



## Nothing but Net: Helping Families Learn the Real Price of College

By Andrew P. Kelly

*In recent years, students and parents have seen tuition costs at colleges and universities rise, to the extent that many low-income families may feel a college education for their child is out of their financial reach. However, this sky-high tuition is often partially, or even largely, subsidized by various forms of financial aid. For families to accurately evaluate the cost of higher education—and decide whether it is a viable option for their students—they must understand the “net price” concept.*

Imagine you are the low-income parent of a California high school senior. Your son is a gifted student—near the top of his class—and wants to go off to a four-year college. He would be the first in your family to attend a four-year university, and you have heard over and over again that college is extremely expensive. In these tough economic times, the key questions are: how much will four years of college actually cost, and which institutions are within your budget? Your son suggests Stanford University, but you have heard that the California State campuses are much less expensive.

After doing a bit of research, you find the total cost of attending both Stanford and Cal State Long Beach for the current year. After tuition, room and board, books, and other expenses, Stanford comes in at a cool \$55,918; while still quite expensive, Cal State Long Beach is less than half that much, at \$20,675. If sticker shock does not leave you questioning whether four years of college is within your family’s reach at all, it almost certainly leads you to eliminate Stanford from the running.

If you are bold enough to proceed with the application process, only after your son has applied to college, filled out the Free Application

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### Key points in this Outlook:

- Six in ten families rule out some colleges because of sticker price, yet many do not know that the “net price” is typically far lower. Stanford’s sticker price for tuition, living expenses, and books is \$55,918, while Cal State Long Beach’s is \$20,675. But for some low-income students, aid discounts those prices to \$4,496 and \$3,593 respectively.
- To help parents and students make informed choices, the federal government now requires “net price calculators” on college websites. That is a start, but proactively teaching parents—especially those with lower incomes—to think in terms of net price is critical.
- An AEI survey found that a majority of parents do recognize a distinction between sticker price and net price after aid when asked to think of the cost for a low-income student. Low-income parents tend to overestimate the net price for their child.
- Three corrective measures: (1) generate net prices for the schools students list on financial aid forms; (2) enlist guidance counselors to marshal relevant data; and (3) encourage web developers to create online tools that help to compare net prices across institutions.

for Federal Student Aid (FAFSA), gotten accepted, and received a formal offer of financial aid do you realize those sticker prices bear little relation to the price you will actually pay. In fact, for students with family incomes less than \$30,000, the “average net price”—the cost of attendance minus grants, scholarships, and other tuition discounts—was \$3,593 at Long Beach and \$4,496 at Stanford in 2009–2010.<sup>1</sup> Given that Stanford boasts a graduation rate of 93 percent for first-time, full-time male students while Long Beach graduates 51 percent, that extra \$900 in net price seems well worth it.

For many families, though, the net price of college remains hidden until far too late in the process. Colleges engage in what economists call “price discrimination”: they set a sticker price and then tailor aid packages to reduce the actual cost of attendance based on student characteristics like family background, academic qualifications, and other accomplishments. Price discrimination is an important recruiting tool for colleges and universities, who use aid packages to attract the desired mix of students.

But the lack of transparency about net price leaves consumers at a severe disadvantage in the higher education market. Without accurate information about prices, prospective students will fail to consider the most selective colleges because of exorbitant sticker prices, while others—particularly those with less experience in the college application process—may give up on college altogether. Qualified students who make suboptimal decisions based on sticker price represent an avoidable waste of human capital.<sup>2</sup>

How much do parents actually know about financial aid and college pricing in the absence of good information on net price? To shed some light on this question, AEI’s Education Policy Studies department developed a survey of higher education attitudes and preferences that was administered to one thousand parents of high school-aged children from California, Florida, Illinois, New York, and Texas.<sup>3</sup> The survey included a series of questions about college pricing and financial aid and was fielded in May and June of 2010 by the Internet polling firm Polimetrix. The survey asked parents to estimate costs of attendance at actual colleges in their state, both overall and for middle- to low-income students, and costs for their own child to attend. The results reveal that parents feel underinformed about college costs and that perceptions of college pricing are highly variable. While most parents recognize that some students will pay a lower net price after financial aid, parents in the

lowest income bracket were the least likely to recognize the distinction between net and sticker price. Those parents also tended to overestimate the price that their own child would have to pay to attend.

The results have implications for the federal government’s effort to shine a light on college pricing with net price calculators. Under the reauthorization of the Higher Education Act passed in 2008, higher education institutions must house a net price calculator on their website. Using real data on pricing and aid from currently enrolled students, the calculators provide prospective students with an estimate of the actual cost of attending the institution, based on their income and other characteristics. Colleges and universities have had the last three years to design and implement the calculators, and they were required to go live by October 29, 2011.

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Our results indicate that the majority of parents will recognize the distinction between sticker price and net price when they are actively primed to think in those terms. In principle, this bodes well for the net price calculator. But it also points to the need to develop the means to both introduce parents to the concept of net price and make net prices available. This challenge is particularly acute for low-income parents, many of whom overestimate the net price of attendance. Making standardized, comparable net price information available is only part of the solution; proactively teaching parents to think in terms of net price will also be a critical piece.

## The College Price Conundrum

The net price calculator is designed to alert parents to the fact that the majority of four-year college students do not pay full posted price for tuition, fees, and room and board. Instead, most students receive some combination of federal, state, or institutional grants that lowers the price they must pay, using family resources or loans, to attend. According to the latest data from the National Center for Education Statistics (NCES), 60 percent of full-time students at public four-year colleges and universities received

some form of grant aid in 2007–08, with students receiving an average of \$6,100 in federal, state, and institutional aid. The Stanford-Long Beach example discussed above is quite common, with private nonprofit colleges being even more likely to discount tuition: 81 percent of students received grant aid, with an average award of \$12,100.<sup>4</sup>

Colleges have control over institutional aid and have increasingly used institutional grants to reduce tuition, leading to a “high tuition, high aid” model that predominates today (particularly at private, nonprofit colleges). The most recent NCES data reveal that 30 percent of first-time students at public four-year colleges received institutional grants, while fully two-thirds of students at private nonprofits did the same. Overall, the College Board estimates that the “tuition discount” rate was about 18 percent in 2008–09 at public four-year universities and 33 percent at private nonprofits. In other words, the average student was paying somewhere between 18 and 33 percent less than the sticker price to attend. Because much, though by no means all, of this aid is based on student need, less advantaged students often pay far less in net price than their more advantaged peers.<sup>5</sup>

But even though tuition discounting is such a common phenomenon, little evidence exists that parents and prospective students have a good grasp on college costs or on the difference between sticker and net prices. Surveys of students and parents by NCES from the late 1990s revealed that that both parents and students “substantially overestimated tuition amounts,” especially for public institutions. Only about 25 percent of high school juniors and seniors hoping to attend college could provide accurate estimates of tuition costs at the type of institution they planned to attend, and just 31 percent of their parents estimated accurately. When they made errors, parents and students were more likely to overestimate than to underestimate tuition costs.<sup>6</sup>

These misperceptions appear to have real consequences for what college choices, if any, are available to particular students. The College Board’s *Student Poll* survey of parents and students found that 59 percent of respondents reported ruling out particular colleges on the basis of sticker price alone and that a small minority of those surveyed had used any kind of financial aid calculator to gauge college pricing.<sup>7</sup> Not surprisingly, the tendency to eliminate schools based on sticker price alone varies by income. A 2009 survey by Sallie Mae and Gallup found that 50 percent of students from families making less than \$35,000 a year had eliminated colleges from their application process based on cost alone. Just

25 percent of students from families making \$150,000 a year reported doing the same.<sup>8</sup>

## How Much Do Parents Know about College Costs?

The net price calculator is designed to correct the misperceptions that result from relying on sticker price to make decisions. How common are these misperceptions? To get a sense of how much parents know about the complexities of college pricing, the AEI survey asked 1,000 parents a series of questions about the cost for in-state students to attend colleges in their state. We asked parents to provide three cost estimates for each of three institutions: a selective flagship state university, a second state university,<sup>9</sup> and a selective private university. For each respondent, the items were customized to reflect the state (for instance, every respondent from Texas was asked about University of Texas-Austin, Texas State-San Marcos, and Rice University).<sup>10</sup> The institutions were not labeled public or private.

Parents were asked to make three different estimates. The first simply asked,

Consider the case of a student from your state who applies to and is admitted to the following schools. How much would it cost the student per year to attend each school?

We did not provide any contextual information about the student or his background. Rather than specify “for tuition” or “total costs including books, supplies, and food,” we left the question open-ended. We use this question as an anchor against which to compare the next two questions.

The second question purposely primed parents to think about student need and financial aid, asking,

Now consider a student from a family of four with a total annual income of about \$60,000, which is below the median for [respondent’s state]. How much would it cost that student, after receiving financial aid, to attend each type of school next year?<sup>11</sup>

Finally, the survey asked parents,

Now consider your child. How much do you think you would have to pay for [child’s initials] to attend each type of school next year?

The third question did not explicitly invoke financial aid, choosing instead to ask how much they “would have to pay” to prime parents to think about the actual price charged to their child rather than the sticker price. Below, I examine questions about whether parents interpreted this item in terms of net price.

For each question, parents provided estimates on a cost scale running from “\$0–10,000” to “\$40,000–50,000.” We analyzed the variable as a five-point scale in increments of \$10,000.<sup>12</sup> The analysis uses the sampling weights provided by Polimetrix.

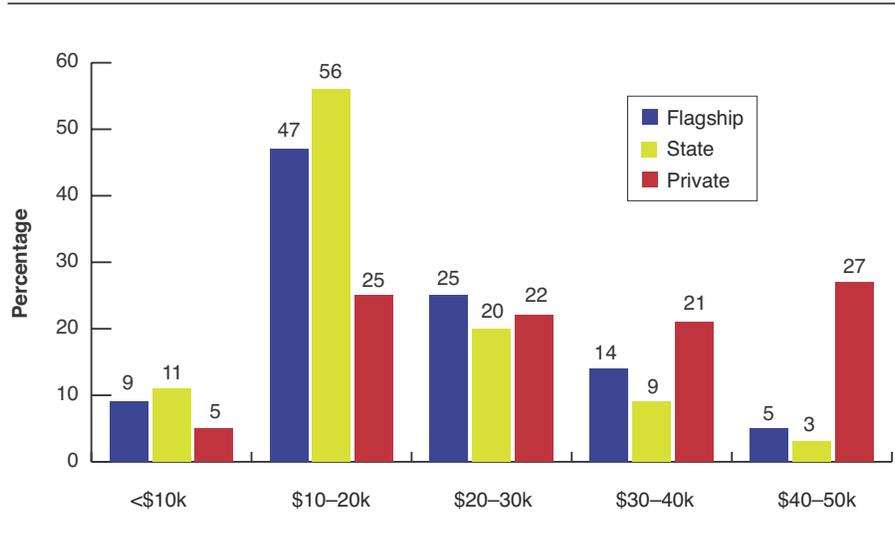
The cost scale has broad categories, which could lead parents’ estimates to appear more accurate than in prior studies. Prior research (using NCES’s Household Education Survey) asked parents for point estimates of tuition, fees, and other costs. On the scale used here, estimates could be considered “correct” so long as the actual cost falls within the same \$10,000 band. But the scale could also overstate differences if the gap between the point estimate and the actual cost straddles a category (for example, \$9,000 compared to \$10,500). To allay the latter problem, the analysis below typically discusses the proportion of people who were off by more than one category.

These questions enable us to explore two important issues. First, we can see whether parents adjust their estimate from the first question to the second when prompted to think about financial aid for students from families below the median income. Second, using real data from NCES about average net price by income, we can look at whether parents had an accurate sense the price of attendance for their child.

## Results

**Concerns about Costs, but Little Information.** Parents are acutely concerned about college costs, but our survey suggests that they feel underinformed about the subject. When asked how important “cost of attendance” was in their child’s choice of colleges, 70 percent of parents identified it as an important concern; 73 percent said the same of “the availability of financial aid.” The only

FIGURE 1  
DISTRIBUTION OF RESPONSES TO COST TO ATTEND  
FOR ADMITTED STUDENT, BY INSTITUTION TYPE



SOURCE: Author’s survey data.

other characteristic that parents reported being more important was the quality of the academic program (82 percent). Characteristics like graduation rates (50 percent), prestige (22 percent), and closeness to home (25 percent) did not rank as highly as these concerns about costs and financial aid.

The parents in our survey also had a sense of how rapidly college costs have increased. When asked how the rise in college prices compared to other goods and services, 69 percent of parents reported that college prices were going up at a faster rate. Just over 25 percent thought that the price of college had gone up at the same rate as other goods.

When asked how well-informed they felt about college costs, however, just 12 percent reported being “very well informed,” while 58 percent responded that they were either “a little informed” (40 percent) or “not informed at all” (18 percent). Almost half of the parents surveyed (46 percent) reported that they did not know what the FAFSA was.

Figure 1 displays how parents responded to the first set of cost estimates (which asked about an admitted student). The figure shows that parents have a sense that public institutions are less expensive than private ones and that estimates of private university costs are all over the map. Indeed, if respondents were guessing at random, we would expect 20 percent of respondents in each of the five categories. The results for the private universities are not far off, though parents clearly know that

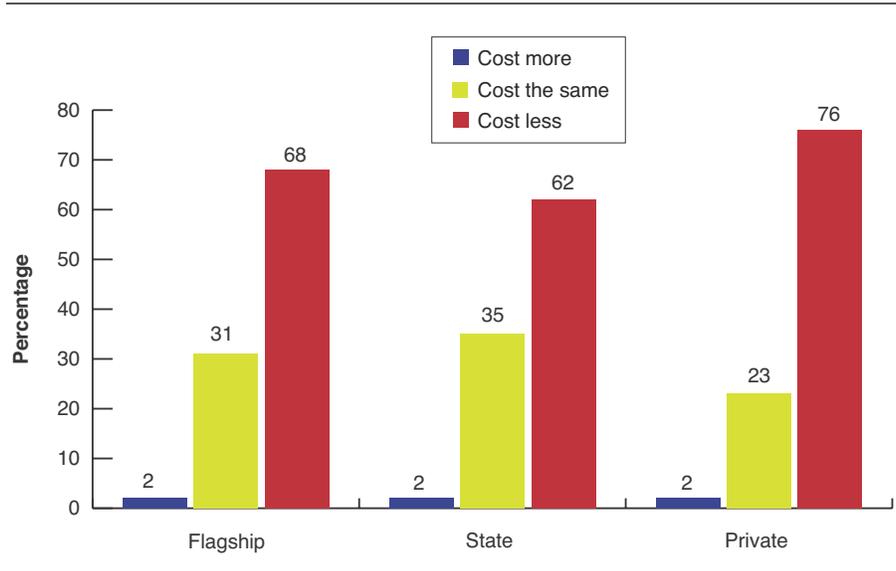
attending a private college costs more than \$10,000 per year. Parents also saw the second state university as being somewhat less expensive than the selective flagship.

**Sticker Price versus Price after Aid.** In combination, the first two questions implicitly asked parents about the difference between the cost of attendance and the net price for a student from a lower-income background. By comparing the first set of estimates to responses on the second question, we can measure whether parents adjust their estimate of costs downward when prompted to think about price after aid.

The results reveal that the majority of parents did adjust their cost estimates downward when primed to think about financial aid for a student below the median income. Figure 2 displays the proportion of parents who estimated that the price after aid would be less than, be greater than, or fall in the same cost

FIGURE 2

PERCENTAGE OF PARENTS WHO ADJUSTED THEIR ESTIMATE WHEN PROMPTED TO THINK ABOUT PRICE AFTER AID FOR LOWER MIDDLE-INCOME STUDENT



SOURCE: Author's survey data.

NOTE: Parents who selected the lowest cost category in response to the first item are excluded from these percentages.

category as the estimate of costs provided on the initial question. On each item, the majority of parents recognized that cost after financial aid would be lower for the hypothetical student. Parents were most likely to adjust their estimates downward in the case of private colleges (76 percent); 68 percent of parents did the same for public flagships, and 62 percent did so for the other state colleges. Overall, the results seem to indicate that parents may (rightly) perceive that top private colleges discount their tuition with financial aid more than public colleges.

Interesting differences emerge when we disaggregate the data by income groups. Table 1 breaks out the results by four income groups of roughly equal size. The lowest-income parents were the least likely to recognize that the student described would pay a lower price after receiving financial aid. Just over 50 percent of parents from the lowest income group adjusted their estimate of cost downward for both the flagship (54 percent) and state campuses (51 percent). A larger proportion of parents from the highest income group adjusted their estimate downward for both

TABLE 1

PERCENTAGE OF PARENTS WHO ADJUSTED THEIR ESTIMATE WHEN PROMPTED TO THINK ABOUT PRICE AFTER AID FOR LOWER MIDDLE-INCOME STUDENT (BY INCOME GROUP AND INSTITUTION TYPE)

	Income Group			
	Lowest	Second	Third	Highest
<b>Flagship</b>				
Cost Less	54	67	74	76
Cost Same	42	33	23	24
Cost More	4	0	2	0
<b>State</b>				
Cost Less	51	66	61	73
Cost Same	45	33	37	27
Cost More	4	1	2	0
<b>Private</b>				
Cost Less	67	74	77	84
Cost Same	29	25	22	15
Cost More	3	1	1	1

SOURCE: Author's survey data.

NOTE: Parents who selected the lowest cost category in response to the first item are excluded from these percentages.

types of public institutions (76 percent for flagships; 73 percent for state campuses; these differences are statistically significant). While low-income parents were more likely to recognize a difference in cost at private colleges (67 percent) versus the public institutions, upper-income parents were even more likely to adjust their estimate of the cost of private education (84 percent).

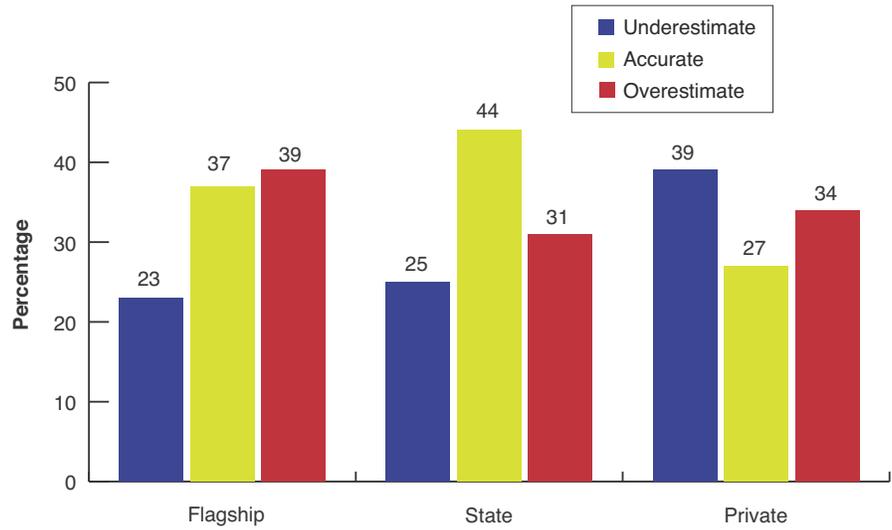
In each row of table 1, a roughly linear relationship exists between family income and the likelihood of ratcheting estimates downward when prompted to think about financial aid. This analysis is descriptive and does not control for other characteristics, so other attributes like education and experience with the college application process are likely also correlated with these responses. But the patterns do track with prior research on “college knowledge.”

**How Much Would It Cost My Child?** The final set of items asked parents to estimate how much they would have to pay for their child to attend the institutions in question. Again, we did not explicitly tell parents to think about financial aid awards in this question.

As a benchmark against which to compare parents’ estimates for their own child, we used NCES’s calculation of “Average Net Price by Income” for each institution, as reported on the College Navigator. NCES provides two years worth of estimates under the “Net Price” tab, and we took the average of the two years for each income group to come up with the baseline for comparison.<sup>13</sup>

NCES provides estimates for five income groups (\$0–30,000; \$30,001–48,000; \$48,001–75,000; \$75,001–110,000; and \$110,001 and above). Other than the lowest income category, these bands do not map exactly to the income scale used in our survey, which above \$30,000 runs in increments of \$10,000 and above \$100,000 runs in increments of \$20,000. As such, these comparisons are not exact, but we approximated as closely as possible.<sup>14</sup> We then compared parents’ responses to the corresponding estimates of net price by income level reported on the College Navigator for each institution. Above the lowest income category, these comparisons

FIGURE 3  
PERCENTAGE OF PARENTS UNDERESTIMATING, OVERESTIMATING,  
AND ACCURATELY ESTIMATING THE NET PRICE FOR THEIR CHILD



SOURCE: Author’s survey data.

are admittedly rough, but they provide a general sense of how parents’ estimates compare to real-world net prices. To be consistent with earlier results, we report results overall and by the four income groups used above.

Figure 3 displays the proportion of parents who accurately estimated the price for their child, as well as the proportions that over- and underestimated. Overall, parents were not particularly accurate. They were most accurate with the state colleges (44 percent chose the correct category) and least accurate with the private universities (just 27 percent); the accuracy of flagship estimates was somewhere in between. In each case, somewhere between 31 and 39 percent of parents overestimated the cost for their child. Parents were more likely to overestimate than underestimate the cost of flagships and state campuses. Only about 25 percent of parents underestimated the price of the state or flagship campus for their child, while almost 40 percent of parents underestimated the cost of the private college.

We also looked at these patterns across income groups. It is important to point out that because the average net prices for low-income families were typically under \$10,000, the lowest income group generally had few opportunities to underestimate the price for their child. The same is not true at the other end of the income spectrum, where, outside of a couple of the private institutions, the net price was below the maximum of the scale.

Table 2 reveals that while parents from the lowest income group were not dramatically less accurate than their peers, they did exhibit a tendency to overestimate the price of the flagship and state universities for their child. Indeed, in each case, the proportion overestimating outweighs the proportion that provided an accurate estimate. This pattern stands out when compared to the other income groups, who are less likely to overestimate. For instance, 60 percent of parents in the lowest income group overestimated the price of the flagship for their child, compared to just 36 percent among the second income group (this difference was statistically significant). And 22 percent of the parents in the lowest income group overestimated the price of the flagship by more than one cost category on the five-point scale; 18 percent did the same for the state college.

Meanwhile, the tendency to underestimate costs at both private and flagship universities was particularly marked among the highest income groups. These parents might be considering the impact of merit-based financial aid on the price for their child. The College Board's *Student Poll* found that the majority of students, even those with the lowest SAT scores, believed that they would receive some sort of merit-based aid on the basis of their academic record.<sup>15</sup>

Some of these differences could be due to how respondents interpreted the question for their own child. Because the question did not explicitly prime parents to think about financial aid, lower-income respondents may not have been thinking in terms of net price, instead reverting back to sticker price. The data suggest that this may have been true for a sizable minority of low-income parents. Between 35 percent (flagship) and 45 percent (state) of respondents in the lowest income category provided the same estimate to the third question ("your child") as they did to the first question about the admitted student.

But the tendency to overestimate among lower-income parents also correlated with a failure to recognize the net price versus sticker price distinction at all. Among the lowest income group, the tendency to overestimate the price for their child was strongest among those parents who did not lower their cost estimate between questions one and two. For example, parents from the lowest

TABLE 2  
PERCENTAGE OF PARENTS UNDERESTIMATING, OVERESTIMATING,  
AND ACCURATELY ESTIMATING NET PRICE FOR THEIR CHILD  
(BY INCOME GROUP AND INSTITUTION TYPE)

	Income Group			
	Lowest	Second	Third	Highest
<b>Flagship</b>				
Underestimate	1	19	40	45
Accurate	39	44	27	35
Overestimate	60	36	33	19
<b>State</b>				
Underestimate	6	29	37	36
Accurate	40	45	44	48
Overestimate	54	26	19	16
<b>Private</b>				
Underestimate	26	39	48	50
Accurate	31	30	16	27
Overestimate	43	30	36	23

Source: Author's survey data.

income group who did not adjust their estimate in the correct direction between question one and question two overestimated 82 percent (flagship) and 78 percent (state) of the time. The comparable overestimation rates for parents who did adjust in the correct direction were 54 percent (flagships) and 42 percent (state).

These patterns have implications for policy: without actively priming parents to think in terms of net price after aid, many will continue to think in terms of sticker price. And those who do not recognize a distinction exists between sticker price and net price seem particularly likely to overestimate the price for their own child.

### Placing Net Price in the Spotlight

These results suggest that the net price calculator has much work to do. Across all parents, somewhere between 30 and 40 percent overestimated how much their child would have to pay to attend one of the colleges in their state. This misperception was particularly acute among parents from the lowest income group, where majorities overestimated the price of the flagship and state campuses for their children. These parents were also less likely to adjust their cost estimates downward when primed to think about the price after financial aid for a lower-middle income student.

But there are also encouraging indications that most parents will recognize the distinction between net price

and sticker price when they are primed to think in those terms. Parents also tended to see private colleges as the most likely to discount their tuition with aid, which reflects reality. On the one hand, it is not surprising that individuals respond when prompted to think in a particular way about college pricing. Plenty of research in psychology and political science has shown how priming and framing can affect the way individuals evaluate a given object.

From a public policy perspective, though, these patterns suggest a need to actively frame the discussion of college costs in terms of net price. Before prospective consumers can use net price data, they must first recognize what net prices are and why they are important. Point estimates of what particular colleges charge “students like mine” answer a second-order question, but parents will arrive there only if they know a distinction exists between sticker and net price. As such, policymakers, educators, and nongovernmental organizations should take pains to introduce parents to the net price concept if they want parents to use the actual data.

This seems to be especially true for low-socioeconomic-status parents who are both most likely to benefit from information about net price and least likely to know about it. The College Board’s Student Poll found that just 8 percent of students from low-income backgrounds reported using a net tuition calculator, compared to 25 percent among students from families making \$100,000 or more.<sup>16</sup> In our survey, 33–44 percent of parents from the lowest income group reverted back to their initial estimates when asked what they would have to pay for their child to attend college without actively priming them to think about financial aid. The net price calculators could have a sizable impact on these parents, but only if peers, educators, and government programs clue them into net price.

In other words, correcting misperceptions about college costs will require more than passively placing calculators on college websites. While there are a number of ways to be more proactive, three potential avenues stand out.

First, the federal government could begin to report net price information for the colleges that students point to when they fill out the FAFSA. The FAFSA already reports six-year graduation rates for the colleges that students choose on the application, and evidence shows that consumers began ranking graduation rates as an important characteristic after this reporting began. Because the FAFSA asks for family incomes, it seems reasonable to suggest that the report could generate information on

both graduation rates and net price once consumers complete the application. This approach could provide a proactive complement to the Department of Education’s College Affordability and Transparency Center.

Second, states, school districts, and professional associations should target guidance counselors as the key intermediaries in this effort. Counselors are likely already in the know when it comes to the financial aid process. But they should also be asked to teach their advisees about net price before they become seniors and to plug them into this new resource. Counselors could create customized summaries of net prices at local colleges based on students’ academic qualifications and family income. States, districts, and individual schools should make every effort to compile this information in a format that guidance counselors can use, perhaps by creating a yearly guide that provides net price information for all colleges in the state.

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Third, the calculators represent a tremendous opportunity for third-party web developers to aggregate net price information from colleges around the country and provide it on a central clearinghouse. Think of a Kayak.com for colleges: students or guidance counselors input some basic information and the site provides a list of institutions and their net price. Differences in the ways institutions have implemented their calculators could be an issue, as some colleges currently require different pieces of background information than others. If aggregators become popular with consumers, however, colleges’ desire to be included in the database might also encourage more standardization across institutions.

While not every student is a good fit for a four-year bachelor’s degree program, the idea that qualified students are failing to enroll because they mistake sticker price for the actual price they will have to pay represents a profound waste of human capital. Now that the calculators exist, policymakers, entrepreneurs, and educators must work to make sure that no prospective student makes an application or matriculation decision without first learning about net price.

## Notes

1. Estimates of “average net price by income” are available for almost every college participating in the federal student loan program (Title IV) on the National Center for Education Statistics’s “College Navigator” website, <http://nces.ed.gov/collegenavigator> (accessed December 12, 2011).

2. Researchers have shown that students who “undermatch,” or attend institutions that are less selective than others they are qualified to attend, complete their degrees at lower rates than those who attend more selective colleges. See William Bowen, Matthew Chingos, and Michael McPherson, *Crossing the Finish Line: Completing College at America’s Public Universities*, (Princeton, NJ: Princeton University Press, 2009).

3. For other work using these data, see: Andrew P. Kelly and Mark Schneider, *Filling in the Blanks: How Information Can Affect Choice in Higher Education* (Washington, DC: American Enterprise Institute, 2011), [www.aei.org/paper/education/k-12/filling-in-the-blanks/](http://www.aei.org/paper/education/k-12/filling-in-the-blanks/); Andrew P. Kelly and Mark Schneider, “What Parents Don’t Know About College Graduation Rates Can Hurt,” *AEI Education Outlook* (February 2011), [www.aei.org/outlook/education/higher-education/what-parents-dont-know-about-college-graduation-rates-can-hurt/](http://www.aei.org/outlook/education/higher-education/what-parents-dont-know-about-college-graduation-rates-can-hurt/); Andrew P. Kelly, “More Than Meets the Eye: The Politics of For-Profits in Education,” (Washington, DC: American Enterprise Institute, 2011), [www.aei.org/paper/education/private-enterprise/more-than-meets-the-eye/](http://www.aei.org/paper/education/private-enterprise/more-than-meets-the-eye/).

4. Christina Chang Wei, *What Is the Price of College?: Total, Net, and Out of Pocket Prices in 2007–2008* (Washington, DC: National Center For Education Statistics, 2010), <http://nces.ed.gov/pubs2011/2011175.pdf> (accessed December 12, 2011).

5. Because much federal, state, and institutional aid is designed to serve student need, the average net price varies considerably by income. For instance, while students from families with incomes of \$36,000 or less paid an average net price of about \$10,000 to attend a public four-year college, families with incomes between \$66,000 and \$105,000 paid almost \$17,000 at the same type of institution. Net price gaps between these two groups were even larger at private, nonprofit colleges, where low-income families paid about \$17,900 after grants compared to \$26,500 for “high middle-income” families. See Wei, *What Is the Price of College?*

6. Laura Horn, Xianglei Chen, and Chris Chapman, *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, US Department of Education, 2003), <http://nces.ed.gov/pubs2003/2003030.pdf> (accessed December 12, 2011).

7. “Students and Parents Making Judgments about College Costs without Complete Information,” *Student Poll* 8, no. 1 (2010), [www.artsci.com/studentpoll/v8n1/index.aspx](http://www.artsci.com/studentpoll/v8n1/index.aspx) (accessed December 12, 2011).

8. Sallie Mae and Gallup, *How America Pays for College: Sallie Mae’s National Study of College Students and Parents, Conducted by Gallup* (Reston, VA, and Washington, DC: Authors, 2009), [www1.salliemae.com/about/news\\_info/research/how\\_america\\_pays](http://www1.salliemae.com/about/news_info/research/how_america_pays) (accessed December 12, 2011).

9. Labeling state campuses as “flagships” has generated considerable disagreement in states with multiple top-tier research universities. Efforts by policymakers in states like New York and Florida have generated controversy by moving to define one campus as the premier state flagship. In our case, we chose campuses that were generally considered selective flagships for the first type of institution. Some of the public universities in the second category (SUNY Albany, University of South Florida) are considered to be among the “flagships” in their state but are somewhat less selective.

10. The colleges used (flagship, state, and private) were California: UCLA, CSU-Long Beach, Stanford University; Florida: University of Florida, University of South Florida, University of Miami; Illinois: University of Illinois-Urbana Champaign, Northern Illinois University, Northwestern University; New York: Stony Brook University, SUNY-Albany, New York University; Texas: UT-Austin, Texas State University-San Marcos, Rice University.

11. The inspiration for this line of questioning was provided by a survey of Virginia parents administered by University of Virginia economist Sarah Turner and colleagues. For estimates of median income by state for four-person families for 2010, see *Federal Register* 74, no. 8 (March 13, 2009) <http://edocket.access.gpo.gov/2009/pdf/E9-5412.pdf> (accessed December 12, 2011).

12. For the analysis, we collapsed two response categories (\$10,000–15,000 and \$15,000–20,000) to create a five-point scale in increments of \$10,000. This approach sacrifices some information, but it ensures that the categories are of equal size.

13. See NCES’s “College Navigator” website. Though they use Title IV status to define the cohort, the average net price calculation takes the mean of the prices paid by students *after grants*, but not counting loans (that is, a student who received federal loans but no grants would have a net price equal to the sticker price).

14. Our five categories were: \$0–29,999; \$30,000–49,999; \$50,000–79,999; \$80,000–120,000; and \$120,000 and above.

15. “Students and Parents Making Judgments.”

16. *Ibid.*