

Is College Affordable? In Search of a Meaningful Definition

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July 2012



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Acknowledgments

This brief arose from a longer paper that was originally commissioned by the Canada Millennium Scholarship Foundation. We thank Andrew Parkin, Noel Baldwin, Joseph Berger, and Anne Motte from the foundation for their support and for their insightful comments. The brief has also benefited from useful input from Michael McPherson, Alisa Cunningham, and Brian Sponsler. All errors remain our own. We are grateful to the Bill & Melinda Gates Foundation for supporting the publication of this brief. To read the full paper, see http://gsehd.gwu.edu/research/workingpaperseries.

Introduction

Rising college prices, stagnating incomes, and diminished asset values have led to the widespread perception that college is "unaffordable" for more and more people. The role of student aid in reducing the prices many students pay is too complex to be widely understood, and in spite of increasing enrollment rates, most people do not question the idea that college is unaffordable.

The goal of this brief is to make progress in understanding what it really means for college to be "affordable" or "unaffordable." The idea that college is unaffordable simply because it is "too expensive" is not very constructive, and the common practice of comparing published tuition prices—or the combination of tuition and living expenses—with family incomes is misleading. Understanding the complex factors affecting the actual price of college, perceptions of that price, and the very real (and not so real) struggles facing today's students is vital to efforts to increase educational opportunity.

Is college affordable? For policymakers, an important starting point is to recognize that affordability is unavoidably subjective. Some parents make great sacrifices to pay for their children's education. Others who may have greater resources are unwilling to sacrifice current consumption for the uncertain benefits of a college education; their children may enter the labor force rather than going to college. The difference between these parents is not only in their incomes or in the options available to them, but in their preferences and priorities.

Economists have long focused on the concept of education as an investment that, on average, pays off well over the long term, for both individual students and society as a whole. Yet many families lack faith in that premise. Instead, concerns about the published "sticker price" of college, about the necessity of borrowing to pay college expenses, and about the uncertainty of future employment frequently dominate policy discussions. An increasing percentage of Americans believe that a college education is vital to success in the work world, but a declining percentage believe that it is within reach of most qualified and motivated students.¹

In an effort to develop the foundation for more constructive policy discussions on the financial barriers to postsecondary education, this brief discusses a variety of ways to approach the concept of affordability. The first step is to review work in two other policy areas—housing and health care—in which affordability issues receive considerable attention. Although the subjectivity of the term "affordability" cannot be avoided, housing and health care analysts have made some progress in developing benchmarks.

The brief then discusses two important facets of the debate about affordability that should be clear in the minds of policymakers. First, the costs and benefits of college are widely misunderstood. In particular, the concept of "net price"—the price students pay after receiving financial aid that does not have to be repaid—is difficult to communicate. Second, the uncertain return on higher education makes the investment risky and therefore less attractive for many people.

Whether or not college is "affordable" depends on a combination of the price students pay and the returns they experience over time. Some students pay a lower price because they receive subsidies from their families. Others depend on governments, institutions, and other sources to lower the prices they pay and increase the return on their investment.

¹ J. Immerwahr and J. Johnson. 2010. Squeeze Play 2010: Continued Public Anxiety on Cost, Harsher Judgments on How Colleges Are Run. Washington, DC: Public Agenda and the National Center for Public Policy and Higher Education.

http://www.highereducation.org/reports/squeeze_play_10/squeeze_play_10.pdf.

Affordable Housing and Affordable Health Care

Discussions of affordability in housing and health care policy are similar to those in postsecondary education along several important dimensions.²

Although housing and health care are higher on the list of what people consider basic rights, education is also considered a "merit good," one to which many think all citizens should have access. Concerns that these special goods are unaffordable lead to demands for public policies that reduce prices to a level deemed affordable. By contrast, a belief that restaurant meals or commercial airfares are unaffordable would not elicit the same push for policy reform.

Another similarity to housing is that education, like buying a house, is a long-term investment, one that is expected to improve life for many years. The concern about college affordability is widespread because higher education opens many doors, both financial and non-financial, for those who are able to participate and succeed.

In housing and health insurance, understanding affordability requires thinking in terms of regular payments—not of a house or a major medical procedure being paid for all at once at the moment of purchase. Few people have difficulty thinking about buying a house as a purchase to be paid for over time. Monthly mortgage payments, rather than the total purchase price, are most relevant to determining what is affordable. Likewise, health insurance payments make medical procedures that otherwise would be financially out of reach more affordable, because they are paid for over time.³

These ideas are widely accepted in housing and health care discussions, but are less often highlighted in debates about

postsecondary education. Nonetheless, they provide a logical basis for sounder public policy. These ideas are more fully developed below.

Housing

Housing, along with food and clothing, is a necessity that must be paid for before any other expenses are considered. Assessing the extent to which housing is affordable begins by recognizing that the difference between a family's after-tax income and its housing costs is all that can be spent on non-housing expenses. If that difference is too small to cover a basic level of non-housing expenses, the family is judged to have a housing affordability problem. In the housing literature, this is known as the "residual" income approach.⁴

An affordable home purchase is usually considered one that has affordable monthly mortgage payments, where "affordable" is defined in terms of residual income. It is not the total price of the house that is the issue, but rather the question of whether the buyer's income can support the mortgage payments over the long term and leave enough to pay for other necessities. Households also have the alternative of renting, which makes monthly payments the only issue.

² Not surprisingly, there are differences as well. Like all insurance programs, health insurance pools risks across a large number of diverse individuals. Neither housing nor postsecondary education has this explicit risk-pooling. Housing, unlike postsecondary education or health insurance, provides an immediate and transparent benefit.

³ Health insurance is also more affordable because insurance spreads the risk of ill health across the entire population. Almost all are at risk of ill health; those who are currently in good health subsidize the less fortunate.

⁴ For a more complete discussion, see M. E. Stone. 2006. "What Is Housing Affordability? The Case for the Residual Income Approach," *Housing Policy Debate* 17, no. 1, 151–184. For a general analysis of related issues, see J. D. Hulchanski. 1995. "The Concept of Housing Affordability: Six Contemporary Uses of the Housing Expenditure-to-Income Ratio," *Housing Studies* 10, no. 4, 471–491.

Health Care

Discussions of health care reform in the United States are peppered with references to "affordable" insurance premiums. As is true in postsecondary education discussions, however, the definition of "affordable" is rarely made clear. It may be helpful to examine two different definitions of affordability from the health care literature. 5 Both definitions adapt the residual income idea discussed above.

The first definition requires the specification of a threshold for the minimal acceptable level of health insurance and a second threshold for a minimum consumption level, net of health insurance payments. For example, suppose \$3,000 per year is the price of the minimum acceptable health insurance premium and \$25,000 per year is the minimum amount needed to sustain a reasonable level of consumption of items other than health insurance. Health insurance would be considered "unaffordable" for any family with an income less than \$28,000 per year. In reality, a significant number of families with very low incomes do purchase health insurance, whereas many of those with much higher incomes do not. In our example, because preferences for health care and other goods vary, some families with incomes greater than \$28,000 may not buy health insurance ("non-insured afforders") and some families with incomes less than \$28,000 may buy it ("insured non-afforders").

A second, "behavioral" definition of health insurance affordability takes into account the actual consumption patterns of households at different income levels. It defines the income at which health insurance is affordable as the income level at which half of all households make the purchase. Both definitions of affordability share an important characteristic: They generate clear benchmarks for determining for whom the expenditure is affordable. These benchmarks are constructed in the spirit of the calculation of a poverty line. They say "if income is higher than a certain level, the family can afford health insurance," just as the poverty line says "if income is less than a certain level, the family is poor." The benchmarks are suggestive, not definitive. Notably, they direct the focus to income levels rather than to the price of health care.

The Concept of Affordable Postsecondary Education

Despite the similarities, there are important differences in the way people view housing, health care, and postsecondary education. One problematic issue concerning postsecondary education relates to intergenerational questions. In housing and health care, there is a general assumption that parents make the necessary payments for children, who take responsibility for themselves once they reach adulthood. However, a central question in considering the affordability of postsecondary education is whose financial situation is relevant—the student's or the family's.

Most discussions of affordability focus on the necessary expenditure relative to family incomes at the time the student enrolls, either in terms of the parents' income or the earnings of older students and their spouses. Students' ability to repay their debts after college is, however, also an area of concern. The

⁵ The discussion here is based on that in M. K. Bundorf and M. V. Pauly. 2006. "Is Health Insurance Affordable for the Uninsured?" *Journal of Health Economics* 25, 650–673.

central focus should be on long-term affordability for the student with parental resources providing significant subsidies for many. The postcollege earnings of the student are relevant for assessing reasonable levels of debt financing. That is, concerns over whether parents of potential students are able to pay for postsecondary education are actually concerns over the extent to which those parents can make education less costly for their children.

For many parents and students, postsecondary education is not as essential as housing or health insurance. Some people have no interest in postsecondary education regardless of the level of their resources. Those who are inclined to enroll in college may think first of how much they spend on basics such as housing, food, medical care, and other regular expenditures. If there is not enough extra money in the budget when it comes time to pay for college, they do not think they can afford it. In other words, they see expenditures on postsecondary education as the residual rather than as an essential expense.⁶

In addition, the expenditure is not consistent over time. Families manage their budgets for many years, usually without high levels of savings, and are suddenly faced with a large expense when it is time to help their children pay for college. Adults

There are well-established and well-accepted institutional structures for paying for housing and health care over time—but not for postsecondary education. Rather, education debt is widely considered an inappropriate burden. Paying for college is usually framed in terms of the annual out-of-pocket cost for the few years the student is in school, even though the benefits are enjoyed over a longer period. The difference is not so much in the nature of the expenditure as in the way it is framed. It is possible that education would seem more affordable if people thought about it as a fundamental need and as an investment to be paid for over time, much as they think of housing.

considering postsecondary education enrollment face a similar situation. Paying for college then requires giving up something else they are accustomed to buying.

⁶ Archibald and Feldman argue that if after paying for college, there is enough left over to pay for everything that the people who pay for college used to buy, college has not become less affordable even when its price rises. R. Archibald and D. Feldman. 2008. "Explaining Increases in Higher Education Costs," *The Journal of Higher Education* 79, no. 3, 268–295.

⁷ Part of the issue here is again that both housing and health care provide immediate and visible benefits, whereas postsecondary education has large upfront costs and, aside from the value of the educational experience itself, benefits that are uncertain and seemingly distant.

The Complexity of Price

TABLE 1

Net Tuition and Fees, Net Room and Board, Average Grants, and Total Published Price, 2007-08: U.S. Public Four-Year Colleges

	INCOME QUARTILE				
	LOWEST	SECOND	THIRD	HIGHEST	
Total Published Cost of Attendance	\$16,496	\$17,078	\$17,724	\$18,688	
Average Total Grant Aid	\$7,092	\$4,348	\$2,235	\$1,817	
Net Tuition and Fees After All Grant Aid	\$0	\$1,916	\$4,507	\$5,586	
Net Room, Board, and Other Expenses	\$9,404	\$10,814	\$10,982	\$11,285	

Source: The College Board, Trends in College Pricing, 2009; National Postsecondary Student Aid Study, 2008

TABLE 2

Published and Net Prices for Full-Time Dependent Public Four-Year College Students in the United States, 1992–93 to 2007–08:

Students in the Lowest Income Quartile

	1992–93	1995–96	1999–00	2003–04	2007–08	AVERAGE ANNUAL % INCREASE 1992-93 TO 2007-08	AVERAGE ANNUAL % INCREASE 2003-04 TO 2007-08
Published Tuition and Fees	\$2,582	\$3,219	\$3,369	\$4,669	\$5,723	5.4%	5.2%
Total Student Budget	\$8,493	\$9,471	\$10,715	\$13,458	\$16,496	4.5%	5.2%
Total Grants	\$2,357	\$2,928	\$3,719	\$5,295	\$7,092	7.6%	7.6%
Net Tuition and Fees	\$225	\$291	-\$350	-\$626	-\$1,369	NA	NA
Net Student Budget	\$6,136	\$6,544	\$6,996	\$8,164	\$9,404	2.9%	3.6%

Source: National Postsecondary Student Aid Study, 2008

NOTE: The lowest income quartile includes families with incomes below \$32,500 in 2006, with the income cut-off the same in inflation-adjusted dollars for earlier years.

The price of postsecondary education is less obvious than that of housing or health insurance. This is partly due to the attention that is paid to the rapid rise in published "sticker" prices. For any number of reasons, however, many students pay less than the published price. Most schools award institutional scholarships, grants, or tuition waivers to selected students,

reducing the price that these students pay. Additional grants come from federal and state governments. Tax credits and subsidized student loans also provide benefits to students and their families, but these benefits are often far less transparent than student grants.⁸ The *net price*, which takes these subsidies into account, is a better measure, but is less visible.

College prices vary dramatically from state to state, but as **TABLE 1** indicates, in the United States in 2007–08, low-income students received enough grant aid on average to cover the entire tuition and fees at public two- and four-year colleges, leaving living expenses the only actual affordability issue. Moreover, average net tuition and fees for students in the lowest income quartile at U.S. public four-year institutions actually declined from 1995–96 through 2007–08 (**TABLE 2**). However, because many students do not have adequate information, their choices may sometimes respond to the published prices rather than to the actual net prices they would pay.

Misperceptions of Postsecondary Education Prices

There is substantial evidence that people are making choices in the face of considerable misperceptions about the price of postsecondary education, whether the published price or the net price. The complexity of the pricing and aid systems contributes to the misperceptions. Such misperceptions are especially likely when some of the costs and benefits of a purchase are both uncertain and spread out over time, as is the case for postsecondary education.

Several studies have examined price misperception in U.S. postsecondary education. Their findings suggest that the public significantly overestimates the price of college. There is some evidence that lower-income individuals have more inflated perceptions than others, and stronger evidence that African Americans estimate price less accurately than Whites.

If parents and students have trouble with readily available published prices, how much more trouble might they have estimating net price, which also involves calculating the value of grant aid, and perhaps even tax credits or loan subsidies? The net price calculators that all U.S. institutions are now required to post on their Web sites may make the concept of net price more visible and perhaps improve the accuracy of the estimates some families make. ¹¹ But surely these calculators will not suffice to clarify the pricing issue, particularly for students and families that are least familiar with postsecondary education. Policymakers must give careful consideration not only to policies that ensure that postsecondary education is affordable, but also ensuring that it is perceived affordable.

Postsecondary Education Prices as Reference Points

Even if prices are correctly perceived, the reference point from which people assess affordability is crucial. How people respond to an experience depends on what they are used to. This idea, one of the central tenets of behavioral economics, is simple to understand: A person arriving in 32-degree Chicago from zero-degree Winnipeg will perceive the quality of the weather differently than a person arriving from 72-degree Miami.

Many people believe that they have a fundamental right to postsecondary education, and rapid price increases may generate feelings of injustice. People are using the previous lower price as the reference point and judging the value and the fair price of the purchase accordingly. The same phenomenon can work in the other direction, of course. If those who have been overestimating the price of postsecondary education come to see that the published price is lower than they thought and the net price is lower still, their reference point will be their previous overestimate and the net price will be judged positively. In other words, both the price level and price changes affect perceptions of affordability.

⁸ Tax credits are difficult to understand and predict, are usually received long after the bills must be paid, and are rarely directly associated in recipients' minds with paying for college.

⁹ The true cost of attending college includes the earnings students forego by limiting their labor market participation in order to spend time on education. It does not include eating and paying for housing because those activities are necessary whether or not an individual is a student. However, for pragmatic reasons, TABLE 2 includes living costs, as a proxy for foregone earnings.

^{**}See S. O. Ikenberry and T. K. Hartle. 1998. Too Little Knowledge Is a Dangerous Thing: What the Public Thinks and Knows About Paying for College. Washington, DC: American Council on Education. For research on these issues as they pertain to low-income people or African Americans, see: L. Horn, X. Chen, and C. Chapman. 2003. Getting Ready to Pay for College: What Students and Their Parents Know About the Cost of College Tuition and What They Are Doing to Find Out. Washington, DC: National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education; and E. Grodsky and M. T. Jones. 2007. "Real and Imagined Barriers to College Entry: Perceptions of Cost," Social Science Research 36, 745-766.

[&]quot;See http://nces.ed.gov/ipeds/resource/net_price_calculator.asp for details of the net price calculator requirements. There is broad consensus that even though it is important to increase the available information, the variation across calculators, the difficulty of accessing many of them, and the complexity and inconsistency of the information they provide leaves considerable room for improvement.

Investment or Consumption?

Although it is not easy for everyone to see paying for college in this light, postsecondary education is undoubtedly a long-term investment that benefits both individual students and society as a whole. These benefits are partly financial and partly social and psychological. Even the personal long-run financial return to education is difficult to estimate precisely, but careful statistical analyses suggest that controlling for individual characteristics, the average monetary return to postsecondary education for individuals can be approximated by differences in median earnings by level of education. The 2010 earnings of full-time workers in the United States reported in TABLE 3 provide a good indication of the financial benefits associated with postsecondary education.

Despite the high average return on postsecondary education, however, there is considerable variation in the earnings levels of individuals at each level of educational attainment, and college does not pay off for everyone. Even if the expected return is high enough to make the investment a good one, the risks involved in ending up on the lower end of the distribution of returns and being left with an unsustainable debt burden may make the investment unappealing to some potential borrowers. Risk enters into all investment decisions and affects perceptions of the anticipated benefits. It affects the perceived affordability of postsecondary education.

Unfortunately, perhaps, the word "affordability" is not particularly useful in considering long-term investment decisions. A firm that is considering building a new factory in order to enter a new line of business does not worry about whether it has enough cash on hand to finance the construction and staffing of the enterprise. If

TABLE 3
Median Earnings of Year-Round Full-Time Workers
Ages 25–64 in the United States, 2010

EDUCATION	MEN	WOMEN	
High School	\$40,066	\$29,752	
Some College	\$46,447	\$33,229	
Associate's Degree	\$50,283	\$37,821	
Bachelor's Degree	\$64,174	\$47,353	
More than Bachelor's Degree	\$71,717	\$51,867	

Source: U.S. Census Bureau, Current Population Survey PINC-03, http://www.census.gov/hhes/www/cpstables/032011/perinc/new03_000.htm

¹² D. Card. 2001. "Estimating the Return to Schooling: Progress on Some Persistent Econometric Problems," *Econometrica* 69, no. 5, 1127–1160.

it can construct a solid business case demonstrating the likelihood of future profits arising from the new line of business, it assumes that it will be able to raise the necessary capital. The issues are liquidity and the expected rate of return.

Investing in education shares some of the features of investing in physical capital. In both cases, many different options are available. Some options have much higher expected returns than others, and the appropriate decision is not just whether or not to invest in a business or in education, but which of the alternatives is likely to be the best path for the individual investor. Postponing a promising investment until you can save enough to pay cash is rarely the best approach. Understanding both the likely returns and the uncertainty involved in predicting the outcomes is critical to wise investments.

Legitimate questions exist about the plausibility of imagining that students and families view an investment in postsecondary education in the same way private firms view industrial expansion. Most students and families cannot make economists' calculations of expected returns; some may be so risk averse that they avoid borrowing, while others may be unable to borrow enough to pay their out-of-pocket costs. Yet the existence of these questions does not imply that postsecondary education should be treated as a pure consumption good.

It makes sense to call consumption goods "unaffordable" if their purchase would leave too little money to pay for the necessities of life such as food and rent. If postsecondary education is seen as a long-term investment it is not meaningful to call it "unaffordable," regard-

less of the size of net tuition and fees, if loans are readily available to pay the relevant costs and if it is likely that the future earnings premium will be adequate to repay the loans.^{13, 14}

Although the investment perspective implies that family income is not relevant as long as there is no constraint on how much students can borrow, the funds that well-off parents give to their children diminish their children's need to borrow and repay out of future income. It might be argued that in a more perfect world, all students would receive the same total subsidy, either from parents or from other sources. Government and institutions would fill the gap for students whose parents are in no position to pay. Grant aid distributed according to family financial circumstances before college might also help to overcome the lack of information and the misperceptions about paying for college.

In other words, an understanding of paying for postsecondary education as a long-term investment should moderate concerns about unaffordability based on the relationship of price to precollege income. But both the uncertainty attached to the investment for any individual and the added hurdles faced by students whose families cannot subsidize them create a strong case for a significant government role in easing the burden of financing postsecondary education.

¹³ For detailed discussion of how much debt is manageable for students, see S. Baum and S. Schwartz. 2006. "How Much Debt Is Too Much? Defining Benchmarks for Manageable Student Debt." http://professionals.collegeboard.com/data-reports-research/cb/debt.

¹⁴ If net tuition and fees were extremely high, the economists' view would be that the high costs would force down the expected rate of return and lead some students to reject the college option even if they could borrow enough to pay the fees. The issue, though, would be the low rate of return, not the "unaffordability" of tuition and fees.

Conclusion

As policymakers attempt to address the problem of funding postsecondary education in an environment of rising prices, strained government budgets, and limited household resources, it is constructive to think about what it really means for college to be affordable. Looking at rising published prices and thinking of paying those prices out of current incomes is misleading. This brief provides perspectives on what determines whether, when, and for whom college is affordable.

- Affordability is unavoidably subjective. Understanding of the term may differ depending on preference and priorities, as well as on available resources and prices.
- In contrast to housing and health care, it is difficult for people to think of college as an investment that generates benefits over a longer period and can reasonably be paid for with installments over time. If benchmarks for college affordability are to be set, they should be given in terms similar to those that are historically accepted for housing—as monthly or annual payments over time, not as a year of college relative to a year of income before or during college.
- Although many students and families have very real difficulties paying for college, the perception of college affordability is often worse than the reality because (1) people believe that published prices are higher than they actually are; (2) many students and families are unaware of the magnitude of the grant aid and tax credits available to them, and therefore do not understand the extent to which the net price they will actually pay is lower than the published price; and (3) sensitivity to prices depends not only on the current price, but also on how much the price has changed. This problem is exacerbated by a sense of unfairness among people who believe that they should not actually have to pay for education.
- Postsecondary education is an investment with a high average rate of return, but it is an uncertain investment that does not pay off equally well for all. For example, students who leave school without completing credentials experience

- much lower returns than they might have anticipated. A weak economy increases the uncertainty associated with the level and timing of the return on investments in postsecondary education, but does not alter the fact that for most people, financial outcomes are far better than they would be without the investment.
- The costs and risks associated with postsecondary education are greatest for students whose families are unable to provide significant financial assistance. Grant aid for lowand moderate-income students can substitute for parental support, reducing the extra risk that low-income students take on because of their greater need to borrow.

A number of suggestions emerge from this perspective.

- The pricing and financial aid systems should be simplified and made more transparent and predictable. Clear and comprehensive information should be easily accessible to students and families. Merely increasing financial aid will not solve the affordability perception problem if people do not fully understand the complex pricing system and do not take the aid into consideration when estimating how much postsecondary education will cost them.
- In addition to better information about prices and aid, students and families need greater understanding of the monetary and non-monetary benefits of postsecondary education. Creative ways of communicating accurate information about the costs and benefits of college are needed.

- It is not practical to lower the price of college enough to eliminate the risk that it will turn out to have been a bad investment for some people. Instead, student loan programs should carry adequate protections. Students who end up unable to repay their education debts should be subsidized to prevent their low return from ruining them financially. The benefits that college carries for the society as a whole also justify such subsidies. Strengthening the federal income-based repayment plan, easing the restrictions on discharging student loans in bankruptcy, and eliminating the advantages that private lenders enjoy for high-interest student loans would go a long way toward making college more affordable for many students.
- Although future earnings should be adequate to fund the investment for most students, public subsidies play an important role in making up for the parental subsidies not available to students from low- and moderate-income families. In the absence of those subsidies, low-income students have to take on much greater risk than other students in order to invest in themselves. Both grant aid and subsidies provided through the tax code should be better targeted on disadvantaged students. This will increase equity, spread the risk more evenly, and increase the impact of financial aid on educational attainment.

