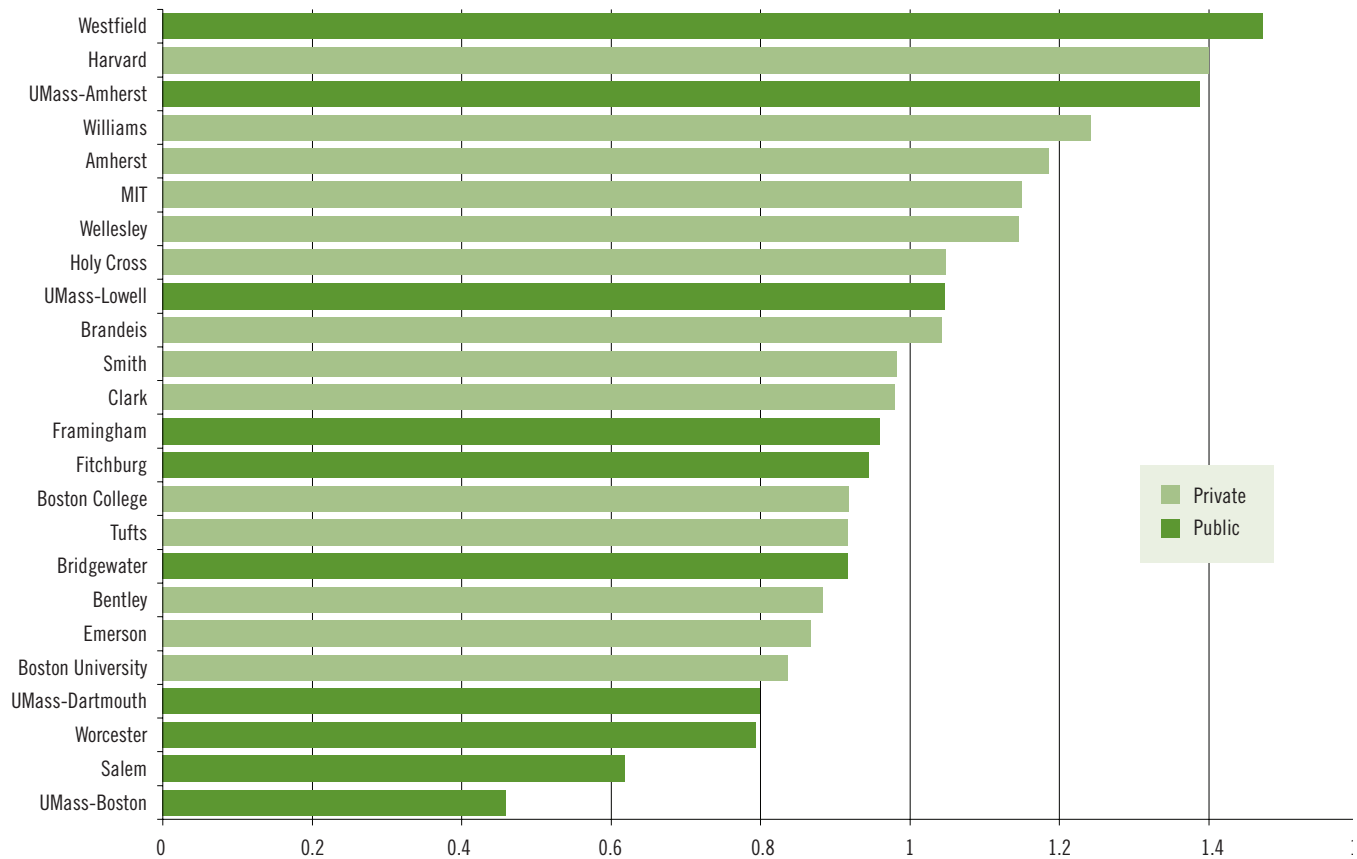
This does not speak to the visibility of the faculty, the professional commitment, or the level of research involvement of the various faculty from the different schools. The apocryphal story repeated at research universities is that the faculty members at less selective institutions teach courses effectively, but they use materials that were written by faculty at research universities. One might attempt to capture these differences from salary, publications, awards, and prizes of the different faculty. Figure 9a, however, displays only the probability of access to any individual

faculty per dollar of net tuition, fees, room, and board after grant or scholarship aid.

Figure 9b comes closer to describing faculty quality at an institution. Instructional expenditures, which are reported annually to the US Department of Education, are largely faculty salaries. While salaries alone do not reflect the quality of faculty instruction, they are a rough indicator of the standing of faculty in the market. Schools that spend more money on their faculty are likely to have more faculty with the attributes mentioned earlier: visibility, professional commitment, and research involvement. When normalized by enrollment, instructional expenditures are an indication of the institutional commitment to quality teachers, if not quality teaching.

Figure 9d:

Index of Graduation Rate per Dollar of Expected Net Price



Source: Author's analysis of data from the US Dept. of Education

Not surprisingly, the wealthiest institutions are the schools that can afford the higher salaries and spend the most on instructional expenditures. Even at the high expected net price of places like Amherst, Harvard, MIT, Wellesley, and Williams, students get more instructional dollars per payment of tuition, fees, room, and board than other public and private institutions. But all private institutions are not higher than all public institutions on this ratio as suggested by published price alone. The branches of the University of Massachusetts, for example, are generally higher than more expensive private institutions, and several private colleges and universities are near the bottom in instructional expenditures per expected net price.

Differences among institutions for expected net price are closer to conventional wisdom when attempting to evaluate peer effects. The most highly selective colleges and universities in Massachusetts – in the nation for that matter – attract a disproportionate number of students with excellent academic credentials. Obtaining a 600 on the SAT-Verbal or the SAT-Math places a student roughly in the top 13 percent of all test-takers in the nation. Virtually all students that attend Harvard fall into that category. At Fitchburg, Salem, UMass-Dartmouth, and Westfield the number is more like 8 to 13 percent, depending on which test. Even though Harvard is far more expensive than these state schools, it is not eight or nine times as high as the percentage of

600-plus SAT takers, as Figures 9c indicates.

But the price of a four-year graduation rate at private and public colleges produces a very different picture. The four-year graduation rate is a good measure of a school fulfilling its “promise” of a four-year degree. Harvard’s, William’s, Amherst’s, MIT’s, or Wellesley’s “virtual certainty” for graduation is well established in higher education. Seven out of eight students, or more, graduate in four years at all of these Massachusetts private schools, but students pay a high price for this assurance.⁶² Westfield State has a lower four-year graduation rate than any of these private schools, but a much higher graduation rate for the expected net price students pay. And given the relatively similar profile of incoming students to several other Massachusetts public colleges, the success of students obtaining their attempted degree is phenomenal. Indeed, per dollar of expected net price, Westfield State has a better ratio than all other private colleges and universities in Massachusetts; UMass-Amherst closely follows Harvard, and has a better ratio than all other private and public schools in this analysis. Interestingly, some of the other University of Massachusetts campuses are at the bottom in graduation rates per expected net price.

Additional Issues besides Quality Indicators in Deciding Where to Apply

Colleges and universities have different policies about admissions and access. Some schools, mostly two-year and continuing education programs, are open to all applicants regardless of their academic background. This “open enrollment” system can be highly effective at providing upward mobility for students from low-income families. Nearly 2,000 disadvantaged women who attended the City University of New York through open enrollment in the early 1970s eventually completed their degree and significantly increased their incomes. Furthermore, the

children of these women enhanced their educational attainment as well.⁶³

On the other hand, people often think of college access according to selectivity that is typically measured by the admission rate and or yield.⁶⁴ Indeed, the news articles appearing in large city newspapers and national news magazines typically focus on the most selective colleges and universities. Sales of the magazine *US News* historically spike with its September issue ranking “America’s Best Colleges.”

One reason for the interest in highly selective colleges and universities is their association with the quality indicators in higher education

THE FEWER APPLICANTS A SCHOOL ADMITS, THE BETTER IT IS THOUGHT TO BE

described in this section. Private highly selective colleges and universities typically spend more money per student than other institutions. They have large endowments that help support faculty salaries, facilities, research opportunities, curricular innovation, and extra-curricular opportunity. Several flagship public institutions compete at the highest levels in each of these categories, and they, too, have raised endowments over the past few decades and draw students from all fifty states and many nations.

One irony of the association between price and quality is that schools that are thought to be among the nation’s best have the lowest admission rates. The fewer applicants a school admits, the better it is thought to be. Therefore, quality is by definition a restricted commodity.

Table 3 displays detailed information about the published price for tuition, fees, room, and board, as well as information about access for the private and public colleges and universities in Massachusetts that were analyzed earlier. To keep the data from Table 3 in perspective, Massachusetts has some private colleges and universi-

Table 3:

Publicly Available Information about Published Price and Access for Selected Massachusetts Colleges and Universities

	ACCESS			IN-STATE			OUT-OF-STATE		
	ADMIS- SION RATE	ENROLL- MENT	PERCENT PELL ELIGIBLE*	PUBLISHED PRICE OF ATTENDANCE**	TUTION AND FEES	ROOM AND BOARD	PUBLISHED PRICE OF ATTENDANCE**	TUTION AND FEES	ROOM AND BOARD
PRIVATE SCHOOLS									
Amherst	15%	1697	18%	\$49,678	\$38,928	\$10,150	\$49,678	\$38,928	\$10,150
Bentley	38%	4259	14%	\$48,618	\$35,828	\$11,740	\$48,618	\$35,828	\$11,740
Boston College	26%	9060	11%	\$52,308	\$39,130	\$12,909	\$52,308	\$39,130	\$12,909
Boston University	59%	18733	10%	\$51,228	\$38,440	\$11,848	\$51,228	\$38,440	\$11,848
Brandeis	33%	3196	13%	\$50,739	\$37,294	\$10,354	\$50,739	\$37,294	\$10,354
Clark	56%	2367	17%	\$42,870	\$35,220	\$6,750	\$42,870	\$35,220	\$6,750
Emerson	37%	5423	12%	\$42,998	\$28,884	\$11,832	\$42,998	\$28,884	\$11,832
Harvard	8%	6678	14%	\$49,684	\$36,173	\$11,042	\$49,684	\$36,173	\$11,042
Holy Cross	34%	2898	12%	\$50,042	\$38,722	\$10,620	\$50,042	\$38,722	\$10,620
MIT	12%	4153	15%	\$50,292	\$37,782	\$11,360	\$50,292	\$37,782	\$11,360
Smith	52%	2596	26%	\$51,180	\$36,058	\$12,050	\$51,180	\$36,058	\$12,050
Tufts	26%	5044	10%	\$51,889	\$38,840	\$10,518	\$51,889	\$38,840	\$10,518
Wellesley	36%	2344	14%	\$50,594	\$36,640	\$11,336	\$50,594	\$36,640	\$11,336
Williams	17%	1997	15%	\$50,680	\$39,490	\$10,390	\$50,680	\$39,490	\$10,390
PUBLIC SCHOOLS									
Bridgewater	62%	8497	20%	\$13,089	\$6,237	\$6,852	\$19,229	\$12,377	\$6,852
Fitchburg	64%	4057	23%	\$14,532	\$6,900	\$7,632	\$20,612	\$12,980	\$7,632
Framingham	61%	3962	19%	\$13,650	\$6,141	\$7,509	\$19,730	\$12,221	\$7,509
Salem	55%	7677	24%	\$12,498	\$6,460	\$6,038	\$18,638	\$12,600	\$6,038
UMass-Amherst	64%	20539	35%	\$20,378	\$12,102	\$8,276	\$28,601	\$20,325	\$8,276
UMass-Boston	63%	10476	24%	\$17,959	\$10,611	\$7,348	\$26,003	\$18,655	\$7,348
UMass-Dartmouth	66%	7982	22%	\$19,308	\$10,358	\$8,950	\$25,990	\$17,040	\$8,950
UMass-Lowell	75%	7316	22%	\$16,700	\$9,181	\$7,519	\$23,813	\$16,294	\$7,519
Westfield	62%	4867	19%	\$14,744	\$7,016	\$7,728	\$20,824	\$13,096	\$7,728
Worcester	54%	4643	19%	12240	6605	5635	\$18,320	\$12,685	\$5,635

*Number of Grants from 2007-08 **Includes Incidental fees for private schools

ties with the lowest admission rates in the country. Harvard admitted only one out of thirteen students that applied in 2009; MIT admitted just one out of eight. Two of the schools in the list admit only women – a little over one out of three applicants at Wellesley, and slightly more

than half at Smith.

The mission of public education is to serve the citizens of a state; not surprisingly the admission rates reflect that objective. Almost all of the public schools in Table 3 have higher admission rates than the private institutions, but not all.

Worcester State College is actually more selective in admission than Clark or Boston University, and Framingham and Westfield are only a few percentage points higher. This probably has to do with several factors that are discussed below, including the difficult trade-off between quality and affordability, as well as self-selection prior to submitting an application.

The admission rate reflects the difficulty of being admitted to a college or university, and thus the probability that an applicant will use the resources and facilities of an institution. The total enrollment also reflects access, since larger schools serve more students. These institutions vary in size from Amherst to Boston University and UMass-Amherst. The size of the school and its capacity to grow, therefore, affect the total number of students that are admitted each year. Given different background characteristics of an applicant, both the probability of admission (admissions rate) and the total number of positions (enrollment) affect the choices about where best to apply.

In general, the more selective the admission requirements to a college or university, the smaller the percentage of students from low-income families.⁶⁵ A few factors that help account for barriers to low-income families include the criteria that are valued in college admissions, the high test scores, and the quality of the public or private high schools that students attend – all factors that correlate with family income. Several of the most selective and wealthiest colleges are addressing this issue with increased recruiting, special consideration of family background in admissions, and adjustments to financial aid policies. In his inaugural address discussing this topic, Amherst president Anthony M. Marx declared:

It remains our students' responsibility to learn, engage and change the world. It remains the faculty's to inform teaching with scholarship that is deep but also broad in the way it can be only at a great liberal arts college. And it remains

our duty, together, to serve the community, and thereby learn further. To work with those less privileged.... [emphasis added] By serving our core mission of education, we serve beyond it....⁶⁶

As Table 3 indicates, Amherst and a few of the wealthiest schools are an anomaly among both public and private schools in Massachusetts. Amherst enrolls the same percentage of Pell-eligible students as its overall admission rate. Harvard and MIT actually have a higher percentage of enrolled Pell-eligible students than their admission rates. But Tufts, Emerson, and Boston University are typical of private Massachusetts schools that cannot afford the financial aid packages of their wealthier neighbors; they have much lower enrollments of Pell-eligible students than their admission rates. As the admission rate increases for both public and private schools, so too does the percentage of Pell-eligible students, producing a J-shaped curve with the higher percentage of Pell-eligible students at schools with both the lowest and the highest admission rates.

The significance of this relationship is that

FAMILIES MAY NEVER CONSIDER SOME OF THE MOST SELECTIVE SCHOOLS WITH THE MOST GENEROUS GRANT PROGRAMS

the decisions about where to apply to college are different for students from low and moderate-income families than from middle and upper income families. This section on where to apply to college has addressed affordability as financial aid that was available to students based upon their family's income. In fact, the access to any specific college or university is the interaction of its financial aid program with the availability of the program to its admitted students. Families may sense this and never consider some of the most selective schools with the most generous grant programs or the open-access public schools with the lowest net price.

Table 4:

Choosing a Public Institution

	PUBLISHED PRICE	ANNUAL SAVINGS
DECISION 1		\$7,349
Live at Home	\$8,161	
Live on Campus	\$15,510	
DECISION 2		\$5,127
Attend Massachusetts State College	\$13,459	
Attend University of Massachusetts	\$18,586	
DECISION 3		\$6,237
Transfer after two years to Mass. State College	\$7,222	
Attend Mass. State College for Four Years	\$13,459	
DECISION 4		\$9,223
Transfer after Two Years to Univ. of Massachusetts	\$9,363	
Attend Univ. of Massachusetts for Four Years	\$18,586	
DECISION 5		\$6,666
Attend Instate	\$8,161	
Attend Out-of-State	\$14,827	

Where a student decides to apply has an impact on many of the available options of paying for college. Obviously, the higher the net price, the more money the student must pay through work, loans, or available family assets. Besides the choice of schools with different expected net prices, students may decide between two- and four-year institutions, between in- and out-of-state universities, and between living at home or rooming on campus.

Table 4 models the effects of several decisions that families make about which public college or university in Massachusetts to attend – but without consideration of any financial aid.⁶⁷ These figures reflect the published prices of the institutions and not the net price, which would be a more accurate description of the real

expenses. Nevertheless, published price is the first amount that families see and, without further investigation, probably make several decisions about which college is affordable.

A student that lives at home may sacrifice much of the college experience, but saves the price of room and board, paying only tuition and fees. The average \$15,510 published price of attendance across all nine public schools is \$7,349 less for the student living at home. Of course, the student still has to eat and get to and from campus, so the model estimates expenditures for the price of attendance and not the actual savings. Similarly, students can apply to one of the four University of Massachusetts campuses or to one of the state colleges with University of Massachusetts charging on average \$5,127 more in tuition, fees, room, and board.⁶⁸

Another option for getting a four-year degree is to attend a two-year institution, and then transferring to one of the four-year schools after earning an Associates Degree. Massachusetts community colleges have a special agreement with the Massachusetts public institutions that guarantees the credits will transfer. A student participating in this Joint Admissions Program also receives an extra financial benefit of a one-third reduction in tuition during the first year of transfer. The annual savings in the published price, on average, for a student in this program is \$5,127 per year as a state college transfer and \$9,223 as a University of Massachusetts transfer.⁶⁹

Public officials see this alternative as a cost-savings, not only for the student, but also for the institution and the state. The institutional cost for students at two-year colleges is less per capita than four-year colleges. Thus, the financial incentives are a win-win-win for the student, the institution, and the state. Recognizing this, the Jack Kent Cooke Foundation funded several pilot projects with private, highly selective colleges and universities, both as opportunity for the lower income students who begin at two-year

colleges, and as savings to the four-year institutions that admit them.⁷⁰

As financially appealing as this option appears, very few students take this path for a BA degree. Of students entering two-year colleges, 71 percent say they are seeking a baccalaureate degree and would be potential candidates for this program. But a study of the 1989-90 academic year revealed that only 11 percent of the two-year students were actually taking courses in a major toward a baccalaureate degree at the end of their first year. Presumably the numbers are even smaller at the end of the second year when they might have completed a two-year degree.

Finally, students may decide to remain in Massachusetts or go out-of-state. Massachusetts has one of the highest net in-migrations in the country with many more out-of-state students enrolling in its colleges and universities than in-state students deciding to go elsewhere. While an accurate accounting of the actual savings from a Massachusetts resident selecting a public in-state school versus a public out-of-state school would require following each student, it is possible to simulate the difference by comparing in-state and out-of-state expenses in the Massachusetts higher education system. Decision 5 in Table 4 indicates that this simulated savings is \$6,666 per year for choosing a Massachusetts public institution.

In sum, the decisions that parents and their children make about which school to attend is one of the major factors affecting the price of higher education. Some of the decisions are made with little information about the net price. However, estimates of the expected net price can inform the decision. Additionally, family decisions about the type of school and the location of the school are critically important. In general, taking advantage of the proximity to schools reduces the price of attendance as well as prioritizing those educational attributes of an institution that are most important to the family.

How should I Pay for College?

Another branch of the proverbial “College-Bound Decision Tree” has changed over the past three decades. In 1980, two out of three aid recipients reported some kind of government grant to help pay the price of tuition, fees, room, and board. By 2006, less than one out of four reported that same kind of help, and the money they received was paying a smaller portion of the total price tag. Institutions themselves have made up much of the difference, but the availability of “gift aid,” as a function of published price, has clearly withered.

To replace these subsidies, students today dig into prior, current, and future earnings far more than students in 1980. Today more than 60 percent of entering college students report taking out a loan to pay for college; the comparable figure in 1980 was a little over 40 percent. In other words, one out of five college students today has an extra financial burden at graduation that the 1980 students did not carry. And they are twice as likely to have tapped their savings

MORE FAMILIES TODAY ARE ASKED TO SPEND THE MONEY THEY HAVE WHEN A STUDENT ENTERS COLLEGE

from gifts and earnings prior to entering college. Thus, more families today than in prior years are asked to spend the money they have when a student enters college, and to borrow from future earnings after the student completes college. Moreover, many students today have a job in the summer or during the school year, so they also tap earnings now while they are still in school.

Greater reliance on loans means that families are making choices about banking products that have financial consequences. Particularly problematic is the information that is available from colleges and universities and the manner in which the information is presented to families.

At the outset, it is important to emphasize

that financial aid administrators are professionals, but they are also employees of colleges and universities. As professionals, they share policies, perspectives, and information about the conduct of their work at national and regional meetings, and private correspondence with each other. These exchanges typically focus on service to students, and how to allocate scarce resources in a fair and equitable manner.

An unintended consequence of recent challenges to financial aid administrators is that many have become hesitant to counsel families and make comparisons about loan products (see text box). Despite the fact that this kind of intervention serves the least-informed parents and students, financial aid administrators fear that their preferences will be interpreted as unethical behavior – a potential chilling effect of any professional code of conduct.

Nevertheless, financial aid administrators are employees of their colleges and universities; the information that they provide to the families of college applicants is structured from the perspective of the institution, and often absent some important facts for making financial decisions.⁷² For example, the central concept in this paper, “net price,” is not the focus for telephone queries, family conferences, or the letters that admitted students actually receive.

Instead of net price, colleges and universities calculate the “financial need” of a family, subtract that number from the price of attendance, and focus on the “expected family contribution” (EFC). The “financial need” part of this equation is typically represented as the “package” distributed by the financial aid office. Offering a package that covers the full family need is a source of great pride for an institution and gratification among the staff of financial aid offices.

However, the “package” contains all components of financial aid: grants from all sources, a work-study job, and all student loans. “Net price” depends only on the amount of the grants. In

other words, the financial aid office focuses on the amount of the institution’s “award” with all component parts until it reaches an amount that it expects the family to pay. Meanwhile, the parents focus on the price of attendance, and any “gift aid” (i.e. grants) that will lower the price for them and their child.⁷³

Even the price of attendance – whether published or net – does not contain the same components at all schools. Tuition, fees, room, and board are always included, but schools will also calculate “incidental expenses” as part of a financial aid package. An allowance for the price of text books is the largest incidental expense, but some institutions will also factor in transportation, supplies, computers, and other assumed expenses.

Table 5 displays the differences between net price and expected family contribution for several financial aid scenarios. The first two examples are for applicants who plan to attend schools with the same price of attendance and come from the same financial circumstances. The financial aid office calculates the family’s financial need to be the same at \$20,000, but they offer different packages to fill that need. In Scenario A, the financial aid package has a \$10,000 grant with a job and loans making up the other components; in Scenario B, the package has an \$8,000 grant with the same job component, but a larger loan component. In both cases, the financial aid office met the full need of the family with an equal EFC of \$22,000 for the remainder of the price. Because the net price uses the grant portion of the package to calculate the actual price reduction, the net price for the family is lower in Scenario A, which has the larger grant component.

Scenario C is an example of a school, such as Amherst, Harvard, or Williams, that has replaced its student loans with grants. The “package” is the same as Scenarios A and B with the same calculated need and the same EFC. However, substituting grants for loans reduces the net

HELPING STUDENTS AND FAMILIES CLIMB THE COLLEGE-BOUND DECISION TREE

The complexities of dealing with the large sums of money tied to college financing often place financial aid administrators in a challenging position. Symbolic in this context is a group of schools known as the 568 Presidents Group, which grew out of the MIT settlement from a 1991 US Justice Department complaint about anti-trust violations.

At the time, Ivy League schools and many other private, highly selective colleges and universities shared information about financial aid packages for incoming students. Their objective was to ensure that students who were admitted to several schools would have a consistent calculation about financial circumstances and, therefore, the same or similar expectation of a family's ability to pay for college.

The participating colleges wanted students to decide which school to attend by its educational offering rather than its price. The Justice Department argued that shared information constrained competition. The Ivy League schools settled the case in 1991, and promised not to share financial aid packaging for incoming students. MIT went to court and eventually settled the lawsuit with a promise to cease the practice of sharing data about future financial arrangements, but in turn received a guarantee that it could host and share information about financial aid policies. The MIT settlement was codified in Section 568 of the Improving America's School Act of 1994, and has been renewed periodically, most recently in 2008.

The financial aid administrators of the 568 Group are the most active component of the group. They meet semiannually to talk about fair and equitable policies that can benefit students and their families. They believe that consistent decisions in evaluating the role of family income and assets – such as home equity, retirement accounts, cost of living, or foreign student incomes – guarantee fairness through equal treatment of largely similar cases. In short, financial aid administrators spend much of their professional careers thinking about college access and trying to make financial aid programs as fair and equitable as possible.

In a very different context, New York Attorney General Andrew Cuomo scolded financial aid administrators in 2007 with an investigation into their professional practices. Many institutions paid substantial fines to the State of New York for not monitoring their internal procedures of establishing lists of “preferred lenders.” The outcome of the investigation resulted in a voluntary code of conduct that reflects best practices for institutions in making any purchase or contractual relationship with a private vendor. The New York investigation exposed less than a dozen financial aid administrators with perceived conflicts of interest, and none of these individuals was charged with criminal wrongdoing. Furthermore, the attorney general concluded that there were no financial damages to students coming out of the practices of these or any other financial aid administrators. Even in their worst hours, financial aid professionals have proven that they are dedicated workers committed to helping students pay for college.

price considerably. Scenarios D and E are variants of wealthier institutions' capacity not only to replace loans with grants, but also to remove jobs as a component of aid or to use an enhanced formula to calculate the family's need. (Scenario E).

Scenarios F and G are common strategies for institutions that do not have a large endow-

ment, are less selective, and operate entirely on revenues from net tuition. In Scenario F, the institution calculated the family need of \$20,000 like the earlier scenarios, but it does not have the resources to meet full need, known as “gapping.” The total for the grant, job, and loans is less than the calculated need; so the expected family con-

Table 5:

Difference between Net Price and Expected Family Contribution for Selected Financial Aid Scenarios.

EXAMPLE	PRICE OF ATTENDANCE	FINANCIAL AID PACKAGE				EXPECTED FAMILY CONTRIBUTION*	NET PRICE (POA - GRANTS)
		FINANCIAL AID OFFICE CALCULATED NEED	FEDERAL, STATE, OR INSTITUTIONAL GRANTS**	STUDENT JOB	FEDERAL, STATE, OR INSTITUTIONAL STUDENT LOANS		
Scenario A	\$42,000	\$20,000	\$10,000	\$2,000	\$8,000	\$22,000	\$32,000
Scenario B	\$42,000	\$20,000	\$8,000	\$2,000	\$10,000	\$22,000	\$34,000
Scenario C	\$42,000	\$20,000	\$18,000	\$2,000	\$0	\$22,000	\$24,000
Scenario D	\$42,000	\$20,000	\$20,000	\$0	\$0	\$22,000	\$22,000
Scenario E	\$42,000	\$22,000	\$22,000	\$0	\$0	\$20,000	\$20,000
Scenario F	\$42,000	\$20,000	\$6,000	\$2,000	\$10,000	\$24,000	\$36,000
Scenario G	\$38,000	\$20,000	\$5,000	\$2,000	\$13,000	\$18,000	\$33,000

*Generally includes federal, state, and private loans to parents

**Most school also include all or part of Private Grants in the financial aid package

tribution is higher than other scenarios, where the school met the full need of the family. Scenario G has a lower price of attendance than the other examples. Perhaps this school has lowered its published tuition and fees to attract “full pay” students who are not expecting any financial aid.⁷⁴ It may also have fewer resources for grant money; so its financial aid package is heavy on loans. In an actual case, the financial aid administrator would probably discuss the obligations of students and/or parents assuming high levels of debt.

While the difference between net price and expected family contribution may at first appear as an arithmetic distinction, the actual computations are more complicated than indicated in these scenarios. In fact, the absence of standardized formulas, different treatment of assets, use of professional judgment, and other idiosyncrasies result in variant calculations of EFC from different institutions. Additionally, the nomenclature for components of aid is neither conventional nor consistent. The attempt of financial

aid administrators to devise professional decisions for similar family circumstances is a laudatory effort; the use of confusing terminology to calculate net price – what the family really wants to know – is not so praiseworthy.

The overall grant money that is available to a college applicant also varies according to the source of money, the financial and academic background of the applicant and the policies and priorities of the postsecondary institution. Financial aid administrators, themselves, are constrained by the institution’s wealth – or lack thereof – and government assistance for the applicant and the institution. Furthermore, federal, state, and institutional guidelines constrain the disbursement of grants to college students according to very specific program criteria. Financial aid administrators themselves have marginal impact on the amount with adjustments from “professional judgment.”

This report emphasizes net price as a central concept. The practical implication is that college students should begin with information about

the published price of attendance for a college or university, and subtract the total amount of grant and scholarship money from all sources that they will receive. Then they should determine their options for payment from all other sources (i.e., jobs and loans).

Jobs. Almost all colleges and universities offer an opportunity to help pay for college through student wages. Philosophically, many financial aid administrators and funding programs support the belief that students should work to help pay a portion of the college bills. Furthermore, the federal government subsidizes colleges and universities that hire student workers who meet its program's criteria. Financial aid awards consider a campus job as part of the financial aid package; students and their family probably consider money from a job as wages for work, rather than a reduction in the published price.

Some schools have academic programs that incorporate their work philosophy into campus jobs by making them part of the curriculum. Northeastern University, for example, has several co-operative programs where students have a paid job that is related to their field of study. Nationally, some schools require all students to work as part of the curriculum. Other colleges recognize commitments to college jobs by giving an aid package with a choice between working and taking a loan equivalent to the wages that might have been earned.

Loans. With college and government setting criteria for grants, families are left with decisions about the selection of loan products. Government-sponsored loan programs have low interest rates but the government also sets eligibility requirements, so families do not have a choice among all programs. Nevertheless, families make choices about loans and jobs as already indicated, about home equity and parent loans, and about the balance between student and parent loans, as well as decisions about other loan products.

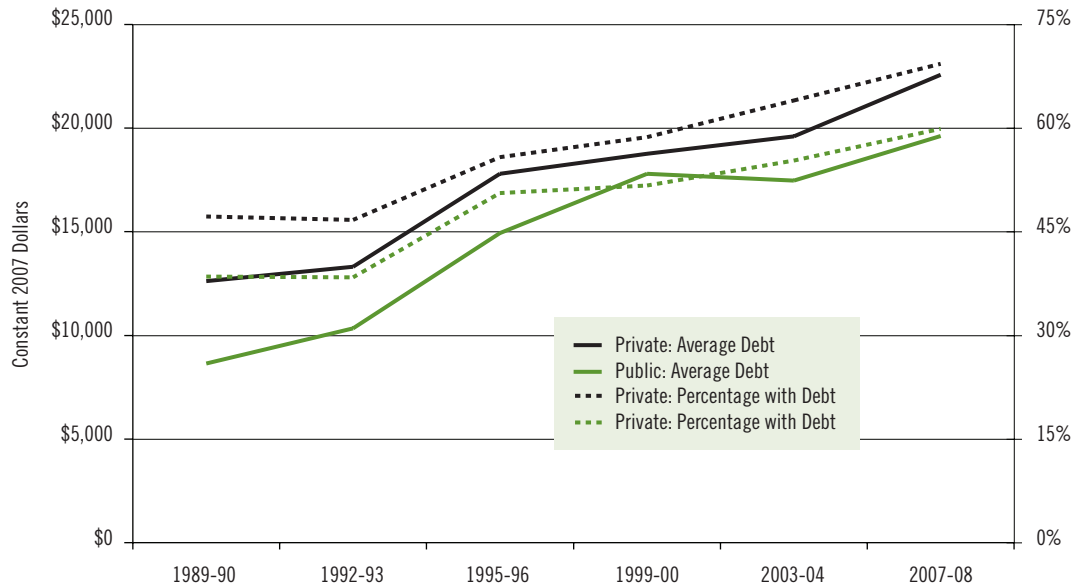
Data about student indebtedness currently do not span the full period of time between the benchmark year of 1980 and now. The National Postsecondary Student Aid Study (NPSAS, pronounced "nip-sas") only began in 1986. Recently released aggregate data show that two out of three college students borrow for college and graduate with an average debt of \$23,186.⁷⁵ This analysis combines both two- and four-year as well as public and private schools. The earliest data set separating public and private schools is 1989-90.

Figure 10 displays both the participation (dotted lines, right axis) and the average amount (solid lines, left axis) of debt for undergraduates at four-year private and public colleges who received a Stafford Loan.⁷⁶ Since 1986, the percentage of undergraduates at private, four-year colleges and universities with debt has increased from 46 percent to 69 percent showing that more than two-thirds of graduating seniors from private institutions leave with some debt. The comparable numbers for public, four-year institutions have gone from 38 percent to 60 percent.

The dollar amounts tell a similar story. At private institutions, the average amount of debt for students with Stafford Loans increased from roughly \$12,500 in 1989-90 to just under \$20,000 in 2003-04 to \$22,600 in the most recent study. At public four-year institutions, the average amount doubled, from \$8,600 in 1989-90 to \$17,500 in 2003-04 to \$19,600 in 2007-08. These data do not separate the growth in Unsubsidized and Subsidized Stafford Loans, but Figure 4 displayed the tremendous growth rate of Unsubsidized Stafford Loans after the program was introduced in 1992. The general low savings rate during this period as well as transfer of responsibility for education from parent to child explains some of the growth. One also suspects the availability of money with only limited eligibility requirements is one explanation for both the increase in student participation

Figure 10:

Percentage with Debt and Average Debt at Graduation for Students with Stafford Loans



Source: National Post Secondary Student Aid Study

and an increase in the average debt since 1990.

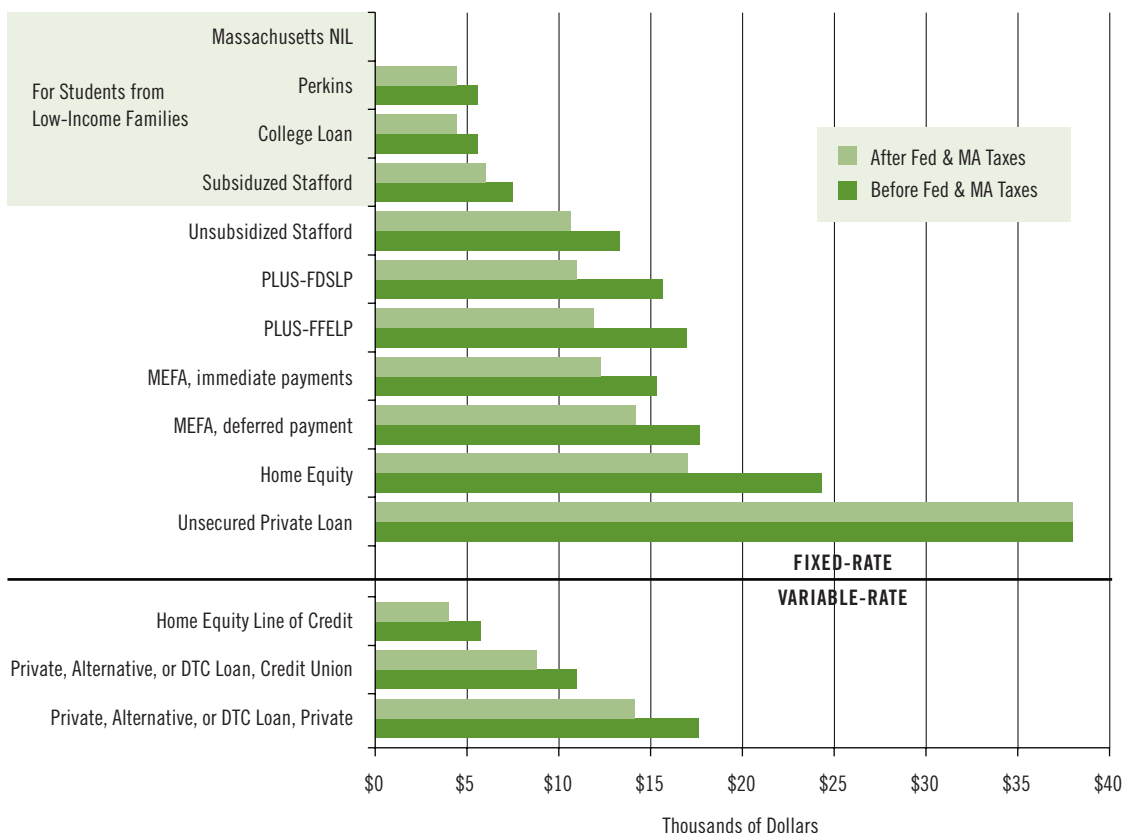
Subsidized Stafford Loans are an inexpensive way for eligible students to borrow money at a fixed-rate to pay for college. Students borrow at a rate that was lowered from its historic 6.8 percent to 5.6 percent for academic year 2009-10. The interest rate will continue to decline for the next two years to 4.5 percent and 3.4 percent before returning to 6.8 percent in academic year 2012-13. Eligible students do not begin repaying the loan, and it does not accrue interest, while they are enrolled as an undergraduate and during a six-month grace period following graduation. The use of money for four and a half years without charge amounts to lowering the cost of money for the overall period of the loan. The Annual Percentage Rate (APR) over the life of the loan is 4 percent.⁷⁷ Perkins Loans are also subsidized with an interest rate of 5 percent that does not change in the next four years. The grace period for a Perkins Loans is nine months following graduation producing an APR of 3.4 percent for the life of the loan.

Figure 11 compares various loan options from federal programs, such as Stafford and Perkins, with Massachusetts state loans and private loans. Stafford and Perkins loans have a repayment period of 10 years following graduation, and a grace period that differs from state and private loans. Both minimum and maximum loan amounts also differ for various loan programs. To make comparable calculations for the value of loans to the borrower, therefore, requires some counter-factual assumptions. For example, Figure 11 shows calculations on a principal of \$20,000, which is above the maximum for several federal loans. Additionally, 10-year Stafford and Perkins loans are calculated for a longer period. Figure 11 represents data using a 15 year repayment period, time roughly equal to four years in college, a grace period, and ten years for repayment.⁷⁸

Many federal, state, and private loans also have origination and other fees that affect the amount that borrowers pay a lending institution. Fees are typically deducted from the loan up

Figure 11:

Amount of Interest Paid for 15-Year \$20,000 Loan



Source: Author's analysis of data from financialaid.org

front, so the amount of money that the borrower receives is actually less than the principal on the loan. For home mortgages, the US Department of Housing and Urban Development requires disclosure of an APR that considers interest payment on the basis of money that the bank actually lends the borrower. The interest calculations in this paper consider origination fees at their maximum allowable level and compare them with the amount that would be paid for each APR.

Payments on student loans are also tax deductible up to \$2,500 of interest per year. The amount of savings tax deductibility generates for students and families depends on their tax bracket. A married couple with incomes between \$65,000 and \$131,000 would be in a 25 percent federal tax bracket and a 5 percent Massachusetts.

That percentage would be the maximum deduction for roughly half of the families in the United States making decisions about how to pay for their dependent child's college education. The tax savings is more for parents in higher income brackets. For most students, the tax savings following graduation would likely be less. A single person earning \$32,500 is in the 15 percent federal tax bracket. The data in Figure 11 use these assumptions about parent and student tax brackets in calculating the paid interest after taxes.

Thus, the terms of the loans and repayment conform to current statutory or market rates, but the principal and time for repayment do not. For example, a family would pay \$5,541 in interest payments for a Perkins Loan of \$20,000 with an APR of 3.4 percent over a 15-year repayment

period. While an undergraduate Perkins Loan is for 10 years with a maximum of \$15,000, the hypothetical 15-year calculation on a \$20,000 loan allows comparison to other loan programs in the analysis that are available for longer periods and higher amounts. The \$5,541 interest payments on a Perkins had no origination fee, began to accumulate only after graduation, and were tax deductible. A student in a 15 percent tax bracket would pay \$4,433 after taxes. Perkins Loans are not available at all institutions.⁷⁹

Several Massachusetts private colleges and universities use their own monies to make low-interest loans to students. The programs at Smith College and Wellesley College are typical with a 5 percent interest rate to students from low-income

SEVERAL MASSACHUSETTS PRIVATE COLLEGES AND UNIVERSITIES USE THEIR OWN MONIES TO MAKE LOW-INTEREST LOANS TO STUDENTS

families. While the schools obviously could set their own terms, Smith and Wellesley set the rate equal to a Perkins Loan and have no origination fee. This program allows the institution to make low-interest loans to students beyond the federal loan limits using a combination of federal and institutional dollars. The total interest payment of a hypothetical 15-year \$20,000 college loan is the same as a Perkins Loan. After taxes, a borrower would pay \$4,447 in interest for both a Perkins and a college loan.

The only college loan that is less expensive than a federal Perkins Loan or an institutional college loan is the state's Massachusetts No Interest Loan; but it too has a limited number of eligible recipients. There are no interest payments for eligible students from low-income families. In 2008, Massachusetts provided 1,871 students with these loans that ranged from \$1,000 to \$4,000. Eligible students can borrow

up to \$20,000 as undergraduates from the \$7.7 million that the state has made available for the coming year.

Perkins Loans, college loans, and Massachusetts No Interest Loans are available only to eligible students at participating institutions. Subsidized Stafford Loans, on the other hand, are available to all students from low-income families that meet the federal eligibility requirements, regardless of the school they attend.⁸⁰ The interest payment for a hypothetical \$20,000 Subsidized Stafford Loan for 15 years is \$7,476 and only \$5,981 after taxes.

Students must begin repaying an Unsubsidized Stafford Loan after graduation, but the interest accrues during the years of deferral. All Stafford Loans have an origination fee up to 2 percent of the loan, which makes the APR for a hypothetical Unsubsidized Stafford actually 7.1 percent, slightly above the advertised 6.8 percent that Congress sets. The 2007 College Cost Reduction Act focused on students from low-income families; hence, Unsubsidized Stafford Loans, which are available to students without regard to financial circumstances, remain unchanged for the foreseeable future.

Thus the 6.8 percent is effective for the life of the loan. A hypothetical 15-year loan of \$20,000, which is actually within the maximum amount a student could borrow in this program, would cost \$13,288 in interest payments. That amount includes the reduced amount of the loan from a 2 percent origination fee, but does not include tax savings of \$2,658 for a student filing a return as a single person following graduation.

The loans described so far are available to students; PLUS loans are available for parents of dependent children attending college.⁸¹ Funds for federal loan programs come from two sources, the Federal Family Education Loan Program (FFELP) and the Federal Direct Student Loan Program (FDSLPL). FFELP lending institutions are banks; FDSLPL is the US Department of Edu-

cation. Loans in both programs are guaranteed by the federal government, but FFELP have 8.5 percent interest, while PLUS loans from FDSLPL have 7.9 percent interest. Parents do not have a choice between FFELP and FDSLPL since the institution itself enrolls in one or the other program. With the tightening of the loan market that has not left student loans immune to scarcity, many schools have switched from FFELP to FDSLPL, providing some savings to parent borrowers.⁸²

An important decision that families make in paying for college is whether the parents should take out a PLUS loan or the student should take out an Unsubsidized Stafford Loan, or some combination of the two. The trade-off is an important consideration since both programs allow borrowing up to the price of attendance minus any other financial aid. In other words, families could use either program to help pay the bills while the dependent child is in college.

Figure 11 indicates that an Unsubsidized Stafford Loan is less expensive than a PLUS loan when funded by either FFELP or FDSLPL. A parent taking out a \$20,000 PLUS loan for 15-years would pay \$2,333 more in interest than a dependent child taking out the same amount as an Unsubsidized Stafford Loan. The comparable amount for PLUS Loans from FFELP and an Unsubsidized Stafford is less, \$3,640. An organization called FinAid.org has an online calculator that helps parents calculate different mixes of PLUS and Stafford Loans.⁸³ This trade-off creates one of the more important decisions parents make in paying for a dependent child's college education. The difference between PLUS and Unsubsidized Stafford Loans are less after taxes since parents are likely to be in a higher income bracket than a recently graduated single student. After taxes, interest payments from the hypothetical PLUS Loan at an FDSLPL school is only \$305 more than the Unsubsidized Stafford Loan.

Loan instruments have consequences beyond the difference in interest payments. Without an

agreement between parent and child for side-payments, the loans place financial responsibility on different people, regardless of the amount of overall savings or expense. For this reason, financial aid administrators may counsel families to take PLUS loans as parental responsibility or they may counsel students to take Unsubsidized Stafford Loans as independent responsibility for their education. These circumstances suggest largely personal and psychological as well as economic decisions.

Residents of Massachusetts have additional options for securing loans for college besides the No Interest Loan. Massachusetts Educational Financing Authority (MEFA) is a public non-profit that provides services, including loans, for students pursuing higher education in Massachusetts. MEFA administers a Pre-Paid Tuition Waiver Program funded by the state, Massachusetts's tax-free savings 529 plans, and help with financial planning. It also provides loans to students for amounts up to the price of attendance minus other financial aid. MEFA Loans are an alternative to Unsubsidized Stafford Loans for students or PLUS loans to parents from Massachusetts, but at slightly higher rates.⁸⁴ They are also available for both fixed and variable-rates.

MEFA has two student loan programs, one which students begin paying back while they are enrolled in college, and the other students delay repayment until graduation. Eligibility requires a good credit rating, and students must maintain normal progress at the college or university where they enroll. Immediate repayment loans are less expensive (fixed-rates of 7.75 percent) than deferred payment loans (fixed-rates of 8.89 percent). MEFA loans also have an origination fee of 4 percent, which makes the APR slightly more than the quoted rate, depending on the type of loan and whether the student defers repayment until graduation or begins repayment during the deferral period. MEFA loans are available for 15 years and a \$20,000 maximum; so

the comparative interest payments in Figure 11 are not really “hypothetical” like they were with several federal loan programs.

MEFA loans with immediate repayment are less expensive than FFELP or FDSLPL PLUS loans before taxes. However, PLUS loans are tax deductible in a parent’s income bracket, while MEFA loans are deductible in the student’s income bracket. Thus, the after-tax interest repayment is greater for MEFA immediate repayment loans than PLUS loans. MEFA with deferred payments are more than all PLUS and Stafford Loans, but they are less than alternatives that require going to a private lender. MEFA loans have tighter credit eligibility requirements than federal programs but fewer restrictions than other options for bank loans that are not specifically for college. Students pay \$15,297 before taxes on a 15-year \$20,000 loan with immediate payments. The final cost is \$12,238 after taxes. This after-tax interest expense is actually higher than the after-tax expense of Unsubsidized Stafford Loans from an FFELP school – again emphasizing the necessity for parent and student to decide which generation should assume the loan burden.

MEFA loans with deferred payment have an additional complexity in deciding which college loan is most economical. At a slightly higher interest rate, the repayment schedule on a \$20,000 loan for 15 years is more than the maximum allowable tax deduction for one year. Thus, only a portion, albeit the largest part, is deductible at the income level of the student after graduation. The interest paid after taxes on a deferred payment MEFA loan of \$20,000 for 15 years is \$14,165.

The fixed-rate alternatives to loans not specifically designated for college are home equity lines of credit and unsecured private loans. The interest on home equity loans varies with market rates, but these products are particularly attractive because all of the interest payments are tax deductible. Unlike college loans, home equity

loans have no maximum limit for the amount that can be deducted. At this writing, home equity loans were available from LendingTree.com at 11.7 percent with 4 points, the home mortgage equivalent of origination fees. A \$20,000 loan for 15 years at that rate costs \$24,285 in interest, but this interest expense is reduced to \$16,999 after taxes. At current market rates, home equity loans are more expensive than federal or Massachusetts college loan programs.

The most expensive loans for college are unsecured private loans, the equivalent of credit card debt with interest rates fixed by a family’s credit score. LendingTree.com has these loans available for 18 percent. Of course, a student could secure a loan with a credit card at roughly the same rate – neither of which is a very wise investment. The interest on a \$20,000 loan for 15 years is \$37,978, which is almost twice the original loan. Like credit card debt, the interest on unsecured private loans is not tax-deductible. Banks giving these loans would almost certainly require parents to co-sign an agreement with students.

The loan products described so far and in the top portion of Figure 11 are all fixed-rate loans. The borrower pays a known percentage rate for the loan until the principal has been reduced to zero. Variable-rate loans have an interest rate that changes with market prices that are typically pegged to a financial index such as the LIBOR average, Prime Lending Rate, or the 3 month US Treasury bill.⁸⁵ PLUS Loans and Stafford Loans dispersed prior to 2006,⁸⁶ for example, had interest rates that tracked the 91-day Treasury Bill plus a margin.

These formulas make most variable-rate loans very inexpensive right now with interest rates at historic lows. A Home Equity Line of Credit (HELOC) from Charter One, a lending company obtained from a website like LendingTree.com, had an interest rate of 3.49 percent in mid-February. The borrower can use money

from the HELOC for 10 years with 15 years for repayment and the interest is tax deductible. Of course, the interest rate changes monthly, has no cap, and requires a good credit rating to obtain a low rate — and the loan is secured against equity in the borrower’s residence. This option is best suited for families with the financial stability to qualify for low rates and assume significant risk in interest rate variability.

Comparing variable-rate loans with fixed-rate loans is an exercise in fiction making the assumption that the loans have the same repayment terms and schedule. This requires ignoring the risk that the variable-rate loan will have a higher interest rate in the future, currently a poor assumption for financial management. In other words, comparing a fixed-rate loan with a variable-rate loan assumes the borrower receives the same variable-rate for 15 years. With that assumption, a person with a HELOC at the quoted rate of 3.49 percent would pay \$5,718 in interest before taxes and \$4,003 after taxes for a mortgage deduction. *Caveat Emptor!* This apparent deal could become expensive, but currently a HELOC is the least expensive loan to pay for college.

The growth of private loans since 1980 was noted earlier. These private or alternative loans to students typically require a parent to co-sign; both parties have responsibility for the repayment with the loan made payable to the institution.⁸⁷ At current market rates, the interest rate on private loans is lower than the fixed-rate MEFA loans. Those available from credit unions are even lower interest rates. Interest rates will, of course, go higher as the economy rebounds, but currently secured private loans are relatively inexpensive. One suspects the availability of low-cost private loans, along with the decrease in interest rates for federally funded loan programs and recent increase subsidies from the stimulus bill President Obama signed last February encouraged more young people to attend college in the fall of 2009, especially those with dim

hopes of getting a job.⁸⁸

In sum, paying for college for the majority of families requires loans. The principal is determined from the price of attendance less the grant aid that is available to the student from government and institutional sources. Colleges may “package” low-interest loans along with grants that reduce the immediate amount of monies that are due from family resources, but families decide about the mix of loans and future financial obligations. Loan programs represent alternative obligations to pay for college with government subsidized and government guaranteed loans offering the lowest interest rates. The bal-

THE IMPLICATION IS AN INCREASING BURDEN ON THE STUDENT IN PAYING FOR COLLEGE, ESPECIALLY STUDENTS FROM FAMILIES WITH LOW OR MODERATE-INCOMES

ance comes from other loans that are available to students and parents at varying interest rates with long-term financial consequences.

This discussion ignores the use of liquid assets or extended-family resources to pay for college. Attitudes about parental responsibility and willingness to forego other expenditures have changed since 1980, just as the perception of college as a public or private good has changed. The implication is an increasing burden on the student in paying for college, especially students from families with low or moderate-incomes that are likely to have many competing financial obligations.

The amount of the burden, then, that parents can and will assume varies with access to and worth of resources for securing loans, the financial history of the family, and the availability of current assets. Each affects the overall price that the family pays for a child’s college education. While government and institutions them-

selves attempt to create affordable prices for students from all economic backgrounds, the general rule is that those with the most information will pay a lower price.

How should I repay my loans from college?

Because a college education stays with someone for a lifetime, some refer to it as the “tree that keeps on giving.”⁸⁹ But families that have piled up debt sometimes feel like it is the “tree that keeps on taking.” The percentage of students taking out college loans along with the amount of debt has increased as Figure 10 indicated. This makes the financial decisions after completing an education as important as the decisions before applying and while enrolling.

Forgiveness. Perhaps the largest savings comes from a provision of the College Cost Reduction and Access Act of 2007. A person can discharge all remaining debt from college loans after serving 10 years in a full-time public service job. A recipient must make payments for 10 years of employment, which itself might be reduced from other payment options. For example, when used in combination with an income contingent repayment plan that is available with some federal loans, college graduates planning employment in the public sector could retire the largest portion of their debt with only minimal payments. Some public service employers provide a loan deferment during employment where payments are postponed without accruing interest. These employees might retire their debt without ever making a payment.

Some public service jobs have additional provisions for forgiveness, allowing reduction of a portion of the loan from specified employers. For example, college graduates entering the Peace Corps, VISTA, AmeriCorp, the Army National Guard, or an elementary school teaching career in designated low-income districts may also have portions of their college loans forgiven. A Peace Corps volunteer with a Perkins

Loan, for example, has the principal reduced by 15 percent per year up to 70 percent of the loan; AmeriCorps volunteers receive \$4,725 in reduction of their loans. These public service employees can receive a loan deferment during their employment where payments are postponed without accruing interest.

Loan forgiveness has expanded since 1980, and is now available for students entering numerous professions. Doctors, lawyers, teachers, government employees, and members of the military can all pursue careers that qualify them for this type of debt reduction. Ironically, incentives for public service jobs come precisely at a time when the market is likely to expand for these jobs. Anecdotal evidence suggests that the current downturn in the economy makes careers in finance and consulting less attractive. Approximately 43 percent of Harvard graduates from the class of 2008 entered these two fields immediately after graduation. According to faculty who follow these trends, the class of 2009 views these positions as less attractive with lower salaries and job security. David Elwood, dean of the Kennedy School at Harvard observes:

*The economy, other long-range policy issues, and the new administration add up to a “benevolent perfect storm,” which could lure talented people to public service in a way not seen in decades.*⁹⁰

Prospective college students analyzing the “College-Bound Decision Tree” in this storm might receive shelter from the high price of attending college.

Loan Consolidation. Concurrent with forgiveness through public service, loan consolidation is the primary method for realizing debt reduction. Consolidation loans combine student loans or parent loans after graduation into a single instrument with one rather than multiple payments. Federal loans can be consolidated during the six-month grace period after graduation with no fees and with interest payments that are no higher than the interest from the original loans.

In some instances, the interest on a consolidated loan is actually lower. For example, the interest on a consolidated PLUS loan is 8.25 percent while the original was 8.5 percent. Parent loans and student loans must remain separate since each has a different borrower, but the possibility of consolidating at a lower interest rate is another reason for families to decide when the student is first enrolling in college on the mix between an Unsubsidized Stafford Loan to the student and a PLUS loan to the parents.

Consolidation loans have several advantages. The most obvious is that they lock in the interest rate for a negotiable repayment period. The interest rate for federal consolidation loans is the weighted average of the interest on the existing loans. For example, the interest rate for a student owing \$15,000 on a Stafford Loan and \$5,000 on a Perkins Loan would be calculated with the following formula:

$$\frac{(\$15,000 \times 6.8\%) + (5,000 \times 5.0\%)}{\$15,000 + \$5,000} = 6.35\%$$

More important, a consolidation loan is a new loan and provides an opportunity to renegotiate the terms and conditions of the loan with a new lender. Borrowers are not obligated to stay with the same lending institution as their undergraduate loans, so the grace period is a time to shop. Most of the new terms and conditions are favorable to the borrower, although some are not. One reason a borrower would want to shop is that banks have different minimum balance requirements, typically from \$5,000 to \$7,500.⁹¹ Additionally, banks offer different terms and conditions for repayment.

Consolidation loans have a variety of repayment options. Extended Repayment stretches monthly payments over a longer period of time from the original 10 or 15 year loans to as long as 25 years. Such an arrangement reduces the

monthly payments; however the total amount of interest increases for longer repayment periods. A \$20,000 loan at 8.25 percent for 25 years results in interest payments of \$27,307, while the same loan paid in 15 years costs \$14,924 in interest. Another option, Graduated Repayment, begins with low monthly payments that increase over time. While convenient for college graduates starting a career, this method also increases the total interest payments. Income Sensitive repayment for FFELP loans and Income Contin-

CONSOLIDATION LOANS CAN PROVIDE OVERALL SAVINGS FOR THE BORROWER

gent repayment for FDSLPL loans are both based upon a percentage of the borrower's income, which makes repayment easier, but more expensive as interest accrues during periods of lower repayment.

Consolidation loans can provide overall savings for the borrower. Besides the lower interest rates for PLUS loans, consolidation loans have discounts of both the interest rate and the principal with a record of on-time payments. For example, on-time repayment for 36 months might result in a 1 percent reduction in the interest rate and 48 months of on-time repayment a 2 percent reduction. Principal reductions of \$295 to \$595 after 12 months are also eligible with FFELP Loans.

Lending agencies also may offer a rebate to borrowers when they originate a consolidated loan. The size of the rebate depends on whether it is FDSLPL (1.5 percent) or FFELP (3 percent). Keeping the rebate is generally contingent on making on-time payments over the first one or two years of the loan. Lending agencies make repayment easy with electronic payment directly from a checking account; indeed they will lower the interest rate an additional 0.25 percent for those who have their loan serviced with this option.

Consolidation loans are important, not only

for their reduced monthly payment or the total interest payments; they also allow relief from potential penalties in case the borrower cannot afford to make payments. Borrowers can receive deferments on their federal loans during periods of unemployment or economic hardship. The government pays the interest during the deferment period. When deferment is not possible, borrowers might also request forbearance of a consolidated loan for one to three years during which they make no payments, but the interest continues to accrue for the balance of the loan. Forbearance generally requires extreme hardship or unusual circumstances. Deferment and forbearance are also available with federal loans that are not consolidated, but consolidation resets the clock so these options are available for more time.

Consolidation loans also have disadvantages. The most important is that they can be consolidated only once, so the borrower is committed to the lending institution and its terms and conditions. Reconsolidation is possible by including a new loan. For instance, not including a Perkins in a consolidated loan gives the option of changing lenders at some future time with a new loan that includes it. The interest rates will not change, but the process allows flexibility in case the relationship with the lending institution deteriorates.⁹²

Consolidation is possible with private loans, although they can not be combined with federal loans. The interest rate will depend on the type of loan and the credit rating of the borrower. Unlike federal consolidation loans, private ones may have payoff penalties, higher loan limits, and higher interest rates.

In sum, repayment of loans after graduation affects the price that a student pays for college. Consolidation loans and their potential savings affect the wisdom of earlier family decisions while the student was still enrolled. The mix between PLUS and Stafford Loans, the choice of

a public service job or career, and the inclusion of different loans require attention and planning, especially if unforeseen hardship and misfortune seem possible.

The Dangers of Taking Out College Loans

While virtually all students take out a student loan with the intention of repayment, unforeseen financial difficulties can change these plans. Not making payments on federal student loans for 270 days results in default. At this point, the federal government may legally collect payment by taking legal action, offsetting a federal or state tax refund, garnishing wages of federal employees, or hiring collection agencies. Defaulting results in the loss of eligibility for all future student loans, and liability for collection costs during the delinquency and default period. Furthermore, student loans, both federal and private, are not dismissed in bankruptcy proceedings; they are like child support debts, alimony, overdue taxes, and criminal fines. The consequences of not making payments on college loans are severe penalties that are costly to the student's future creditworthiness and financial standing. On September 23, 2009, the House Judiciary Committee held hearings on the consequences of not discharging student loans with bankruptcy. At this writing, the House Education and Labor Committee has introduced legislation to make the change.

As an indicator of economic distress among borrowers, the default rate on federal loans is rising with the bad economy. A little over a year ago 5.2 percent of borrowers were no longer in payment and defaulted on their college loans; the percentage increased to 6.7 percent by the end of March 2009. Default rates for students at Massachusetts institutions are generally lower than the national averages. Default rates are higher for loans from the FFELP program than the FDSLIP program, which the Obama

administration uses as one reason to support a proposal to cut banks from the system.⁹³ Speaking at Kent State University, the president stated that the change would save \$94 billion over 10 years, allowing the government “either to lower student loan rates or expand grants.”⁹⁴ The Congressional Budget Office estimates \$54 billion in savings, but both recognize that cutting out the middleman on these government-secured loans produces savings.

Private loans present even greater problems than federal loans for distressed borrowers. First, they are more expensive, making the likelihood of default much higher. A recent survey of Sallie Mae, the largest holder of private loans, showed that interest rates for private loans between 2001 and 2006 ranged from 5 percent to 19 percent with an average APR of 11.5 percent. Six out of seven private loans during the same period charged origination fees that ranged from 2.8 percent to 9.9 percent; the average was 4.5 percent. The compounding effect of interest for missed payments at rates this high increase the overall debt far more rapidly than the lower interest rates of federal loans.

Second, deferment is possible with subsidized federal loans, but forbearance is the only remedy for delinquent payments that lenders for private loans are likely to approve. Both types of agreements between the lender and borrower postpone payment, but interest continues to accrue during a forbearance agreement.

Understanding the dangers from private loans requires understanding more about the borrowers. They are often individuals who have taken the maximum amount of federal loans. This leads them to private lenders for additional money. Because eligibility and the price depend on creditworthiness, students from the lowest income families pay the highest interest rates. Parents are typically asked to co-sign.

Indeed, the lender story for private student loans is similar to the story for sub-prime home

mortgages. Lending originators made student loans with the intent of selling them in packages to investors. The loan products were developed for securitization and sales rather than the concerns of the borrower. With little or no effective bank regulation, reporting requirements, or interest caps, banks encouraged students to take loans with a streamlined application process, no collateral, and little transparency. When the downturn in the economy hit in 2008, the people that were most likely to lose jobs were the low-income families with the largest and most expensive private loans.

PRIVATE LOANS PRESENT EVEN GREATER PROBLEMS THAN FEDERAL LOANS FOR DISTRESSED BORROWERS

The National Consumer Law Center, an advocacy group for student borrowers drew attention to this issue in an April 2009 report, entitled “Too Small to Help.”⁹⁵ It calls for government regulation that creates income-based repayment options for private loans, loan cancellation provisions (e.g., the death of the borrower or the closing of unlicensed or unaccredited schools), options for loan modification other than forbearance, and greater transparency. While these reforms address many of the gravest dangers for distressed borrowers, they do not affect the high cost of private loans for all borrowers.

IV: IS COLLEGE WORTH THE PRICE?

College educators like to say that “college is not just about making a living – it’s about making a life worth living.” This statement distinguishes a liberal arts education from more job-specific forms of training designed to help students accomplish a task. A college education, in contrast, helps build more flexible communication and critical thinking skills, along with the confidence needed to solve new problems. Research indicates that a college education has benefits for health, employment, and retirement.⁹⁶ Economists often describe education as providing “human capital,” a good that an individual can save and spend throughout life.

The quote about liberal arts education also addresses the satisfaction of thinking about, engaging in, or knowing about a topic or subject, establishing importance beyond pecuniary objectives. College graduates may enhance their appreciation for music and art, but gain little financially. While education may enrich the experience of attending a concert or visiting a

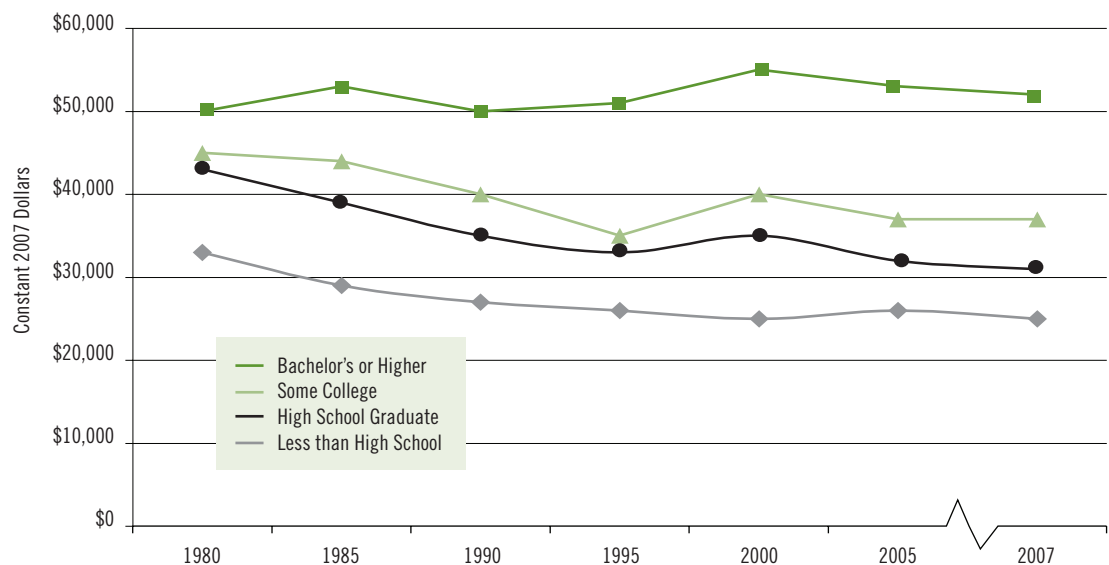
museum, the monetary value for this aspect of higher education is difficult to assess or weigh against financial achievements.

This intangible benefit of higher education receives less attention in these competitive economic times. Indeed, the percentage of entering college freshman who say “being well off financially” is a “very important” or “essential” objective in their decision to go to college has increased from 62.5 percent in 1980 to 76.8 percent in 2008.⁹⁷

For these increasingly financially motivated students, data confirm that the decision to earn a college degree will help them achieve their goal. Figures 12a and 12b display the inflation adjusted median income for 25 to 34-year-old males and females, respectively, from 1980 to 2007. The lines in both graphs show that college graduates have increased their income over the last two and a half decades, while the earnings power for most groups of non-graduates has significantly eroded. Relative to females, the wages earned

Figure 12a:

Median Earnings of Full-Time Year-Round Male Workers Ages 25-34



Source: National Center for Education Statistics

by male graduates have grown slower and male non-graduates have experienced greater declines in income.

Figures 12a and 12b are also important for illuminating the most recent trends among each level of educational attainment. Over the past four or five years, the median income of college graduates has declined along with the median income of all four categories of non-graduates.

A more comprehensive indicator of the financial value for staying in school is the increase in lifetime earnings of individuals with different levels of education. Figure 13 displays this information in 2007 dollars. The calculations take median income for 25 year olds from the Census data and cumulate the median salary until the age of retirement at 65.

Comparing lifetime earnings of a person with a high school diploma to the earnings of a person with a bachelor's degree or higher gives the value of the so-called "college dividend." The most recent College Board data suggest that lifetime earnings are \$1 million dollars higher for a college graduate than a high school graduate.

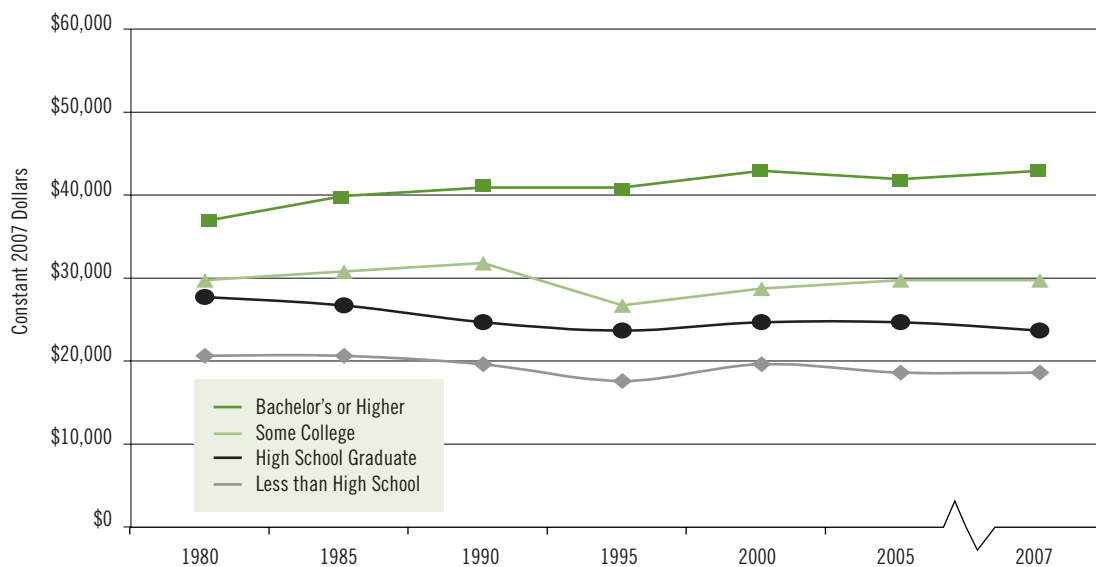
This easily remembered value has made the college dividend a marketing tool for online education and other coursework that may not have the same set of calculations underlying their assertions. Figure 13, for example, allows disaggregation of the financial benefit that comes from a bachelor's degree and from a bachelor's plus other post-baccalaureate and professional degrees. A person with a professional degree has

**LIFETIME EARNINGS ARE
\$1 MILLION DOLLARS HIGHER
FOR A COLLEGE GRADUATE**

almost \$2.5 million more in lifetime earnings than a person with only a high school diploma. Doctoral degrees are worth roughly \$1 million more lifetime earnings than a college degree. The difference between individuals with only a high school diploma and individuals with only an undergraduate degree is a little over three-quarters of a million dollars.⁹⁸

But this model also lacks sophistication in addressing whether going to college is worth

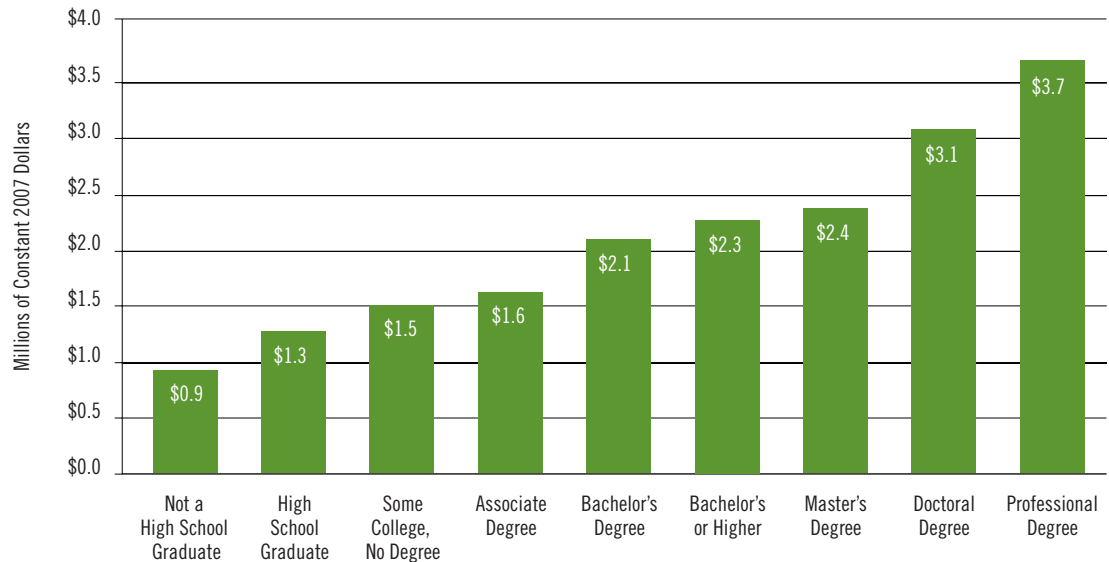
Figure 12b:
Median Earnings of Full-Time Year-Round Female Workers Ages 25-34



Source: National Center for Education Statistics

Figure 13:

Lifetime Earnings by Degree Attainment



Source: College Board, *Education Pays*, 2007

the investment. Besides the financial outlay for tuition and fees, attending college full-time defers the earnings that a high school graduate would start making immediately after receiving a diploma. In other words, high school graduates may earn less than college graduates, but they earn wages sooner. By similar logic, a comparison between a two-year and four-year degree should account for the two-year advantage in earning wages by going to college for a shorter length of time.

Making this calculation requires several assumptions. First, money earned in the future is not worth as much as money earned today. The reason is that money earned today, in theory, could be invested or deposited in a bank and grow with interest. So today's earned dollar might return 3 percent interest and make it worth \$1.03 one year from now, compared to the dollar that is earned in the future, which is still worth only \$1.00. Thus, the future value of money is not the same as the present value. The amount less that the future dollar is worth is known as the "dis-

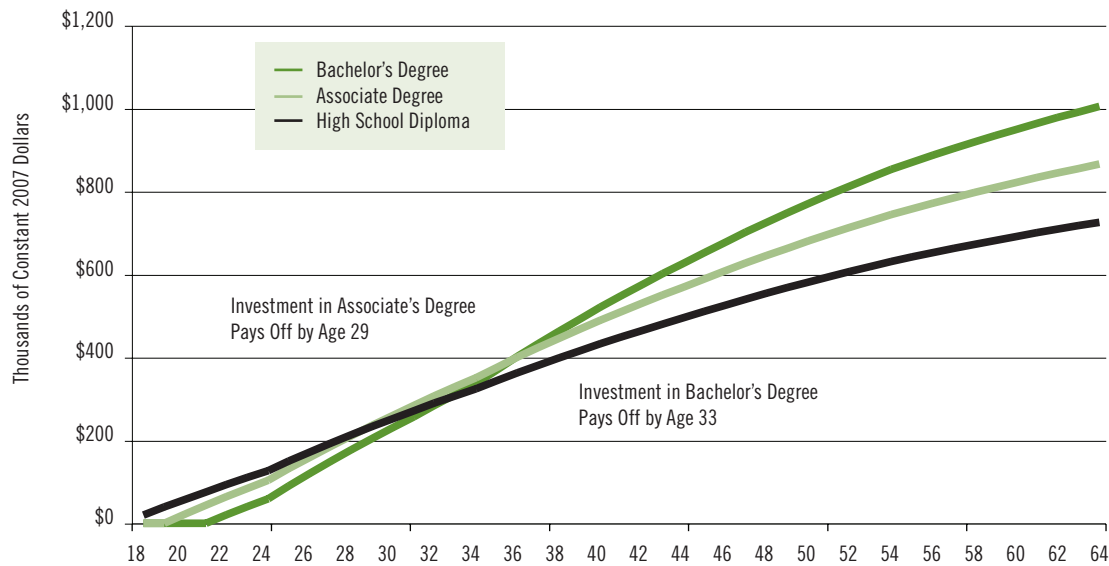
count rate."⁹⁹ Calculating the value of all future income that has been discounted to current dollars allows comparison of life-time earnings for different salary streams, such as those earned by individuals not attending college, and income earned by those attending two-year colleges and four-year colleges.

The model uses the average salary from Census data for individuals ages 18 to 65 with varying levels of educational attainment adjusted to 2005 dollars.¹⁰⁰ High school graduates start earning at age 18; associate's degree recipients begin at age 20, and college graduates begin at 22. Each of the college degree recipients pays the average tuition from its school with loans that are repaid over 10 years following graduation at 6.8 percent, the current rate for Unsubsidized Stafford Loans.

Figure 14 displays the data for lifetime earnings for the high school, associate's degree, and bachelor's degree graduates. At age 18, and for a few years that immediately follow, high school graduates accumulate earnings, while college

Figure 14:

Lifetime Earnings and College Investment



Source: College Board, Education Pays 2007

students defer their wages and borrow to pay tuition and fees.¹⁰¹ At age 20, a student working on an associate's degree graduates, gets a slightly higher salary, and begins repaying college loans. By age 29, even before the loans are paid in full, the person with an associate's degree has accumulated more earnings than the high school graduate.

A person with a bachelor's degree does not

start earning a salary until age 22 and has four years of loans to repay. By age 33, the same year that the student retires the college loans, lifetime earnings surpass those of a high school graduate. By these rather simple models, college is a good investment for 29 year olds with a two-year degree and 33 year olds with a four-year degree. By those ages, college has already begun paying dividends.

V. DISCUSSION AND CONCLUSIONS

In 1964, Shel Silverstein wrote his classic children's book, *The Giving Tree*. In it, a young boy climbs the tree, swings from the branches, eats the apples from the tree, and sleeps in the tree's shade. As he grows older, his life objectives change and he sells the tree's apples, uses its branches to build a house, and chops its trunk to build a boat. Eventually, the tree tells the boy that "I have nothing left to give you," as the boy sits on the tree stump and contemplates life's meaning.

Silverstein's tree and the College-Bound Decision Tree have much in common. First and foremost, both trees provide comfort to a person from an early age and throughout a lifetime. The branches on the College-Bound Decision Tree begin growing at birth with a parental decision (or non-decision) to begin savings. The branching decisions about paying for college continue into adolescence, after college, and into adulthood as former students and their families repay loans and retire debt obligations that began with a much younger tree. The known value of each tree is determined only late in life, as individuals reflect on their decisions.

But Silverstein's tree provides additional lessons for those who live in the forest of financial planning for college. The boy abuses *The Giving Tree* so that neither he nor anyone else can benefit from its shade, its branches, or its fruit. Likewise, lending institutions, college students, and their families can abuse lending programs and credit opportunities in ways that they negate the life-long benefits of higher education.

So how can government, financial institutions, colleges, and universities work together to ensure a healthy grove of trees that provides knowledge and training for generations to come? The answers to this question are found in the College-Bound Decision Tree.

How should I save for college?

The most efficient way to pay for college is to begin saving money as soon as a child is born. Currently the government provides tax incentives that encourage savings that can amount to almost half of a four-year education. Research shows that low-income families rarely use this option for savings.¹⁰² Furthermore, some features of financial aid policy discourage use of Coverdell and 529 savings plans for both low and moderate-income families. Parental efforts at responsible savings are perversely penalized when some colleges calculate the family's ability to pay.

In addition to helping families pay for college, there are other important reasons why encouraging more families to save is a critical policy goal. Saving for college sends a message from one generation to the next: a sign of hope and belief in the future that a parent has for a child. Even saving small amounts of money shows that college is a family commitment, and that parents are willing to sacrifice for their child's future. An abundance of research shows that students from low-income communities attend college at double the rate of their peers when equipped with study skills and the financial guarantee of college tuition support.¹⁰³ College savings plant the seed for a healthy tree.

Simplification of the process would encourage the use of savings plans. If parent and student assets were treated similarly in federal and state financial aid programs, two different savings programs could be combined. Furthermore, parent, grandparent, and student assets should be treated similarly to encourage the use of tax-protected savings accounts. Currently, student savings is "taxed" at a higher rate in financial aid policy than parent savings; and grandparent or extended-family savings are not calculated at all in the family's ability to pay. A tax-free sav-

ings plan that pays for college deserves the same financial aid treatment regardless of its source.

Federal and state tax policy might also treat college savings the same as pension programs or health plans with options for wage deduction. Behavioral economists have shown that workers who must opt out of 401(k) programs are more likely to save for retirement than those who must opt in to a program that costs the same amount. Employer-provided health care options typically have sliding scales for families with and without children. These familiar pre-tax practices would encourage and offer incentives for parental savings toward their child's college education.

As a matter of government policy, the current network of over 100 different savings programs with different fees and hidden costs requires attention. Consumers rarely know the terms and conditions of these programs. Many do not have online access to accounts. And too often the process to receive payment is lengthy and difficult. The mix of government and investment house responsibility not only creates confusion, it also obscures the relative strengths and weaknesses of a program to even the most attentive investor.

Where should I attend college? By the time a student enters high school, college choice, in general, depends on two factors: price and quality. Information about both should be easily available to the public. Currently, prospective students and their family get most of their information about college from websites and guidebooks, such as *The College Board College Handbook*, Peterson's *Four Year Guide to Colleges*, US News' *Ultimate Guide to College*, and the *Fiske Guide to College*. The Department of Education also makes comparative information about colleges and universities available on its "College Navigator" website.

The problem with all of these sources is that they do not allow easy comparison of institutions with the information that most parents and students want to know. Price is the most obvious

example. The tuition, fees, room, and board for colleges and universities are rarely available in an easy to find or standard place on a college website. Most often, they appear on the financial aid page several clicks of a mouse behind other information about the many virtues of the college. There is no standard format; tuition and fees may be listed together, calculated by the course, by the hour, by the term, or by the academic year. Tuition may or may not allow access to campus medical facilities or include health insurance for longer care. Most schools do not announce the price of attendance until after the

STUDENTS AND PARENTS SHOULD HAVE ACCESS TO THE INFORMATION NECESSARY TO ESTIMATE PRICES

application deadline, and many do not announce prices until after admitted students must make a deposit for enrollment.

Additionally, college websites generally only provide the published price. The information a prospective student needs to determine net price is much harder to find. This report relied on data from published guidebooks to calculate an estimated net price for the average applicant. Prospective students and parents should have access to the information necessary to estimate prices for their specific financial situation. The data presented here can help policymakers determine the impact of financial aid programs on institutions, they do not provide the consumer information that is necessary for informed choice.

The Higher Education Opportunity Act (HEOA) of 2008 begins to address this problem by requiring colleges and universities to have price estimators on their websites by 2011. The regulations require that the institution report the website address to the Department of Education as part of its annual IPEDS reporting. The estimators report the net price based upon family income and a few additional variables such as age,

residency, marital status, the number of siblings, the number of siblings in college, and living plans for on- or off-campus (with family) housing. The website will return information about the price of attendance, the grant award, and the net price.¹⁰⁴

Price estimators contribute to the understanding of college prices because they change the discourse from how much the institution helps the family and student to how much the family and student will pay. Rather than having a discussion with a financial officer about the grants, job, and loans that are available to the student, price estimators provide information about the net price, which is what the family needs to know to do comparison shopping. The next step is a family discussion about the availability of past, current, and future resources to pay for college.

The problem with current practices is that colleges and universities focus on paying for college rather than the total price of college for the student. They have responsibility for only one branch of the College-Bound Decision Tree, while families must watch the growth of the Tree itself.

The other information that families need to make a decision about which college a student should attend pertains to the educational experience. The amount of money that an institution actually spends on each student is probably the single best indicator. Colleges and universities differ on the amount of money they spend to educate each student. The price of attendance is a bad proxy for spending because at most schools the price each student pays does not cover actual costs. The fact that even this basic information is not readily available to the public tells a lot about the information vacuum students and parents encounter as they make this major financial decision.¹⁰⁵

Guidebooks do provide some information to help families estimate institutional quality. In this report, we used four such indicators: student-faculty ratios, instructional expenses, standard-

ized test scores, and graduation rates. This type of information, called accountability measures, is available from a variety of public sources.

The problem is that these data are not systematically audited or reviewed for accuracy. While graduation rates are the one exception, even these data are limited in that figures are not easily available for sub-groups of the population, such as race and gender. Nevertheless, the availability of graduation rates makes them the most common measure for quality in the absence of other indicators.

Institutions of higher education that use public funds must be accountable to the public for the educational experience they provide to students. The author of this report advocated and helped define graduation rates as they are collected by the Department of Education. Government should not introduce regulations that invade the curriculum or abridge the academic freedom of faculty, but government should work to ensure that institutions provide families with information about the characteristics that make up the campus, classroom, and learning experience for a prospective student.

How should I pay for college?

As indicated, the net price is the most important factor in a family's financial decisions about paying for college. Lack of adequate information about the price of attendance and the amount, frequency, and probability of receiving grants hinders families in their selection of a college. Adequate information about paying the net price is also a problem since both colleges and lending institutions typically focus on getting the bills paid rather than the total financial outlay in interest and fee payments for students and their family.

The Annual Percentage Rate (APR) is the second element of a loan that is necessary for an informed decision about paying for college. When fees are taken out of the amount of money

that is loaned to a person, the interest rate is slightly higher than the one that is typically quoted to the borrower. Like home mortgages, where points and closing costs are taken out of the loan, the homeowner does not receive the full amount of the loan, but pays interest on the full amount. The “Mortgage Lender Disclosures” form required by the Massachusetts attorney general’s consumer protection regulations for all mortgages describes the APR, the fixed interest rate, the amount of the loan, rights of the consumer, and provides an 800 number for additional information or explanation. Describing the APR, however, is not currently an obligation of a lending institution for a government-guaranteed college loan or a private college loan, nor is it an obligation of a financial aid office when explaining a financial aid package. Nevertheless, the APR is the appropriate information for comparing the interest expense of loans with different terms.¹⁰⁶

The monthly payment for a college loan is always available to borrowers from any lending institution. Indeed, the marketing of loans often emphasizes the monthly payment rather than the rate and total borrowing costs. Mark Kantrowitz, founder and publisher of FinAid.org states this point with an example similar to the ones presented here:¹⁰⁷

Marketing of private loans often focuses on monthly loan payments and not on total payments over the life of the loan. The marketing also includes comparisons with different loan terms and best interest rates, yielding a misleading picture of the cost of the loan. For example a 20-year student loan at 10 percent interest has a monthly payment of \$193, compared with the \$248 monthly payment of a 10-year PLUS loan at 8.5 percent interest. That makes the private student loan seem more affordable than the Parent PLUS loan. However, the borrower will pay \$9,757 in interest over the life of the PLUS loan, compared with \$26,323 in interest over the life of

the private student loan.

In concert with other information about a loan, the monthly payment is important since it describes the cash flow necessary for on-time payment, but it should not be the only information.

The most important information for comparing the price of a loan is the total interest that the borrower pays for a loan, an amount that lenders rarely disclose. Interest expense is a major component of the overall cost for the two-thirds of students who end their college career with some amount of debt. For the average college student graduating in 2009 with \$19,237 in debt, the interest repayment scenarios displayed in Figure 11 represent real financial obligations. College loans for these students may add \$10,000 to \$15,000 to the price of college; and the price is even higher if they are unable to make timely payments for the life of the loan.

These four pieces of information – net price of college, monthly payment, APR, and total interest expense – are basic consumer information that is required for a family to make an informed decision about the price of the col-

INTEREST IS A MAJOR COST FOR THE TWO-THIRDS OF STUDENTS WHO END COLLEGE WITH DEBT

lege. Both lending institutions and financial aid administrators have a responsibility to provide this information to incoming students; indeed, government and non-profit groups should work together to make it available before college application so a family can match its finances with its educational needs and aspirations.

Some financial aid administrators understand this obligation and have begun providing basic financial planning to families. Private college loans, for example, are made payable to the institution rather than the borrower. Lending institutions confirm the planned enrollment of an admitted or transfer student with the finan-

cial aid office prior to issuing a check. This notice provides an opportunity for a conscientious financial aid administrator to intervene if the family has not explored other less expensive options.¹⁰⁸ This could reduce the price of college for the 51 percent of borrowers with as much as \$5,000 debt in 2007-2008, who did not utilize the Unsubsidized Stafford Loan program or the 87 percent with as much as \$2,500 debt that made the same decision.¹⁰⁹

Government can proactively help consumers with requirements that lending institutions provide consumer information when parents and students apply for and receive college loans. At this writing, several states, including Massa-

THE LANGUAGE THAT FINANCIAL AID ADMINISTRATORS USE HAMPERS THEIR ABILITY TO ANSWER QUESTIONS

chusetts and New York, have announced plans to create consumer-oriented websites to help the public evaluate different funding options. The most advanced existing website is the College Foundation of North Carolina (CFNC), which provides information about the state's 529 plan, interest calculators, links to student and parent loan applications, and planning tools for saving, paying for college, and career choice. The website has an option for a password-protected "My CFNC," where parents and students can personalize the information that is relevant to their situation, access planning tools that help record and calculate their preferences, and save the information for multiple sessions.

As mentioned earlier, the attorney general of New York fined several lending institutions and colleges for their noncompetitive practices in selecting "preferred lenders" for federal student and parent loan programs. The revenues from that settlement will be used to fund a consumer-oriented website based on the North Carolina model for consumers throughout the United

States. Besides links to websites and information that is relevant to users outside of New York, the website will have tools for side-by-side loan comparison, a staff-operated call-in center, and reverse auction capacity for lending institutions that want to bid on individual consumer loans.

Besides the lack of adequate information, the quality of the information needs improvement if prospective students and their parents are to make meaningful decisions about paying for college. Consider the nomenclature of financial aid on its face. The money that goes to the student to offset the published price of going to college is known as "gift aid," which implies that the person is getting something for nothing; yet to receive this "gift," the typical person must pay a lot of tuition money – usually a lot more than the gift. The money that the student's family pays is known as expected family contribution (EFC) and is the basis for all financial aid "packages" (a word that itself makes the grants, loans, and wages from a job sound like a "gift"). But is the EFC a "contribution?" Contributions to colleges and universities typically come from alumni and not students and are based upon the generosity of a donor (and a tax deduction). The "contribution" that a family is "expected" to pay is an oxymoron. In fact, the contribution is a requirement for student enrollment and certainly much different from contributions to a local charity, church, or alumni association.

These are not simply clever examples. Because websites, call centers, and help desks explain the price of attending a college or university, clear and accurate communications are essential, especially for first-generation students and their families for whom this vocabulary is often new. The language that financial aid administrators use hampers their ability to answer questions and actually confuses the simple question that a family wants to know: what is the price of attending the school? Although little data exist on this point, one suspects that college applicants

limit their choice of colleges and may even pay an unnecessarily high price for their education due to the lack of understanding and inability to navigate the language and pricing structure of post-secondary institutions.¹¹⁰

The complexity of FAFSA, the required financial aid form for all Federal and Massachusetts state programs, is particularly problematic. Evidence suggests it inhibits college choice and can result in more expensive student loans. For example, in an experiment where H&R Block professionals helped clients complete FAFSA forms from data on their tax returns, high school graduates under the age of 18 were more likely to complete the FAFSA, more likely to receive aid, and more likely to enroll in college than a control group that was only informed about eligibility.¹¹¹ Many experts believe the complexity of the FAFSA pushed many toward private loans. Roughly one out of seven students who took out private loans in 2007-2008 did not bother to complete the FAFSA. Mark Kantrowitz writes:

*The complexity of the federal Stafford Loan application process, which requires the submission of a FAFSA, is probably a key driver of reliance on private student loans.*¹¹²

The Rethinking Student Aid Study Group reached a similar conclusion in its important analysis of federal programs in 2008. Based on the work of study group member Susan Dynarski, it recommends that government programs eliminate the FAFSA altogether. The Internal Revenue Service (IRS) could determine federal aid eligibility for families with dependents from information in tax returns with only slight modifications to the current formula.¹¹³ If this approach were implemented, families would receive an annual letter from the IRS in much the same way that wage earners receive notice from the Social Security Administration about eligibility for retirement benefits.¹¹⁴

On June 24, 2009, the Obama administration announced its intent to phase in some

of these recommendations. A new Web-based FAFSA allows applicants to skip items about family assets that are not relevant to their eligibility. Financial aid applicants will soon be able to populate the online FAFSA with relevant data from the IRS. Legislation is necessary, however, to change the elements in the formula to only those that are collected – and therefore verified – by the IRS. In the proposal to Congress, Secretary of Education Arne Duncan will seek simplification that requires a financial aid applicant only to complete personal information with 18 key financial questions supplied by data from the IRS. The Department is exploring the possibility of making the service available to all students, regardless of whether they are a financial aid applicant. This final step has the benefit of providing information to students who otherwise might not have applied for aid, or might have eliminated college options, because of a misperception that they are not eligible or could not afford the price.

How should I repay my loans for college?

Retiring debt is a key component of making higher education affordable and the expectation of all students when first enrolling in college. Educators worry that high levels of debt can delay graduation, distort the selection of a college major, and postpone post-baccalaureate education. Debt may also hinder personal goals, such as getting married, buying a home, or having children. To use an example from health care, large debt from undergraduate and medical school may encourage young doctors to specialize in fields with the highest income potential, rather than becoming primary care physicians with less earnings potential. Similarly, one worries that college graduates with a commitment to public service may avoid positions in government or the non-profit sector, where salaries are traditionally lower than private sector jobs. College administrators speculate, for example, that

many of the most talented students have abandoned their studies of science, technology, engineering, and math (STEM) over the past decade in favor of careers in banking and finance.

Distortion of the job market resulting from college debt could be reduced through the expansion of loan forgiveness programs. The federal government currently has programs for volunteer work, such as the Peace Corp, Americorps, and VISTA, for military service, and for teaching

THE GUARANTEE AGENCIES MAKE MORE MONEY BY ALLOWING DELINQUENT BORROWERS TO GO INTO DEFAULT

in specified low-income areas. These programs require updating such that the amounts of forgiveness match national priorities and student interests.

Loan forgiveness is a partnership between government and higher education. *Inside Higher Education*, an online publication going to many college administrators reported the following very successful program at Tufts University:

*During the last year, Tufts University awarded grants to 288 alumni who work for nonprofit groups or in the public sector to help them repay their student loans. The grants – which ranged from \$500 to \$5,000 and for which alumni may reapply annually – are part of what may be the broadest program of its kind. Many colleges have programs to repay the loans of alumni in selected fields. The Tufts program, in contrast, is open to all of its alumni providing that they are working in government or for nonprofit groups, and provided that they are repaying loans they took out to attend the university.*¹¹⁵

Many professional schools have programs that subsidize their graduates who take positions in the non-profit sector or predominately provide services in low-income areas.

Finally, federal policy needs to relax the obligation of students who run into financial dif-

ficulties following graduation. While a college education improves one's chances for increased wages and compensation, it does not guarantee it. College graduates can run into financial difficulty from loss of job, medical problems, or a variety of obstacles that impede their ability to make timely payments. In 2008, 6.9 percent of student borrowers who were supposed to begin repayment defaulted on their obligation.¹¹⁶

Student loan guarantee agencies were established for the FFELP to provide default insurance on student loans for lenders, to help delinquent borrowers avoid default, and to help restore defaulted loans. In 2008, these agencies received \$1.57 billion in fees and were holding \$1.63 billion in trust from the Federal government guarantee to refund lenders for defaulted loans. A breakdown of the fees they received indicates that their most lucrative function is the "collection and rehabilitation" of defaulted loans. They received about one-fifth as much money from helping delinquent borrowers avoid default.¹¹⁷ Thus, the guarantee agencies make more money by allowing delinquent borrowers to go into default rather than counseling or refinancing and helping them stay out of default.

The primary reason for this situation is the fees associated with each function. The loan guarantee agency receives 1 percent for preventing default, but 18.5 percent for rehabilitating a defaulted loan, plus another 18.5 percent on accrued interest during default. Collecting payments from a small number of defaulted loans at 37 percent can be far more lucrative than helping prevent borrowers from default at only one percent. The interlocking arrangements among state government, lending institutions, and loan guarantee agencies can distort the objectives for the agencies to serve the consumer. Indeed, employees of the Ombudsman office at the Department of Education have ties to collection agencies that erode consumer confidence and provide little help for a borrower who is seeking

advice or help that is removed from the interest of collection agencies.

In 2008, American Student Assistance (ASA) – a loan guarantee agency for Massachusetts – received just \$47 million in fees for helping borrowers avoid default, compared to \$63 million in revenue for collection of defaulted loans. While ASA also works with non-profits, such as The Education Resource Institute (TERI) in the Boston Library, on outreach and education programs that help students with financial planning and application for college and financial aid, it is clear that realignment of incentives is still needed to encourage loan guarantee agencies to help borrowers and provide consumer education instead of encouraging loan defaults.¹¹⁸

The Obama administration has proposed eliminating the FFELP program altogether and contracting with four institutions to service the \$550 billion in existing federal loans and the roughly \$100 billion annual budget for future loans from the Direct Loan Program. Unfortunately, little is known about the competition for the contract to service the Direct Lending Loans, but all the for-profit institutions that were selected previously engaged in student lending and loan collection. Non-profit agencies with a mission of providing consumer information

about all branches of the College-Bound Decision Tree either were excluded or eliminated from the selection process.¹¹⁹

Finally, student loans, both government-sponsored and private, are not discharged in bankruptcy proceedings.¹²⁰ This places them in a category like alimony, child support, overdue taxes, or criminal fines. This provision only became law in 2005 with the banking industry providing no empirical evidence about any abuse. Restoring bankruptcy rights would provide greater incentives for those that service student loans to create alternative repayment options that more comfortably meet the needs of distressed student loans.¹²¹

In conclusion, the College-Bound Decision Tree requires some attention. The seeds for government programs were planted over half a century ago. They have taken root and support millions of students who might not otherwise receive a college education. But like all trees, they require maintenance. Some branches, such as FFELP, may require pruning. Others, such as Pell Grants and tax credits, need fertilizing and care. The objective is a Tree that stands firm for all Americans, providing a forest of protection and growth for the nation.

Endnotes

1. C. Anthony Broh is a consultant with Broh Consulting Services. Previously, he was Director of Research for the Consortium on Financing Higher Education (COFHE) and the Registrar at Princeton University for 15 years. He has served on numerous committees with responsibility for academic planning, staff management, and enrollment diversity and was on the board of the Association for Institutional Research, the Advisory Committee for the CIRP Freshman Survey, was a founding member of the Registrar Summer Institute at Aspen, and helped rewrite the bylaws for the American Association of Collegiate Registrars and Admission Officers.
2. Throughout this report, the word “income” is used to describe a family’s financial circumstances. Need-based financial aid, in fact, varies according to formulas that approximate wealth rather than income. Using income as a reference has many consumer related advantages that are described throughout the report. Pell Grants are named for Senator Claiborne Pell (D-RI); prior to 1980 they were known as Basic Education Opportunity Grants.
3. The five-year moving average is a statistical technique for “smoothing” the yearly ups-and-downs to make overall trends easier to observe.
4. Claudia Goldin and Lawrence F. Katz, *The Race Between Education and Technology*. Cambridge, MA: The Belknap Press of Harvard University, 2008, p.300.
5. *Ibid.*, p.302.
6. *Ibid.*, p.48.
7. Other expenses, such as books, supplies, travel and incidental expenses are often included in the price of attendance. For comparative data, this report focuses on tuition, fees, room, and board (TFRB).
8. College Board, “Annual Survey of Colleges,” reported in Sandy Baum and Jennifer Ma. [ed.], *Trends in College Pricing*. Washington: The College Board, 2008, p.3.
9. “Net Price” is a standard statistic for economists in many fields besides higher education, but is not the standard metric or nomenclature that higher education administrators use to describe college price. Throughout this paper, the terminology is modified to language that the public is likely to use to describe many kinds of purchases. Precision and accuracy sometimes require this departure from normal usage among the higher education community.
10. College Board, *op cit*.
11. Massachusetts Department of Education, Office of Student Financial Assistance, Correspondence with the author and Robert Brun, Associate Commissioner, Student Financial Assistance, February 13, 2009.
12. In addition, the National Merit Scholarship program is criticized for its dependence entirely on PSAT scores, which are correlated with family income. See Scott Jaschik, “Blow to National Merit Scholarships,” *Insider Higher Education*, September 1, 2009, <http://www.insidehighered.com/news/2009/09/01/merit>
13. Comparable data are not available for 1980-1989; hence 1990 is the starting point for this series.
14. For current research on this topic, see Chris Avery and Sarah Turner, “Playing the College Application Game: Critical Moves and the Link to Socio-Economic Circumstances.” Unpublished manuscript, November 14, 2009.
15. See Goldin and Katz, p. 48.
16. A typical seed also includes three basic parts: (1) an embryo, (2) a supply of nutrients for the embryo, and (3) a seed coat (but let’s not push this metaphor too far!).
17. Throughout this report, we combine grants and tax credits because they both have the effect of reducing the full price that a family pays.
18. This paper does not include an analysis of the GI Bill nor attendance at the military academies, both of which are important sources of college funding for veterans.
19. Since 2005, graduate and professional students have been eligible for PLUS loans.
20. The new Yellow Ribbon GI Enhancement Program, where the government and colleges share in the higher education expense for veterans returning from Iraq and Afghanistan, is a return to this important tradition.
21. The term “supplement” will be used in this paper to describe any grant that is based upon a family’s financial circumstances. Financial aid administrators generally refer to “need-based aid,” a term that confuses the discourse about college pricing since virtually all students feel they “need” a college education.
22. The original name was Basic Education Opportunity Grants.
23. At this writing, the Obama administration has targeted the programs for elimination.
24. The American Recovery and Reinvestment Act of 2009 raised the amount from \$1,800 to \$2,500 for 2009-2010.
25. Almost as many students attend private colleges as public colleges in Massachusetts. See Bridget Terry Long, Dana Ansel, and Greg Leiserson, 2006, “Paying for College: The Rising Cost of Higher Education,” Boston, MA: MassINC.
26. In fact, the states generally contract with brokerage houses to manage the funds.
27. Susan Dynarski, “Who Benefits from the Education Savings Incentives? Income, Educational Expectations and the Value of the 529 and Coverdell,” *National Tax Journal*, Vol. LVII , No. 2, Part 2, (June, 2004), pp.359-383.
28. Some wealthier schools actually fund the “discount” from revenue sources such as the endowment or annual fund raising gifts. Accounting rules, however, do not count financial aid as a source of income.
29. Susan Dynarski, “Does Aid Matter? Measuring The Effect Of Student Aid On College Attendance And Completion,” *American Economic Review*, v93 (March, 2003), 279-288.

30. Since 2001, Coverdell Accounts can also be used for K-12 education, but this provision ends in 2010.
31. Julian Mincer, "College Savings Plans Underused," *Wall Street Journal*, June 2, 2009, p.B12.
32. Coverdell and 529 plans differ in the amounts annual contributions allowed and other restrictions; however, the basic tax treatment is the same for both. The analysis in this report uses "529 plan" to describe both programs.
33. The conceptualization, original analysis, and calculations presented here are reported in Susan Dynarski, "Who Benefits from the Education Savings Incentives? Income, Educational Expectations and the Value of the 529 and Coverdell," *National Tax Journal*, Vol. LVII, No. 2, Part 2, (June, 2004), pp.359-383.
34. Alabama, however, is the exception to the rule. Most states exempt both state and non-state 529 plans from income tax.
35. See Dynarski, *op cit*.
36. http://www.savingforcollege.com/529_fee_study/fee_study.php
37. Using this investment strategy, the author of this paper lost only 10 percent over the past year in his 2009 college-bound son's 529 plan, which has returned 28 percent on the original investment in nine years. Friends and relatives are looking at 50 percent depletion in their original college savings from their personal investment accounts.
38. This information and a rating for each fund are tracked on a very informative website: <http://www.savingforcollege.com>. Another website with strategies and advice about 529 plans is <http://collegesavings.about.com>.
39. Private institutions use their own formula that sometimes differs from federal policy.
40. This estimate is based on the research described in this article with assumptions about the returns on investment increasing at roughly the same rate as college tuition, fees, room and board. The recent downturns in investment products as well as the varied increases in college prices affect this and other estimates in this report. Consult a financial advisor or a lawyer about tax advice.
41. Alexa Capeloto, "Thousands of Students Can't Get College Classes," *Union Tribune*, January 13, 2009.
42. Matt Krupnick, "UC Regents Cut Enrollment, Freeze Salaries," *The Mercury News*, January 15, 2009.
43. James C. Palmer [ed.], "Grapevine: An Annual Compilation of Data on State Tax Appropriations for General Operation of Higher Education," Center for the Study of Education Policy, Illinois State University, Normal, IL.
44. The term "price of attendance" (POA) is more descriptive than the commonly used phrase "cost of attendance" (COA). Higher education economists like to differentiate between "price," the amount a consumer pays, and "cost," the amount an institution spends. "Price of attendance" for financial aid offices also includes "incidental fees" such as travel, books and computers, but are not part of the calculations in this paper.
45. Athletic scholarships are another form of "merit" aid, but reductions in the price of attendance for athletes is rarely included in financial aid data. The conceptual similarity makes the analysis in this report relevant to athletic scholarships, even in the absence of supporting data.
46. The two formulas are mutually exclusive. In this model, if it is a scholarship within need, it is called a grant, if it is a scholarship beyond need, it is a scholarship.
47. Critics correctly point out that the number of applicants that are "typical" depends upon the distribution of students applying to a school; in fact, a very small number of students are actually "typical" and thus estimates such as the one in this report are not practical for a large portion of the population. On the other hand, an average typically represents the best calculation for the largest number of individuals. The Expected Net Price is a construct for further analysis, discussion, and criticism of public policy.
48. Includes students who receive both a grant and a scholarship. A small number of students at relatively wealthy schools may receive a scholarship beyond need; but these cases are rare enough to ignore in a general analysis.
49. This report does not use the phrase "full-pay" which generally refers to students who receive no grants, loans, or job. Some aided students receive no grant or scholarship.
50. Salem State College is not included because of irregularities in the published data.
51. The URL for Peterson's is <http://www.petersons.com/ugchannel/code/searches/srchCrit1.asp>; the URL for the "College Navigator" is <http://nces.ed.gov/collegenavigator/>
52. For a basic explanation of the economic principles underlying this tradeoff, see Sandy Baum, *Higher Education Dollars and Sense*. New York: College Entrance Examination Board, 2001.
53. Michael S. McPherson and Morton Own Schapiro, "Watch What We Do (and Not What We Say): How Student Aid Awards Vary with Financial Need and Academic Merit," in Michael S. McPherson and Morton Owen Schapiro [ed.], *College Access: Opportunity or Privilege?* New York: The College Board, 2006, p. 72.
54. *Ibid*. p. 71.
55. See Donald E. Heller, "Institutional and State Merit Aid: Implications for Students," Unpublished paper presented at the University of Southern California Center for Enrollment Research, Policy, and Practice, Los Angeles, CA, August, 2008.
56. In this paper, we refer to the "faculty to student ratio" rather than the more commonly used phrase "student-faculty ratio." The reversal of terms is necessary so that all measures of "quality" increase with higher numbers.
57. Goethals, G.R., Winston, G.C., and Zimmerman, D.J, "Students educating students: The emerging role of peer effects in higher education," in M.E. Devlin & J.W. Meyerson (eds.) *Forum futures: exploring the future of higher education*, Forum publishing, 1999. See also Gordon Winston and David J. Zimmerman, "Peer Effects in Higher Education," National Bureau for Economic Research Working Paper 9501, Cambridge, MA, February, 2003.

58. Woodrow Wilson, Phi Beta Kappa address, 1909, quoted in Burton Clark and Martin Trow, *College Peer Groups*, 1975.
59. Bruce Sacerdote, "Peer Effects with Random Assignment: Results for Dartmouth Roommates," *Quarterly Journal of Economics*, v 116, no. 2, pp. 681-704; Todd R. Stinebrickner and Ralph Stinebrickner, "Peer Effects among Students From Disadvantaged Backgrounds," CIBC Working Paper Series, (December, 2001), University of Western Ontario.
60. Giorgio Brunello, et al., Residential Peer Effects in Higher Education: Does the Field of Study Matter? *Discussion Paper Series*, (January, 2008), IZA DP. No. 3277.
61. For example, see William C. Friday and Theodore M. Hesburgh, *A Call to Action: Reconnecting College Sports and Higher Education*. Report of the Knight Foundation Commission on Intercollegiate Athletics, June, 2001. Also James. J. Duderstadt, *Intercollegiate Athletics and the American University*. Ann Arbor: University of Michigan Press, 2000, ch. 9.
62. Private institutions like to point out the price differential for graduating from a private institution in four years and a public institution in five or six years. See National Association of Independent Colleges and Universities, "Twelve Facts that May Surprise You about America's Private Colleges and Universities," p 17.
63. Paul Attewell and David Levin, et. al., *Passing the Torch*. New York: Russell Sage Foundation, 2007.
64. Admissions "rate" is generally defined as the number of students admitted divided by the number of students who applied. "Yield" is the number of students who enrolled divided by the number of students who were admitted. Low admission rates and high yield generally define the term "selectivity" as used among admission officers and guidebooks.
65. See William G. Bowen, et al., *Equity and Excellence in American Higher Education*. Charlottesville: University of Virginia Press, 2005.
66. Anthony M. Marx, "Inaugural Address: 'Terras Irradiant,'" Amherst College, Amherst, Massachusetts, October 26, 2003.
67. Private schools are not included in this analysis since several of the decisions are not options. For example, the residential experience is considered part of the education they offer at places like Amherst, Harvard, MIT, Mt. Holyoke, Smith, Wellesley, or Williams. Living at home is typically not an option that students consider when applying. In-state and out-of-state tuitions do not differ at private institutions.
68. Room and board for the University of Massachusetts at Boston, which does not have dormitories, were calculated at the average of all public schools in the state for comparability.
69. This estimate averages two years of tuition and fees at a community college, one year at the 33 percent reduction, and one year at full pay. It does not consider the time value of money nor tuition increases.
70. See Vance Lancaster, "Scholars Take Surprising Path to Elite Colleges... From Community College," News Release, Jack Kent Cooke Foundation, Landsdowne, VA, July 8, 2008.
71. Ellen M. Bradburn et al., *Community College Transfer Rates to 4-year Institutions Using Alternative Definitions of Transfer*, US Department of Education, Office of Education Research and Improvement, NCES 2001-197, May 2001.
72. Some financial aid administrators provide advice about financial planning to families about the best loan instrument and various alternatives for funding college payments. Again professionalism prevails. The point here is that the information is not structured to help families make their own financial decisions.
73. Actually, the process works in reverse. The financial aid office calculates an EFC, subtracts it from the Price of Attendance, and fills in the remainder with the components of the package.
74. "Full pay" is an example of a financial aid term that is structured from the perspective of the institution. Indeed, all students are "full pay;" some receive assistance from the government and the institution.
75. Marie Chaker, "Students Borrow More than Ever for College, *Wall Street Journal*, September 3, 2009, p. D1.
76. These data also include participation and dollar amounts in the Supplemental Loan for Students Program prior to its elimination in 1994. See Lutz Berkner and Larry Bobbitt, "Trends in Undergraduate Borrowing: Federal Student Loans in 1989-90, 1992-93, and 1995-96, US Department of Education, National Center for Education Statistics, NCES 200-151, March, 2000. Christina Chang Wei and C. Dennis Carroll, "Trends in Undergraduate Borrowing II: Federal Student Loans in 1995-96, 1999-2000, and 2003-04," US Department of Education, National Center for Education Statistics, NCES 2008-179rev, February, 2008.
77. The APR for Subsidized Stafford Loans with changing interest rates is calculated using the anticipated interest rate for 10 years following no interest payments for 4.5 years at 5.6 percent, then 3.5 years at 3.4 percent, etc.
78. The information in this paper is produced for theoretical comparisons. Neither the author of the article nor MassInc are responsible for individual investment decisions implied in the findings. Readers should consult a tax lawyer and financial advisor about of an investment product, funding, legal advice, or tax analysis applicable to their own situation.
79. At this writing, the new federal aid program would expand Perkins loans to more institutions and increase the budget from \$1 billion to \$6 billion, but would exclude the in-college no-interest subsidy.
80. The institution, of course, must be eligible for federal financial aid under provisions of Title IV of the Higher Education Act.
81. Since July 2006, PLUS loans are also available to Professional and Graduate students.
82. President Obama's education plan would eliminate FFELP as a source of lending. Some schools are switching to FDSLPL in anticipation of the change.
83. See <http://www.finaid.org/calculators/loanpayments.phtml>
84. MEFA once was a FFELP source for loans but suspended making federal loans in April 2008.

85. Fixed-rate loans may also use one of these indices on a specified date to determine interest rates. LIBOR stands for London InterBank Offered Rate and is also known as Eurodollar deposits. The LIBOR and 3 month T-bills, and prime generally track each other although the spread on these indices has varied in recent years as the EURO itself goes up and down against the dollar. See http://www.finaid.org/loans/prime_libor.phtml
86. Variable-rate PLUS and Stafford Loans are no longer available.
87. Since 2005, banks can also make the loan payable directly to the borrower, so-called "Direct to Consumer" or "DTC" Loans. Financial Aid administrators may not even know that a family received a DTC Loan, which makes serving as a financial planner and adviser for students more difficult.
88. The American Recovery and Reinvestment Act of 2009 increases the maximum Pell Grant to \$5,350 in 2009-10 and \$5,550 in 2010-11. Hiring rates for college students fell 22 percent from a year ago. See "College Hiring Falls 22 Percent," Spotlight Online, www.nacweb.org/spotlight/2009/c031809.htm, March 4, 2009.
89. On the other hand, trees that give too much end up with little to give. See Shel Silverstein, *The Giving Tree*. New York: Harpercollins Childrens Books, 1964.
90. Steve Lohr, "Crème de la Career," *New York Times*, Week in Review, April 12, 2009, p. 1+.
91. NDSLPL Loans have no minimum for consolidation.
92. Perkins Loans have favorable deferment and forbearance options, which is another reason not to include them in a Consolidation Loan.
93. The FFELP program also has a higher proportion of 2-year and proprietary schools that have higher default rates than either public or private 4-year institutions. See Jane Glickman and Stephanie Babyak, "Early effects of the downturn in the economy likely contributed to increase," Press Release, US Department of Education, September 14, 2009.
94. John Hechinger and Robert Tomsho, "Student-Loan Default Rate Rises," *FiLife in Partnership with the Wall Street Journal*, March 26, 2009, <http://www.filife.com/stories/studentloan-default-rate-rises>.
95. Denne Loonin, "Too Small To Help: The Plight of Financially Distressed Private Loan Borrowers," (April 2009) Student Loan Borrower Assistance Project, National Consumer Law Center, Boston, MA.
96. See, Sandy Baum and Jennifer Ma, *Education Pays*, The College Board, 2007.
97. John Pryor, et al., *The American Freshman: Forty Year Trends*. Los Angeles: Higher Education Research Institute, 2007. John Pryor, et al., *The American Freshman: National Norms Fall 2008*. Los Angeles, Higher Education Research Institute, 2008.
98. Differences in lifetime earnings may be attributable to other factors as well as education. For example, higher income families are more likely to send their children to college than low-income families. Thus, a disproportionate number of college graduates start their careers with the benefit of higher socio-economic status.
99. Note that the phrase "discount rate" is also used to describe tuition discounting as described earlier.
100. The conceptualization and all calculations in this model were originated by Sandy Baum and Jennifer Ma using Census data. The data and graph were originally published in Sandy Baum and Jennifer Ma [ed.], *Education Pays 2007*. Washington: The College Board, 2007.
101. Room and board are not included in the calculations since the high school graduate must also live somewhere and eat.
102. Susan Dynarski, "Who Benefits from the Education Saving Incentives? Income, Educational Expectations and the Value of the 529 and Coverdell," *National Tax Journal*, vol. LVII, no. 2, part 2 (June, 2004), pp. 359-83.
103. See I Have a Dream Foundation <http://www.ihaveadreamfoundation.org/html/impact.htm> .
104. "Report and Suggestions from IPEDS Technical Review Panel #26: Requirements of the Higher Education Opportunity Act: Multiyear Tuition Calculator and Net Price Calculator Template," January 27-28, https://edsurveys.rti.org/IPEDS_TRP/docuemnts/TRP_25_20081028.pdf
105. However, see Jane V. Wellman, Donna M. Desrochers, Colleen M. Lenihan, *Trends in College Spending*. Washington: Delta Cost Project, 2009. The report estimates the institutional cost per student for two state systems and uses IPEDS data to estimate the subsidized and student portions of public education in each state.
106. Price is not the only reason to secure a loan with a lending institution; the terms and conditions of repayment are also important. Colleges and universities often provide a "preferred lender" list from their experience with lending institutions as a service to students and their families. The flexibility of repayment is covered in the next branch of the College-Bound Decision Tree.
107. Mark Kantrowitz, "Characteristics of Private Student Loan Borrowers Who Do Not Use Federal Education Loans," *FinAid.org*, June 7, 2009, p. 14.
108. At this writing the House of Representatives passed an amendment to the proposed regulations of the financial industry requiring lending institutions to certify that a student borrower has talked with a financial-aid officer about federal student loan alternatives." The House bill passed on party lines and will likely face greater opposition in the Senate.
109. Kantrowitz, p. 2.
110. For example, making standardized test scores less expensive and easier to send to multiple colleges increased the application rate of low-income students to selective colleges. See Amanda Pallais, "Small Differences that Matter: Mistakes in Applying to College," Unpublished paper presented at the National Bureau of Economic Research, February, 2009.
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115. Staff, "Tufts Sees Positive Impact on Loan Repayment Program," *Inside Higher Ed*, Quick Takes, June 24, 2009.
116. John Hechinger and Robert Tomsho, "Student-Loan Default Rate Rises," *Wall Street Journal*, March 26, 2009.
117. Ben Miller, "Getting to Know Guarantee Agencies: Federal Subsidies and Payments," *The Higher Ed Watch Blog*, July 2, 2009, p.1.
118. *Ibid*, p.2.
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120. They are not even discharged upon death! A borrower's estate or cosigner retains the obligation to repay the loan when death occurs.
121. For example, see Deanne Loonin, "Too Small to Help: The Plight of Financially Distressed Private Student Loan Borrowers," Boston: Student Loan Borrower Assistance, April, 2009.

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