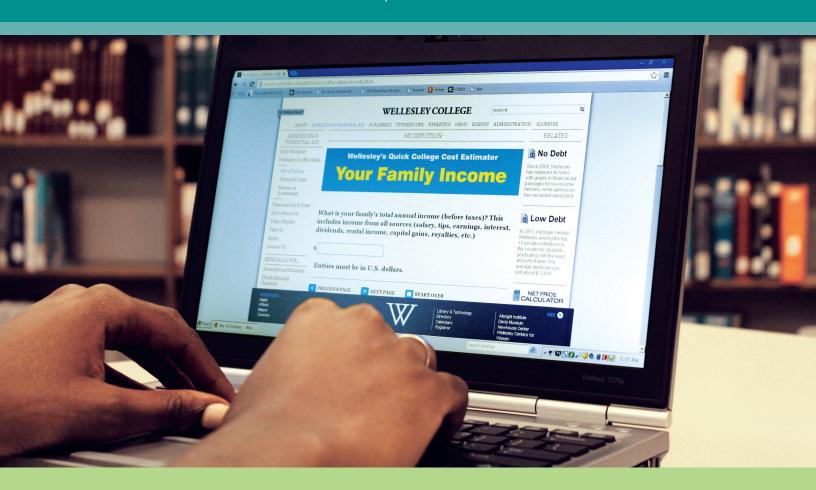


Simplifying Estimates of College Costs

Phillip B. Levine



MISSION STATEMENT

The Hamilton Project seeks to advance America's promise of opportunity, prosperity, and growth.

We believe that today's increasingly competitive global economy demands public policy ideas commensurate with the challenges of the 21st Century. The Project's economic strategy reflects a judgment that long-term prosperity is best achieved by fostering economic growth and broad participation in that growth, by enhancing individual economic security, and by embracing a role for effective government in making needed public investments.

Our strategy calls for combining public investment, a secure social safety net, and fiscal discipline. In that framework, the Project puts forward innovative proposals from leading economic thinkers — based on credible evidence and experience, not ideology or doctrine — to introduce new and effective policy options into the national debate.

The Project is named after Alexander Hamilton, the nation's first Treasury Secretary, who laid the foundation for the modern American economy. Hamilton stood for sound fiscal policy, believed that broad-based opportunity for advancement would drive American economic growth, and recognized that "prudent aids and encouragements on the part of government" are necessary to enhance and guide market forces. The guiding principles of the Project remain consistent with these views.





Simplifying Estimates of College Costs

Phillip B. Levine

Wellesley College and the National Bureau of Economic Research

OCTOBER 2013

NOTE: This discussion paper is a proposal from the author. As emphasized in The Hamilton Project's original strategy paper, the Project was designed in part to provide a forum for leading thinkers across the nation to put forward innovative and potentially important economic policy ideas that share the Project's broad goals of promoting economic growth, broad-based participation in growth, and economic security. The authors are invited to express their own ideas in discussion papers, whether or not the Project's staff or advisory council agrees with the specific proposals. This discussion paper is offered in that spirit.

Abstract

This paper proposes an extension of Wellesley College's recently introduced Quick College Cost Estimator to other higher-education institutions. The estimator is designed to overcome the sticker shock that many students experience when the only price of attendance they know is the stated level of tuition. The lack of information regarding the true cost of attendance often acts as a major impediment for students in the college decision-making process. The purpose of the estimator is to provide greater clarity regarding the true cost of attendance, increasing access for students from families that are less affluent. It provides prospective students with an estimate of what they might expect to pay based on just six basic financial inputs; students need just a few minutes to complete it. It is a tool that could easily be used at many other colleges and universities through collaboration with the College Board and affected universities. The ultimate goal is to allow students and their families to make more-informed choices about where they should apply to college.

Table of Contents

ABSTRACT	2
CHAPTER 1. INTRODUCTION	5
CHAPTER 2. THE CHALLENGE	7
CHAPTER 3. WELLESLEY'S APPROACH	9
CHAPTER 4. THE PROPOSAL	14
CHAPTER 5. QUESTIONS AND CONCERNS	17
CHAPTER 6. CONCLUSION	18
APPENDIX	19
AUTHOR AND ACKNOWLEDGEMENTS	21
ENDNOTES	22
REFERENCES	23

Chapter 1: Introduction

Information—or lack of it—was the single most frequently expressed problem. Almost without exception students felt that they were not aware of the possible financial aid programs available to them. Students had no means of planning because they had no information on eligibility rules (College Scholarship Service Advisory Committee 1976, 1).

That statement was one of the conclusions of a report summarizing congressional hearings that were held regarding financial aid almost forty years ago. In the intervening period, not much has changed (Long 2004). According to a 2009 College Board voluntary survey of students who registered

for the SAT, 59 percent only looked at stated levels of tuition (the sticker price) in evaluating the cost of attending a school, without taking into account financial aid (Hesel and Williams 2010). Yet the sticker price and the net price of attendance—what students actually pay after factoring in financial aid—may be quite different from each other, with the gap between them growing over time (College Board 2012a).

In this proposal, the sticker price of attendance refers to direct charges (tuition and fees, and room and board). In addition to these charges, students face additional expenses (books and

supplies, transportation, and personal expenses). The net price is the difference between total expenses and the grant component of a financial aid award (College Board 2011). The net price includes the expected family contribution (EFC)—which is the focus of much of the discussion below—as well as loans and work-study commitments. The common misperception about the cost of attendance could be a major impediment for students in the college decision-making process, and it could play a role—clearly along with other factors—in the tremendous disparity in higher-educational outcomes that exist in the United States. For instance, Greenstone and colleagues (2013) show that students

at the most-competitive schools are fourteen times more likely to come from a high-income family than from a low-income family.

Given the continuing information deficits that plague the higher-education marketplace, the federal government mandated in the 2008 Higher Education Act that colleges and universities introduce a net-price calculator to provide prospective students with an estimate of the cost of attending the institution. Although these net-price calculators are now in place, they are often difficult to use and sometimes even difficult to find. Consequently, recent developments suggest that an

The common misperception about the cost of attendance could be a major impediment for students in the college decision-making process, and it could play a role—clearly along with other factors—in the tremendous disparity in higher-educational outcomes that exist in the United States.

emerging, private-market solution could help. In September 2013, Wellesley College introduced a highly-simplified but dynamic online tool to provide estimates of a family's expected out-of-pocket cost of attendance: Wellesley's Quick College Cost Estimator (Wellesley College 2013a).¹

What makes this tool unique? Wellesley's Quick College Cost Estimator requires just six basic financial inputs, all of which are generally readily known (though sometimes with a degree of uncertainty) and can be entered quickly. Once a family inputs these six pieces of information, the calculator provides an estimate of that family's EFC as well as a range of cost estimates that correspond to its particular financial situation.²

The purpose of the Quick College Cost Estimator is to communicate to prospective students quickly and easily the cost they may be expected to pay relative to the sticker price of a college education. Although the difference between a cost estimate of \$15,000 and one of \$20,000 may be important down the road, at the start of the college search process, there is a more important difference between this range of cost estimates and the \$57,000 sticker price. In creating this calculator, Wellesley's hope is to encourage applications by showing the true cost of attendance and circumventing the sticker shock that can constrain the college application process.

The same steps that Wellesley has taken can be replicated at many colleges and universities around the country, providing valuable information for students and their families. In this paper, I propose the expansion of Wellesley's Quick College Cost Estimator and suggest an institutional environment to

do so efficiently. It does not make sense for dozens or hundreds of higher-educational institutions to reinvent the wheel and construct their own customized tool. Given the similarities in financial aid processes between institutions, it makes sense for this estimator's expansion to be handled by a single, third party. It would also be ideal if the single entity could use the same methodological approach and user interface to construct these estimates, thereby facilitating comparisons across schools for students.

I therefore propose, as the best-case scenario, that the College Board, with the collaboration of relevant universities, organize an effort to expand this estimator to schools that, like Wellesley College, use the institutional methodology (IM) in their financial aid determination process. The goal is to promote this development nationwide and assist universities in developing tailored, simplified estimators that can provide prospective applicants with an estimate of the price they may be expected to pay for attending that institution. The ultimate goal is to allow students and their families to make more-informed choices about where they should apply to college.

Chapter 2: The Challenge

REVIEW OF THE LITERATURE

Research suggests that providing more information to prospective students regarding the cost of attendance will have a substantive impact on their higher-education decision making. For instance, Bettinger and colleagues (2012) showed that individuals that were presented with the estimated cost of attendance at nearby colleges, including eligibility for financial aid, and that received assistance completing the Free Application for Federal Student Aid (FAFSA) form, were 29 percent more likely to subsequently complete two years of college.

Avery and Hoxby (2012) document that a large number of high-achieving, low-income students do not even apply to selective colleges and universities, perhaps in part because of misperceptions regarding the cost of attendance. Furthermore, Hoxby and Turner (2013a) report the results of a randomized controlled trial testing a program they call Expanding College Opportunities (ECO). They found that ECO provisions—including application guidance, guidance on the actual cost of college, and application fee waiversfor high-achieving, low-income high school seniors led these students to apply to colleges with a 17 percent higher four-year graduation rate, where instructional spending was 55 percent higher, and where median SAT scores were 86 points higher. In a recent Hamilton Project discussion paper, Hoxby and Turner (2013b) promote broader application of the ECO intervention. Although none of these studies directly addresses the introduction of a simplified estimator such as the Wellesley model, they all provide some hope that this new tool may affect access to and enrollment in higher education.

GOALS OF FINANCIAL AID

Financial aid is offered by institutions of higher education to satisfy two important goals: access and equity. Adjusting the cost of attending college enables students without substantial financial resources, who otherwise could not afford to do so, to enroll in college. In so doing, colleges also increase their ability to attract more-diverse and higher-quality students because these students may require financial assistance to attend. Maintaining the integrity of that system also requires focusing on equity; students with similar resources should incur similar expenses. Without due diligence in determining

what students and their families can afford, the financial aid system may unfairly advantage some students over others.

Both equity and access are legitimate goals, but they are often in conflict. To ensure equity, applicants are required to fill out financial aid forms that report vast amounts of financial information. Finding and reporting this detailed information, though, can impose large costs on the student and her family. As a result of this intensive screening, financial aid awards are not provided until perhaps early spring of the prospective student's senior year. The timing of this process may be a barrier to potential applicants who may not even apply to college because they overestimate how much it would cost to attend. The complexity of the current system is so severe that it led Dynarski and Scott-Clayton (2007), in a Hamilton Project discussion paper, to suggest replacing our current system with an application that fits on a postcard. Although this movement toward simplification satisfies the goals of access, it may, in certain situations, violate the principles of equity: without more financial information, schools may not be able to guarantee that students with similar resources receive similar aid packages.

The system that Wellesley College introduced is designed to accomplish both goals. The idea is to maintain equity by continuing to require the same intensive review process to determine final financial aid awards. To achieve the goals of access, Wellesley augmented the process with an upfront, simplified online tool that provides a quick estimate of how much parents might expect to pay if their daughter attends Wellesley College. Families will still have the opportunity to use the current, more-complicated net-price calculator that requires greater inputs, time, and effort to complete, but that yields more-precise estimates of college costs for families who choose to invest more time in the process.

CURRENT SITUATION

Most colleges and universities choose between two methods of analyzing need for the purpose of determining financial aid awards: the federal methodology (FM) and the institutional methodology (IM). Students are required to complete the FAFSA form if they wish to access federal student aid, including Pell Grants. Many schools (particularly state-supported institutions, less-selective private institutions, and for-profit

institutions) also rely exclusively on the FAFSA form and the FM to determine eligibility for additional aid from the school itself. However, more than 300 schools, such as Wellesley College, use the IM (see the appendix for the full list of schools). These schools perform a comprehensive need analysis, award substantial amounts of institutional aid beyond federal aid, and tend to be selective, private colleges. Schools that use the IM require students to also complete the CSS/Financial Aid PROFILE® (known as the PROFILE), developed by the College Board, to help determine the aid that will be granted by that institution (College Board 2013a). Although many more students attend state-supported institutions (which generally rely on the FM) than attend IM schools, most of the top schools in the country by any ranking system use the IM.

The IM approach starts with measures of income and assets, and then subtracts a number of allowances, resulting in measures of available income and discretionary net worth (Baum and Little 2013). Using the College Board's proprietary formula, the IM approach then converts these values into an EFC—what the family will have to pay. Although both the IM and the FM are designed to accomplish the same goal—determining ability to pay based on a family's finances—there are important differences in the two formulas (College Board 2013b). Perhaps foremost among them is the treatment of home equity: the FM does not count home equity at all and the IM does, although individual IM institutions can choose between several options regarding how much home equity is counted. The IM also allows greater allowances for things like employment-related

or medical expenses; in addition, the underlying formulas for constructing EFC estimates are quite different.

Because of the lack of clarity regarding actual costs of attending college, the federal government mandated in the 2008 Higher Education Act that colleges and universities introduce a net-price calculator to provide prospective students with an estimate of the cost of attending a given institution. These net-price calculators are now in place, but they are often difficult to use, requiring answers to a large number of questions and access to detailed financial records (see, for instance, Richard Pèrez-Peña's January 15, 2013, article in the New York Times, "Clarity and Confusion from Tuition Calculators," available online; and The Institute for College Access and Success 2012). They are even difficult to find at some schools: a 2011-12 College Board survey found that the majority of students (and around 60 percent of students from low- and middle-income families) ruled out schools because of the sticker price, not the net price, even after the introduction of these net-price calculators (Hesel and Meade 2012).

The U.S. Department of Education (2010) has made an attempt to overcome this information deficit by creating the FAFSA4Caster, which provides an estimate of the EFC based on very few financial inputs. This tool is useful for FM schools, but may not be appropriate for IM schools, due to differences in the underlying formulas. This paper, therefore, proposes a solution to the information-deficit problem evident at IM schools.

Chapter 3: Wellesley's Approach

THE QUICK COLLEGE COST ESTIMATOR

After a student's family completes the PROFILE, the student chooses the schools to which she wants to send the financial information. Each college receives the student's financial information along with an initial estimate of the EFC, then begins its own review process and decides whether to deviate from the College Board's estimate of the EFC. Some deviations are attributable to mistakes in entry, changes in circumstances (like a lost job), or updates or corrections that do not really depart from the base IM formula. Other possible changes, categorized as "professional judgment,"

are substantive modifications to the initial calculations, which are implemented based on the financial aid officer's individual and detailed review of the case.

Wellesley's new Quick College Cost Estimator uses the IM formula as its basis. This formula is proprietary to the College Board, but Wellesley is able to use it under a specific licensing agreement stipulating its use for research purposes. In essence, the online tool attempts to estimate the results that the

IM formula would generate, but with far fewer inputs. This means that the first obstacle in the success of the estimator is the role of professional judgment. If professional judgment plays a large role in determining financial aid awards, then the estimator would yield poor estimates of the actual EFC.

Although professional judgment comes into play in some financial aid decisions at Wellesley College, it does not do so often. Figure 1 displays the relationship between the value of the EFC calculated solely using the IM formula, and what families ultimately pay. Each data point represents a Wellesley College student who applied for aid for the 2013-14 academic year. The clear pattern in this figure shows that most students fall on the 45-degree line, which indicates equality between the preliminary EFC calculation and the final EFC determination. The other interesting point about this figure is that professional judgment is typically not that large; when adjustments are

made, they tend to favor the family by reducing the EFC. The patterns in this figure suggest that if the estimator can yield a reasonable estimate of the EFC based on the IM formula, then it will also be providing a reasonable estimate of the final EFC.

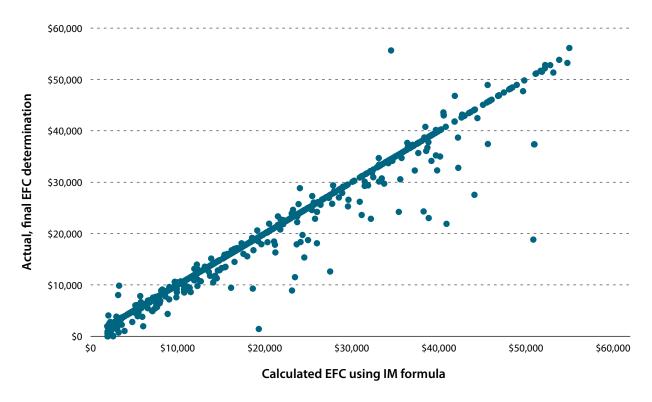
The approach taken with the Quick College Cost Estimator is to provide predicted values of available income and discretionary net worth based on the following six financial characteristics: (1) total family income, (2) home value, (3) remaining mortgage balance, (4) cash in savings and checking accounts, (5) value of retirement investments, and (6) value of nonretirement investments. The value of retirement

In essence, the online tool attempts to estimate the results that the IM formula would generate, but with far fewer inputs.

> investments is not actually included in the IM formula; the estimator function asks for this value to clarify the distinction between retirement and nonretirement investments. Feedback from focus groups that tested the estimator indicated that asking only about the value of nonretirement investments generated confusion regarding the types of investments to include. Once these predictions of available income and discretionary net worth are available, the IM formula is applied to obtain a predicted value of the EFC.

> A comparison between the Quick College Cost Estimator predictions and the actual, final EFC determinations provides an indication of the accuracy of these estimates. Figure 2 shows that the estimates match final EFC determinations quite well (the correlation between the two is 0.94). A handful of major outliers are evident, but for the most part, the discrepancies

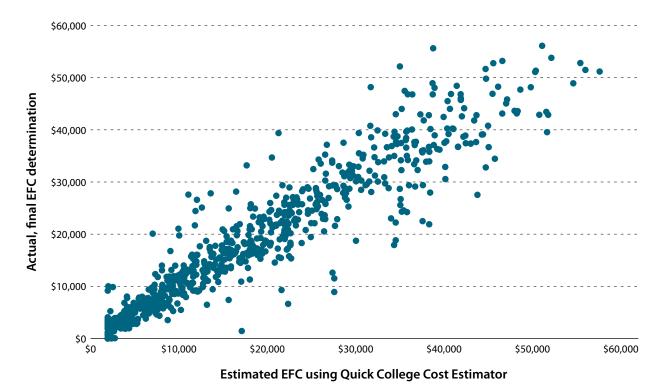
The Role of Professional Judgment in Calculating the Expected Family Contributions (EFC)



Source: Author's calculations, based on 2013-14 data from Wellesley College.

FIGURE 2.

Comparison of the Estimated and Actual Expected Family Contributions (EFC)



Source: Author's calculations, based on 2013-14 data from Wellesley College.

between the two are clustered within some band. That band appears to grow wider as the estimated EFC grows, which makes sense since families with fewer resources tend to have fewer complications in their financial characteristics than those with greater resources.

One useful feature of Wellesley's estimator is that it gives a user a range of estimates, such that roughly 90 percent of Wellesley students of similar financial background to the user fall within that interval. The ranges are narrower (\$2,000 on either side of the estimated value of the EFC) for families with fewer resources, and broader (up to \$10,000 on either side of the estimate) for families with greater resources. This distinction illustrates that the EFC estimates are not precise and should only serve as a ballpark range of what Wellesley College might cost a family. The specific estimate is less important than how the range compares more broadly to the sticker price. Families that are seeking that additional degree of precision are encouraged to use the net-price calculators already in place, recognizing that it will be a more-laborious process to do so. Ultimately, final financial aid determinations will still be made upon completion of the PROFILE and Wellesley's traditional financial aid system.

NATIONAL BENCHMARKS

To show how the Quick College Cost Estimator works, I used national benchmarks of income and wealth obtained using data

from the American Community Surveys (ACS; Ruggles et al. 2010) and the Survey of Consumer Finances (SCF; Board of Governors of the Federal Reserve System 2010). In each case, I restricted the sample to families with college-age children (ages seventeen to twenty-five) living in the household. From the ACS, I extracted total family income, and from the SCF, I extracted data on home equity, cash, and retirement and nonretirement investments to match the categories that Wellesley's estimator uses. I then calculated the 25th, 50th, 75th, 90th, and 95th percentiles for each variable from these data, and finally inflated all values to match the 2013 price level.

I used these data to estimate the cost of attending Wellesley College for simulated families with the respective set of financial characteristics at each of these points in the income and wealth distributions. For instance, the median family was assigned the median value of income and of each asset category, despite the fact that these values are unlikely to come from the same family. I then used the financial characteristics of this simulated median family to determine what its EFC would be. All of these calculations are performed assuming that the family has no other children enrolled in a four-year undergraduate institution at the same time. The resulting EFC would be even lower for any family that did.

The results of this exercise are reported in table 1. In the particular instance of the median, we see that total family

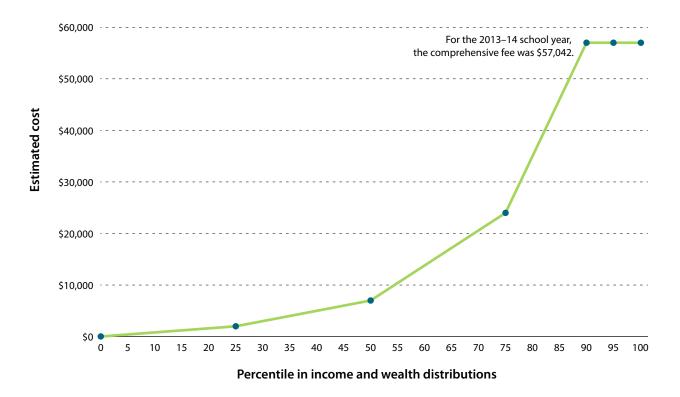
Financial Characteristics and Estimated Cost at Wellesley College by Family Position in Income and Wealth Distributions

	25th percentile	50th percentile	75th percentile	90th percentile	95th percentile
Financial characteristics					
Family income	\$37,000	\$68,000	\$110,000	\$163,000	\$212,000
Home equity	\$0	\$27,000	\$124,000	\$294,000	\$482,000
Cash	\$1,000	\$3,000	\$14,000	\$49,000	\$109,000
Retirement investments	\$0	\$0	\$48,000	\$224,000	\$455,000
Nonretirement investments	\$8,000	\$25,000	\$95,000	\$458,000	\$1,113,000
Estimated cost	\$2,000	\$7,000	\$24,000	Full Amount	Full Amount
Lower bound	\$2,000	\$3,000	\$16,000	\$49,000	Full Amount
Upper bound	\$5,000	\$11,000	\$32,000	Full Amount	Full Amount

Source: Asset values were calculated from the 2010 Survey of Consumer Finances (Board of Governors of the Federal Reserve System 2010). Family income values were calculated from the 2009, 2010, and 2011 American Community Survey (Ruggles et al. 2010).

Notes: All calculations assume that the prospective student has no siblings who will also be a full-time student at a four-year undergraduate institution at the same time. All statistics are calculated for families with children between the ages of seventeen and twenty-five to reflect those with college-age children and are adjusted for inflation to represent 2013 dollars. The full amount is the total comprehensive fee, which is set at \$57,042 in the 2013–14 academic year. Each cost estimate was constructed using income and wealth values at a particular percentile in their respective distributions. For example, the median cost estimate is determined using the median family income and the median value of each asset category, although in practice, these median values are likely drawn from different families.

Estimated Cost at Wellesley College Based on Family Position in Income and Wealth Distributions



Source: Author's calculations, based on data from the 2009, 2010, and 2011 American Community Survey (Ruggles et al. 2010), the 2010 Survey of Consumer Finances (Board of Governors of the Federal Reserve System 2010), and Wellesley College Cost Estimator (Wellesley College 2013a).

Note: Estimates are based on students with no siblings in college, income and wealth statistics are obtained for families with college-age childen. Each cost estimate was constructed using income and wealth values at a particular percentile in their respective distributions. For example, the median cost estimate is determined using the median family income and the median value of each asset category, although in practice, these median values are likely drawn from different families.

income is \$68,000. In terms of median asset values, home equity is \$27,000, cash is \$3,000, and nonretirement savings is \$25,000. The median family has no retirement savings. When we run these values through the estimator, the results indicate that this median family would face an EFC of \$7,000. The range of the estimates expands from \$3,000 to \$11,000. Although \$11,000, or maybe even \$7,000, might still be a lot of money for this family, this financial burden pales in comparison to the stated comprehensive fee of just over \$57,000; if that was the only known cost estimate, it almost certainly would lead the family to completely dismiss the idea of attending Wellesley College.

The remainder of table 1 provides comparable results for these simulated families at alternative positions in the income and wealth distributions. We see that the best estimate of the EFC for a family at the 25th percentile of these distributions is \$2,000. Since Wellesley College expects a \$2,000 contribution from students from summer work or elsewhere, an EFC of this level means that the parents do not owe anything. Elsewhere in the distributions, even a family at the 75th percentile would receive considerable financial aid, and would be expected to

pay approximately \$24,000, albeit with greater uncertainty regarding the specific amount. It is not until the 90th percentile of the income and wealth distributions that the best estimate of EFC is capped by the sticker price. Even then, depending on the more-detailed financial characteristics of the family, some families would still be eligible for a small amount of aid.

Figure 3 summarizes these results, simply connecting the dots of the best EFC estimate at each point in the income and wealth distributions. What this figure shows is that a large share of the population would pay considerably less than the sticker price. It also shows that families up to perhaps the 90th percentile of the income and wealth distributions are likely to be eligible for financial aid.

RESULTS SO FAR

Although Wellesley College only launched its estimator in September 2013, there are already some data available regarding its use; the results have been encouraging. Within the first few weeks of its release, this estimator computed around 13,000 estimates, although some users may have entered more

than one set of values (the site does not track IP addresses due to privacy considerations). As a point of comparison, in the entire 2012–13 academic year only 3,200 people used the more-complicated Net Price Calculator through Wellesley College's admissions web page (Wellesley College 2013b). Certainly some of the volume was attributable to the media attention that the Quick College Cost Estimator received, but its magnitude still suggests that there is a considerable unmet demand for this service. Data also reveal that the average time spent on the web pages leading up to an estimate is fewer than three minutes.

The true test, though, will come at the end of the admissions cycle, when Wellesley can evaluate the impact of the estimator on applications and admissions. It is important to keep in

mind that the results of this analysis are likely to be a lower bound of any longer-term effect since the only students whose college application behavior could be observed are those who were high school seniors when Wellesley's Quick College Cost Estimator was released. In other words, these students would have been unaware of the tool until fall of their senior year, at the earliest. Presumably, the impact of the tool will be greatest on those students just starting out on the college search process, who are more likely to be sophomores or juniors. Even though a full assessment of the effect of Wellesley's Quick College Cost Estimator is perhaps a year or more away, it is likely that its release will generate interest among other schools who wish to implement their own estimators.

Chapter 4: The Proposal

EXPANDING THE QUICK COLLEGE COST ESTIMATOR

I propose that the College Board and IM colleges cooperate in order to implement this estimator at all IM institutions. This collaboration would allow these colleges and universities to more easily create and promote a Quick College Cost Estimator, and yet still be able to customize it to meet corresponding financial aid criteria. Specifically, even within the set of schools that use the IM, the estimator would need to be individually tailored to meet each institution's needs. For instance, different institutions have different caps on the level of home equity that they include in the calculations, and these details would need to be incorporated in the construction of the individual estimators. Moreover, the operation of the financial aid office and the role that professional judgment plays at each school in conducting need analyses may generate somewhat different EFC results. Consequently, the best estimator for each school may use a somewhat unique formula. The College Board is the ideal entity to efficiently organize this effort.

I am proposing a market solution to the problem, but also suggest that the federal government could explicitly require and promote this process. This could be accomplished during the 2014 reauthorization of the Higher Education Act, which, in 2008, required colleges to have a net-price calculator. The Act could be amended to explicitly require that higher-education institutions provide a simplified estimator, in addition to the net-price calculators already in place. I suspect that, ultimately, such a move on the part of the federal government would lead to the same market solution that I am proposing, with the College Board and IM schools cooperating to create and promote such a tool. Indeed, the requirements to create this online tool would be too burdensome for some schools to individually undertake.

If each institution attempted to establish its own customized estimator from scratch, the overlap in effort would be relatively inefficient, especially since the first step in the aid process at a large number of institutions is the underlying IM formula. Each institution can make its own alterations to the IM formula, but those alterations generally are not substantial and are known. The institutional data needed to generate schoolspecific estimators are uniform across institutions as well. Furthermore, it would be much more desirable for students and their families if there were one website where users could

obtain cost estimates for a number of institutions with results reported in a consistent format, rather than if every school went its own way to design its own estimator. It would thus be ideal if a third party, preferably the College Board, could expand simplified estimators to IM schools.

The College Board is the obvious third-party entity to organize this effort, primarily because it is the holder of the IM formula as well as of many of the institution-specific IM options that schools elect to exercise (e.g., how much home equity is counted). Other approaches to forecast a family's final EFC are possible, but since the initial estimate of the EFC is based on the IM formula that the College Board holds, any other approach would be less accurate.

Another advantage that the College Board has is that it is the holder of all the data reported on the PROFILE that is distributed to participating schools. This means that the College Board already has the inputs necessary to construct the prediction equations. The only piece of information it does not have is the final EFC determinations that are made at the institutional level. I therefore propose that highereducation institutions send the necessary data to the College Board in order to help it determine the intervals within which actual, final EFC determinations would likely fall, given the estimates provided. This additional step of data collection would not be difficult for the College Board since it already collects data from higher-education institutions through the Annual Survey of Colleges, and releases annual research reports using this data, such as Trends in Student Aid (College Board 2012b) and Trends in College Pricing (College Board 2012a). Moreover, administering such a transfer should not be particularly difficult for the College Board, especially since it already has connections with all of the IM institutions that use the PROFILE. The limited but necessary data transfers could presumably be accomplished relatively easily since those links already exist. Once a participating institution chooses to introduce an estimator, adding the institution to the system in order to generate estimates, as well as likely ranges of anticipated costs, would not be particularly burdensome.

For these estimators to be effective, students and their families must know about their availability. The College Board has an advantage in satisfying this requirement as well. Since the

College Board website is a central stopping point for students beginning the college search process, it can promote the Quick College Cost Estimators to students and their families, as well as the guidance counselors who may be advising students and their families.

For all of these reasons, the College Board is the ideal institution to implement the Quick College Cost Estimators for the large number of institutions that make up its membership. The College Board has already established a track record of supporting projects designed to help prospective students overcome the lack of financial aid information available to them, and thus their reluctance to apply to elite, private universities.³ It has also supported the introduction of Wellesley's Quick College Cost Estimator. It is now time for the College Board to collaborate with IM schools to expand the scope of estimators like Wellesley's to a much larger set of higher-education institutions. Nonfederal funding for this

project could come from within the College Board or from foundations, such as the Bill & Melinda Gates Foundation, that are interested in helping lowincome students apply to moreselective institutions.

If the College Board were unwilling or unable to take on this project, an alternative could be for universities to create consortiums (e.g., the Consortium on Financing Higher Education, the "568 Group," etc.), and for those consortiums to develop the infrastructure for a simplified estimator alongside a team of

experts. Each school could then use its individual financial aid criteria to customize its online tool. Forming such consortiums would allow a user to compare EFCs among the involved institutions, given the user's financial background. Alternatively, a consortium of schools or a university that was not able to join a consortium could directly reach out to the designer of the Quick College Cost Estimator in order to develop its own simplified calculator. Again, funding for this project could come from the collaborating institutions themselves or from foundations interested in promoting access for low-income students to these higher-education institutions.

THE IMPACT OF THE PROPOSAL

The potential impact of the Quick College Cost Estimators will depend on how many schools adopt them. There are three ways in which a tool like this can have an impact. First,

schools that have it may attract more applicants than their peer institutions among the same underlying population because of the information differential. Second, schools that use the tool may attract applicants who otherwise would only apply to a set of schools to which they are poorly matched, simply because they are poorly informed. Third, the presence of these estimators may draw in a new set of higher-education students who may not have considered applying to college at all because they were deterred by misperceptions regarding the cost of attendance.

If Wellesley College is the only higher-education institution with a Quick College Cost Estimator, the first effect—attracting more applicants than peer institutions from the same underlying population due to the information differential—appears to be the most likely; high-quality applicants shopping among selective, liberal arts colleges may now favor applying to Wellesley instead of (or perhaps

...schools that use the tool may attract applicants who otherwise would only apply to a set of schools to which they are poorly matched, simply because they are poorly informed.

in addition to) other schools with which Wellesley typically competes. More-sophisticated students may recognize that financial aid systems at all IM schools are fairly similar and that the estimates obtained from Wellesley are likely similar to those from other institutions. Nevertheless, because Wellesley will have a marketing advantage and because there will be students who do not recognize similarities in the financial aid system, Wellesley will have a competitive advantage in this market. That is an advantage to Wellesley College, but that may not be viewed as an improvement in social outcomes. This effect would be eliminated if all comparable schools incorporated an estimator.

The second potential effect—drawing applications from students who otherwise would not have applied because of sticker shock—is more likely if more schools participate. Although the additional applicants Wellesley receives from

this category may be substantial for the college itself, as a share of the total college population it is unlikely to make much of a dent in application behavior. If a large number of selective, private colleges were to adopt this approach, however, it could have a substantial effect on the broader higher-education market. This effect would yield social value to the extent that the end result is better matching of students to schools.

It only seems possible to increase the overall number of students applying to college if many schools introduce a simplified estimator. The broader lack of understanding regarding the actual cost of college is a deterrent to attendance. In particular, some qualified students are scared away by the public perception of the high cost of college attendance, which makes them view college as an unattainable goal

and deters them from applying to and thus attending these schools. Without generous financial aid, even the lower cost of state schools presents an insurmountable obstacle. The Quick College Cost Estimators have the potential to change the nature of that discussion, but only if they are widely available. This tool would allow students who are discouraged by sticker shock to obtain a better understanding of what it would actually cost to attend the private, elite colleges who use them, and thus motivate them to apply to these schools. The estimators could also potentially have an effect on the decision to attend state schools, just by changing the nature of the discussion regarding the difference between the sticker price and the actual cost of attendance. Clearly, this effect is speculative, but if it were achieved it would satisfy an important social goal.

Chapter 5: Questions and Concerns

Do alternative estimators already exist? If so, how would the Quick College Cost Estimators be an improvement?

Alternative estimators do exist, but none that I know of does the job as well as the Wellesley estimator in forecasting the cost of attendance at an IM school. Of course, alternatives are the net-price calculators that are now required for all colleges and universities by federal law. Although, as indicated earlier, these calculators have been criticized for their complexity, they vary across institutions, with some better than others. Harvard, for instance, has one of the better calculators. However, it still provides more-complicated prompts, requires greater inputs, and does not provide a range of estimates in which a final EFC determination is likely to fall. Another alternative is the FAFSA4Caster (U.S. Department of Education 2010). This tool is very easy to use, but its estimates are based on the FM. The two different formulas may generate considerably different estimates. It also only provides a point estimate, not a range of estimates.

Does the Quick College Cost Estimator work equally well for all students?

One potential shortcoming of the Quick College Cost Estimator is that, despite its broad applicability, it has more difficulty in handling the financial circumstances of a few identifiable groups. It faces the greatest difficulty in estimating the cost for international students, students with divorced parents, and students whose parents own a small business. Because of the differences and complexity of international students' financial profiles, the tool is only able to provide cost estimates for U.S. citizens or permanent residents. For students with divorced parents (or, more specifically, noncustodial parents), determining if both parents should contribute and distinguishing the parents' resources from any stepparents' resources creates additional complexity. We advise parents in this situation to use the estimator separately, but even so, the results may be somewhat less accurate. Similarly, the estimator is less precise when parents own a small business, partly because of the more-fluid nature of their resources between income and assets, which the formula treats differently. Families in this group may expect their actual costs to be among the more extreme values within the bands.

What is the relationship, if any, between the Quick College Cost Estimator and Hoxby and Turner's (2013b) Expanding College Opportunities proposal?

Both my proposal and Hoxby and Turner's ECO proposal (2013b) include an effort to reduce informational constraints regarding costs of college attendance. In some dimensions, their proposal goes quite a bit farther. It would specifically target low-income, high-ability students, provide them with information regarding college costs, and indicate schools that may be appropriate for students with their academic qualifications. This intervention is much more active than what I am proposing, but is relevant only for those students specifically targeted. Introducing broader access to Quick College Cost Estimators would require creating a website with cost information available to those who come to it, so it would be a passive intervention. On the other hand, it would be universally available and could provide benefits to students who are not necessarily from low-income families. Middle- and upper-middle-income families also suffer from information deficits and could benefit from these estimators. In this sense, the ECO program and the estimators proposed are undoubtedly complementary.

If the Quick College Cost Estimators were to be implemented, what obstacles would remain in the financial aid process for students? How can these challenges be alleviated?

One remaining issue in forecasting the potential success of the estimator is the difficulty in completing the actual financial aid forms toward the end of the process. With regard to the difficulty in completing these forms, Bettinger and colleagues (2012) found that along with greater information regarding the cost of attendance, providing assistance in this task was critical in increasing the number of students who attend college. It may be the case that this form of assistance would be needed, even with the availability of Quick College Cost Estimators. On the other hand, the types of schools for whom the estimator is relevant are different from those included in the exercise studied by Bettinger and colleagues, so students may respond differently to the increase in available information alone. Nevertheless, promoting application assistance is an issue that should potentially be considered along with the introduction of Quick College Cost Estimators.

Chapter 6: Conclusion

Providing opportunities for young people to take full advantage of their potential is an important social goal. One example is providing access to a college education. Too few students attend college and those who do attend may not be well matched to the institution that they enroll in. Finding ways to overcome this problem should be a high priority.

The proposal in this paper attempts to improve the system of providing information regarding the cost of attendance at selective, private colleges. Such a system now exists at Wellesley College; I believe that extending its use more broadly may be helpful in reducing the information deficits that often prevent well-qualified lower- and middle-income students from attending such a selective, private college. If broadly implemented, this improved source of information also may help increase college attendance.

Appendix: Higher-Education Institutions Using Institutional Methodology for Determining Financial Aid

Adrian College

Alabama A&M University

Albright College Alfred University Alma College

American University

American University of Paris

Amherst College Athenaeum of Ohio Babson College Bard College

Bard College at Simon's Rock

Barnard College Bates College Baylor University Beloit College Bennington College Bentley University

Berklee College of Music

Bethel College
Boston College
Boston University
Bowdoin College
Boyce College
Bradley University
Brandeis University
Brown University
Bryn Mawr College
Bucknell University
Butler University

California Institute of Technology California Institute of the Arts Cardinal Stritch University

Carleton College

Carnegie Mellon University

Case Western Reserve University

Catholic University of America Claremont McKenna College

Clark University

Cleveland Institute of Music

Cochran School of Nursing

Colby College

Colgate University

College of the Holy Cross College of William & Mary

College of Wooster Colorado College Columbia College

Columbia University
Connecticut College

Cooper Union Science and Art

Cornell University
D'Youville College

Dartmouth College Davidson College

DePauw University
Dickinson College

Drexel University

Duke University

Edgewood College
Elmira College
Elon University
Emerson College
Emory University
Fairfield University

Fordham University
Franklin & Marshall College
Franklin College Switzerland

Furman University

George Washington University

Georgetown University

Georgia Institute of Technology

Gettysburg College Gordon College Goucher College

Green Mountain College

Grinnell College

Gustavus Adolphus College

Gutenberg College
Hamilton College
Hampshire College
Harvard College
Harvey Mudd College
Haverford College

Hebrew Union College (CA) Hebrew Union College (NY) Hebrew Union College (OH)

Hillsdale College

Hobart and William Smith College

Holy Cross College Holy Spirit College

Illinois Wesleyan University

Ithaca College

Johns Hopkins University

Kenyon College
Lafayette College
Lake Forest College
Lawrence University
Lehigh University
Lewis & Clark College

Lincoln Christian University

Long Island University: Brooklyn

Long Island University: C. W. Post

Loyola University Maryland

Lynn University

Macalester College

Madonna University: St. Mary's College

Manhattan School of Music

Marist College

Marshall B. Ketchum University

Marygrove College

Massachusetts Institute of Technology

McGill University
Middlebury College
Monmouth College

Moravian College
Morehouse College
Mount Holyoke College
Mount Mary College
Muhlenberg College

Nazareth College of Rochester

New College Franklin
New York University
Northeastern University
Northland College
Northwestern College
Northwestern University

Oberlin College Occidental College

Ohio Wesleyan University

Olivet College

Patrick Henry College

Pitzer College

Polytechnic Institute of NYU

Pomona College

Principia College Providence College Queen's University at Kingston

Quincy College

Quinnipiac University

Reed College Regis College

Rhode Island School of Design

Rhodes College Rice University

Roger Williams University

Rosemont College

Sacred Heart University

Saint Louis University
Saint Mary's College
Salve Regina University

Sample University

San Francisco Conservatory of Music

Santa Clara University Sarah Lawrence College

Scripps College Shimer College

Siena Heights University Skidmore College Smith College

Southern Baptist Theological Seminary

Southern Methodist University

St. Anselm College St. Edward's University St. John's College (MD) St. John's College (NM) St. Lawrence University

St. Olaf College Stanford University Stetson University

Stevens Institute Technology

Stonehill College

Susquehanna University Swarthmore College Syracuse University

Texas Christian University Trevecca Nazarene University

Trinity College Trinity University Tufts University Tulane University Union College

University of California, San Francisco

University of Chicago University of Dallas University of Denver

University of Massachusetts

Medical School
University of Miami

University of Michigan University of New Haven

University of North Carolina at

Chapel Hill

University of Notre Dame University of Pennsylvania University of Puget Sound University of Richmond University of Rochester

University of Southern California

University of Virginia Ursinus College Vanderbilt University

Vassar College

Villanova University Wabash College

Wake Forest University

Washington and Lee University
Washington University in St. Louis

Wellesley College Wesleyan University

Western Kentucky University

Wheaton College (IL)
Wheaton College (MA)
Whitman College
Williams College

Worcester Polytechnic Institute

Yale University

Source: Based on College Board (2013c)

Author

Phillip B. Levine

A. Barton Hepburn and Katharine Coman Professor of Economics, Wellesley College

Research Associate, National Bureau of Economic Research

Phillip B. Levine is the A. Barton Hepburn and Katharine Coman Professor of Economics at Wellesley College, a research associate at the National Bureau of Economic Research, a research affiliate of the National Poverty Center, and a member of the National Academy of Social Insurance. He has also served as a senior economist at the White House Council of Economic Advisers. Phil received a BS degree with honors from Cornell University in 1985 and a Ph.D. from Princeton University in 1990. He has been a member of the faculty at Wellesley since 1991. His research has largely been devoted to empirical examinations of the impact of social policy on individual behavior. Along with many publications in academic journals and edited volumes, he is the author of Sex and Consequences: Abortion, Public Policy, and the Economics of Fertility, coauthor of Reconsidering Retirement: How Losses and Layoffs Affect Older Workers, and co-editor of Targeting Investments in Children: Fighting Poverty When Resources are Limited.

Acknowledgments

The author is grateful to Bettina Donohue, Melissa Kearney, and a number of anonymous reviewers for their feedback on earlier drafts; and to Sofiya Cabalquinto, Jenn Desjarlais, Elizabeth Gildersleeve, Scott Juedes, Ravi Ravishanker, Mary Roberts, and Joy St. John for the work they contributed to the development of Wellesley's Quick College Cost Estimator, and for many, many helpful conversations that shaped the thinking reflected in this proposal. I also would like to thank Bettina Donohue and Susan McCrackin at the College Board for helping me obtain the support of the College Board, and Melissa Kearney for encouraging me to pursue promoting it in this outlet.

Endnotes

- I developed the underlying formula for the Quick College Cost Estimator using data from Wellesley's financial aid records; I participated in the development of the estimator along with several members of Wellesley's Office of Admission, Library and Technology Services, Public Affairs, and Student Financial Services.
- As a technical matter, around 90 percent of families with similar financial circumstances would wind up paying an amount within the calculated range at the given institution. Those outside that range have unusual financial circumstances that are not well captured by these six inputs.
- David Leonhardt explores this issue in the New York Times in two recent articles: "Delaware Seeks to Steer the Poor to Top Colleges" (September 18, 2013) and "A Nudge to Poorer Students to Aim High on Colleges" (September 25, 2013), available online.

References

- Avery, Christopher, and Caroline M. Hoxby. 2012. "The Missing 'One Offs': The Hidden Supply of High-Achieving, Lowincome Students." Working Paper 18586, National Bureau for Economic Research, Cambridge, MA.
- Baum, Sandy, and Kathleen Little. 2013. "IM: What Is It?" College Board, Washington, DC. Available at http://professionals. collegeboard.com/profdownload/IM%20-%20What%20 is%20it.pdf.
- Bettinger, Eric, Bridget Terry Long, Philip Oreopoulos, and Lisa Sanbonmatsu. 2012. "The Role of Application Assistance and Information in College Decisions: Results from the H&R Block FAFSA Experiment." *Quarterly Journal of Economics* 127 (3): 1205–42.
- Board of Governors of the Federal Reserve System. 2010. "Survey of Consumer Finances." Federal Reserve, Washington, DC. Available at http://www.federalreserve.gov/econresdata/scf/scf_2010.htm.
- College Board. 2011. "Net Price Calculator." Author, Washington, DC. Available at http://netpricecalculator.collegeboard.org/.
- ——. 2012a. "Trends in College Pricing: 2012." Author, Washington, DC. Available at http://trends.collegeboard. org/college-pricing.
- ——. 2012b. "Trends in Student Aid: 2012." Author, Washington, DC. Available at http://trends.collegeboard.org/student-aid.
- ———. 2013a. "CSS / Financial Aid PROFILE"." Author, Washington, DC. Available at http://student.collegeboard. org/css-financial-aid-profile.
- ——. 2013b. "FM and IM Differences." Author, Washington, DC. Available at http://professionals.collegeboard.com/ profdownload/FM%20&%20IM%20Differences.pdf.
- ——. 2013c. "Participating Institutions and Programs." Author, Washington, DC. Available at https://profileonline. collegeboard.org/prf/PXRemotePartInstitutionServlet/PXRemotePartInstitutionServlet.srv.
- College Scholarship Service Student Advisory Committee. 1976. *Unmet Needs. Report on Student Financial Aid Problems*from the CSS Student Advisory Committee. New York:

 College Entrance Examination Board.
- Dynarski, Susan M., and Judith Scott-Clayton. 2007. "College Grants on a Postcard: A Proposal for Simple and Predictable Federal Student Aid." Discussion Paper 2007-01, Hamilton Project, Brookings Institution, Washington, DC. Available at http://www.brookings.edu/~/media/research/files/papers/2007/2/education%20 dynarski/200702dynarski%20scott%20clayton.pdf.

- Greenstone, Michael, Adam Looney, Jeremy Patashnik, and Muxin Yu. 2013. "Thirteen Economic Facts about Social Mobility and the Role of Education." Policy Memo, Hamilton Project, Brookings Institution, Washington, DC. Available at http://www.brookings.edu/~/media/research/files/reports/2013/06/13%20facts%20higher%20education/thp_13econfacts_final.pdf.
- Hesel, Richard A., and David C. Meade Jr. 2012. "A Majority of Students Rule Out Colleges Based on Sticker Price." *Student Poll* 9 (1).
- Hesel, Richard A., and Ryan C. Williams. 2010. "Students and Parents Making Judgments about College Costs without Complete Information." *Student Poll 8* (1).
- Hoxby, Caroline M., and Sarah Turner. 2013a. "Expanding College Opportunities for High-Achieving, Low-Income Students." Discussion Paper 12-014, Stanford Institute for Economic Policy Research (SIEPR), Stanford, CA.
- ——. 2013b. "Informing Students about Their College Options: A Proposal for Broadening the Expanding College Opportunities Project." Discussion Paper 2013-03, Hamilton Project, Brookings Institution, Washington, DC. Available at http://www.brookings.edu/~/media/research/files/papers/2013/06/26%20expanding%20college%20 opportunity%20hoxby%20turner/thp_hoxbyturner_final.pdf.
- Long, Bridget T. 2004. "The Role of Perceptions and Information in College Access: An Exploratory Review of the Literature and Possible Data Sources." The Education Resources Institute (TERI), Boston, MA.
- Ruggles, Steven. J. Trent Alexander, Katie Genadek, Ronald Goeken, Matthew B. Schroeder, and Matthew Sobek. 2010. "Integrated Public Use Microdata Series: Version 5.0" [Machine-readable database]. University of Minnesota, Minneapolis.
- The Institute for College Access and Success. 2012. Adding It All Up 2012: Are College Net Price Calculators Easy to Find, Use, and Compare? Washington, DC: The Institute for College Access and Success.
- U.S. Department of Education. 2010. "FAFSA4Caster." Author, Washington, DC. Available at https://fafsa.ed.gov/FAFSA/app/f4cForm?execution=e1s1.
- Wellesley College. 2013a. "MyIntuition: Wellesley's Quick College Cost Estimator." Author, Wellesley, MA. Available at www. wellesley.edu/costestimator.
- ——. 2013b. "Net Price Calculator." Author, Wellesley, MA. Available at http://www.wellesley.edu/admission/affordable.



ADVISORY COUNCIL

GEORGE A. AKERLOF

Koshland Professor of Economics University of California at Berkeley

ROGER C. ALTMAN

Founder & Executive Chairman

ALAN S. BLINDER

Gordon S. Rentschler Memorial Professor of Economics & Public Affairs
Princeton University

TIMOTHY C. COLLINS

Senior Managing Director

& Chief Executive Officer

Ripplewood Holdings, LLC

JONATHAN COSLET

Senior Partner & Chief Investment Officer TPG Capital, L.P.

ROBERT CUMBY

Professor of Economics

JOHN DEUTCH

Massachusetts Institute of Technology

CHRISTOPHER EDLEY, JR.

Dean and Professor, Boalt School of Law University of California, Berkeley

Founding Partner

JUDY FEDER

Professor & Former Dean Georgetown Public Policy Institute

ROLAND FRYER

Harvard University

CEO, EdLabs

Cofounder & Managing Principal Centerbridge Partners

TED GAYER

Vice President & Director of Economic Studies

RICHARD GEPHARDT

President & Chief Executive Officer

Gephardt Group Government Affairs

ROBERT GREENSTEIN

MICHAEL GREENSTONE

3M Professor of Environmental Economics

Massachusetts Institute of Technology

Silver Lake

JIM JOHNSON

Johnson Capital Partners

MARK MCKINNON

ERIC MINDICH

Chief Executive Officer

SUZANNE NORA JOHNSON

Goldman Sachs Group, Inc.

Vice Chairman of Global Banking

RICHARD PERRY

Perry Capital

Senior Advisor

ROBERT D. REISCHAUER

Distinguished Institute Fellow and

The Urban Institute

Senior Fellow, The Brookings Institution Professor of Public Policy

DAVID M. RUBENSTEIN

Co-Founder & Managing Director

The Carlyle Group

ROBERT E. RUBIN

Co-Chair, Council on Foreign Relations Former U.S. Treasury Secretary

LESLIE B. SAMUELS

Senior Counsel

Cleary Gottlieb Steen & Hamilton LLP

SHERYL SANDBERG

Chief Operating Officer

RALPH L. SCHLOSSTEIN

President & Chief Executive Officer

ERIC SCHMIDT

Google Inc.

ERIC SCHWARTZ

76 West Holdings

Center for the Next Generation

Harvard University

PETER THIEL

Technology Entrepreneur, Investor,

S.K. and Angela Chan Professor of Global Management, Haas School of Business University of California, Berkeley

Director

Highlights

Phillip Levine of Wellesley College proposes expanding Wellesley's Quick College Cost Estimator nationwide in order to provide prospective applicants with an estimate of the price they may be expected to pay for attending an institution.

The Proposal

Establish collaboration between the College Board and relevant universities to expand Wellesley's Quick College Cost Estimator. The joint effort would allow over 300 colleges that use the institutional methodology (IM) in their financial aid determination process to more easily create and promote a simplified estimator, and yet still be able to customize it to meet corresponding financial aid criteria.

Require that higher-education institutions provide a simplified estimator, in addition to the net-price calculators already in place. The federal government would explicitly require and promote this process during the 2014 reauthorization of the Higher Education Act, which in 2008 required colleges to have a net-price calculator.

Encourage relevant colleges to send the College Board the necessary data to construct customized estimators for each institution. Since the only piece of information that the College Board does not have is the final expected family contribution (EFC) determinations made at the institutional level, colleges would send these data to the College Board in order to help it determine the intervals within which final EFC determinations would likely fall, given the estimates provided.

Benefits

The purpose of the Quick College Cost Estimator is to communicate to prospective students quickly and easily the cost they may actually be expected to pay relative to the sticker price of a college education, which does not take into account financial aid. Unlike the net-price calculators currently in place, which are often difficult to use and sometimes even difficult to find, the Quick College Cost Estimator requires just six basic financial inputs, all of which are usually readily known and can be entered quickly. The ultimate goal is to allow students and their families to make more-informed choices about where they should apply to college.



1775 Massachusetts Ave., NW Washington, DC 20036

(202) 797-6279

BROOKINGS

