

Flaws in the Statutory Definition of Net Price

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The statutory definition of net price is flawed in several ways that understate the real bottom-line cost of college by thousands of dollars.¹ The net price is defined as the cost of attendance minus the average institutional/government grant for just first-year, full-time students. However, the average grant is calculated as the average among just the students receiving grants, not all students. As such it yields a definition of net price that is accurate only for grant recipients, not all students. Overall, only about two thirds of full-time undergraduate students receive any grants. Even among low-income students, only about four-fifths receive some grants. The focus on first-year students yields misleading results for colleges that practice front-loading of grants, which involves awarding more grants during a student's first year and fewer grants in subsequent years. It also means the results will be less meaningful for transfer students. Net price calculators for public colleges will be based on in-state tuition and accordingly will be meaningless for out-of-state students.

The key findings of this report are as follows:

- The statutory definition of net price, which is based on the average grant among just grant recipients as opposed to the average among all students, understates the real bottom-line cost by more than \$2,500 (11% of the cost of attendance) on average.
- Front-loading of grants yields a real bottom-line cost for first-year students that is, on average,² \$1,426 lower than the bottom-line cost for returning students at public colleges, \$1,312 lower at non-profit colleges and \$1,138 higher at for-profit colleges.
- Front-loading of grants yields a real bottom-line cost that is about the same on average for first-year students and returning students at very selective colleges (\$79 higher). The real bottom-line cost for first-year students is \$966 lower at moderately selective colleges, \$1,118 lower at minimally selective colleges and \$2,419 lower at open admission colleges, on average.
- The statutory definition of net price understates the real bottom-line cost for first-year students by more at the most selective colleges: \$3,339 at very selective colleges, \$2,338 at moderately selective colleges, \$2,014 at minimally selective and \$1,185 at open admission colleges.

¹ This paper focuses on flaws with a measurable impact. There are other flaws – such as the tradeoff between simplicity and accuracy and the fact that the calculators will tend to be used in the fall before colleges set tuition and fees – which are not addressed by this paper. The flaws analyzed in this paper are much more problematic, especially for middle and upper income students who will enroll at more expensive and more selective colleges and universities.

² These figures are averaged among all colleges, including colleges that do and do not practice front-loading of grants. The inclusion of data from colleges that do not practice front-loading of grants dilutes the impact of front-loading on net price in the overall averages. The distortions of net price may be of significantly greater magnitude at colleges that practice front-loading of grants. It is not possible to distinguish between colleges that do and do not practice front-loading of grants in the available data sets.

- The statutory definition of net price, which is restricted to in-state students at public colleges, understates the bottom-line cost for out-of-state students at public colleges by \$11,013 on average. Most of the difference is due to the \$8,768 difference between costs and grants for in-state and out-of-state students and \$2,245 is due to the difference between average grants based on just grant recipients and average grants based on all students.
- Transfer students tend to enroll at colleges with a lower cost of attendance and lower grants, yielding a slightly lower net price on average. Results for individual colleges, however, may vary.
- The cost of attendance increases and the percentage of students receiving grants decreases with increasing income. The statutory definition of net price understates the real bottom-line cost by 6% to 10% of the cost of attendance for low-income students, 10% to 14% of the cost of attendance for middle-income students and 15% of the cost of attendance for upper-income students. This makes net price calculators based on the current statutory definition less accurate for middle and upper-income students.
- Except for students with a zero expected family contribution (EFC), the cost of attendance and real bottom-line costs increase and the percentage of students receiving grants decreases with increasing EFC.
- The statutory definition of net price differs by \$2,077 and the real bottom-line cost by \$813 according to the student's dependency status. The differences are even greater when independent students are distinguished according to marital status and having dependents other than a spouse.
- The statutory definition of net price, which is based on full-time students, overstates the net price by \$5,965 and the real bottom-line cost by \$6,693 for part-time students. Part-time students are less likely to get grants than full-time students, and the average grants are lower.
- The statutory definition of net price yields differences in net price of as much as \$6,112 on average for students who live on campus, off campus or with their parents.

This report makes the following recommendations which will require statutory changes:

- The definition of net price should be based on the average grant where the average is calculated among all students, not just among the grant recipients.
- In addition to reporting a net price for first-year students, colleges should report the corresponding net price for continuing students. Alternately, the net price could be reported as an average among all undergraduate students, regardless of year in school.
- Public colleges should be required to report separate net price figures for in-state and out-of-state students or the correct figure for the student's status as an in-state or out-of-state student.
- Net price calculators must be modified to consider the following additional independent variables: dependency status, enrollment status and residence while enrolled.

METHODOLOGY

The tables presented in this report are based on data from the National Postsecondary Student Aid Study (NPSAS), analyzed using the data analysis system for the 2007-08 study. The NPSAS is a large, statistically significant survey of undergraduate and graduate students to determine how they paid for college. The NPSAS is conducted every four years by the National Center for Education Statistics (NCES) at the US Department of Education. The 2007-08 NPSAS was based on a nationally-

representative stratified sample of more than 114,000 undergraduate students and 14,000 graduate and professional students. This report is based on just the data for undergraduate students.

STATUTORY DEFINITION

Section 111 of the Higher Education Opportunity Act of 2008 (P.L. 110-315) amended the Higher Education Act of 1965 to include a definition of net price for use in mandatory net price calculators, effective October 29, 2011. This definition appears in section 132(a)(3) of the Higher Education Act of 1965 as follows:

- NET PRICE. — The term ‘net price’ means the average yearly price actually charged to first-time, full-time undergraduate students receiving student aid at an institution of higher education after deducting such aid, which shall be determined by calculating the difference between —
- (A) the institution’s cost of attendance for the year for which the determination is made; and
 - (B) the quotient of —
 - (i) the total amount of need-based grant aid and merit-based grant aid, from Federal, State, and institutional sources, provided to such students enrolled in the institution for such year; and
 - (ii) the total number of such students receiving such need-based grant aid or merit-based grant aid for such year

Cost of attendance (COA) is defined by section 132(a)(2) of the Higher Education Act of 1965 as “the average annual cost of tuition and fees, room and board, books, supplies, and transportation for an institution of higher education for a first-time, full-time undergraduate student enrolled in the institution.”

Accordingly, the statutory definition of net price is equal to the average difference between the cost of attendance and governmental and institutional grants, but only for grant recipients. This is the same as the difference between the cost of attendance and the average grant, where the average is calculated just among grant recipients.

$$\begin{aligned}
 \text{Net Price} &= \text{Average}(\text{COA} - \text{Grants} \mid \text{All Grant Recipients}) \\
 &= \frac{\sum_{i=1}^m (\text{COA}_i - \text{Grants}_i)}{m} \\
 &= \frac{\sum_{i=1}^m (\text{COA}_i)}{m} - \frac{\sum_{i=1}^m (\text{Grants}_i)}{m} \\
 &= \text{Average}(\text{COA} \mid \text{All Grant Recipients}) - \text{Average}(\text{Grants} \mid \text{All Grant Recipients}) \\
 &= \text{COA} - \text{Average}(\text{Grants} \mid \text{All Grant Recipients})
 \end{aligned}$$

While this may yield a reasonable estimate of the bottom-line cost for grant recipients, it does not yield a reasonable estimate of the bottom-line cost for students who do not receive any grants or students in general. The average grant among grant recipients is higher than the average grant among all students, since grant recipients are a subset of all students. Thus, the statutory definition of net price yields a lower estimate of the bottom-line cost than a definition that averaged the grants among all students, not just grant recipients.

All Grant Recipients \subseteq All Students

So the size of the two sets follows the inequality

$$| \text{All Grant Recipients} | \leq | \text{All Students} |$$

Since

$$\text{Average}(\text{Grants} | \text{All Grant Recipients}) = \frac{\sum_{i=1}^m (\text{Grants}_i)}{m}$$

where $m = | \text{All Grant Recipients} |$ and

$$\text{Average}(\text{Grants} | \text{All Students}) = \frac{\sum_{i=1}^n (\text{Grants}_i)}{n}$$

where $n = | \text{All Students} |$ and

$$\frac{\sum_{i=1}^m (\text{Grants}_i)}{m} \geq \frac{\sum_{i=1}^n (\text{Grants}_i)}{n}$$

because $m \leq n$ and $\sum_{i=m+1}^n (\text{Grants}_i) = 0$, it follows that

$$\text{Average}(\text{Grants} | \text{All Grant Recipients}) \geq \text{Average}(\text{Grants} | \text{All Students})$$

from which it follows that

$$\text{Average}(\text{COA} - \text{Grants} | \text{All Grant Recipients}) \leq \text{Average}(\text{COA} - \text{Grants} | \text{All Students})$$

Enough students do not receive grants that these two averages differ significantly. For example, suppose that two-thirds of students receive grants, with an average grant of \$7,500 per recipient. Then the average grant among all students will be $2/3 \times \$7,500 = \$5,000$, yielding a \$2,500 difference between the two definitions of net price.

Section 132(b) of the Higher Education Act of 1965 limits the calculations for public colleges to the costs and grants for state residents as follows:

CALCULATIONS FOR PUBLIC INSTITUTIONS. — In making the calculations regarding cost of attendance, net price, and tuition and fees under this section with respect to a public institution of higher education, the Secretary shall calculate the cost of attendance, net price, and tuition and fees at such institution in the manner described in subsection (a), except that —

- (1) the cost of attendance, net price, and tuition and fees shall be calculated for first-time, full-time undergraduate students enrolled in the institution who are residents of the State in which such institution is located; and
- (2) in determining the net price, the average need-based grant aid and merit-based grant aid described in subsection (a)(3)(B) shall be calculated based on the average total amount of such aid received by first-time, full-time undergraduate students who are residents of the State in which such institution is located, divided by the total number of such resident students receiving such need-based grant aid or merit-based grant aid at such institution.

ANALYSIS

For the purpose of the following analysis, define *Average* as the average among just grant recipients and *Mean* as the average among all students. This is similar to the terminology used in the data analysis system for the National Postsecondary Student Aid Study (NPSAS).

Many of the following analyses restrict the data to students in Bachelor’s degree programs to enable an apples-to-apples comparison. Including other types of degree programs would raise the possibility that differences in the results were due to differences in the distribution of students among degree programs.

Differences in Net Price Based on Average vs. Mean

The next two tables demonstrate the difference between the net price based on the average (the statutory definition) and the net price based on the mean (the real bottom-line cost). The first table disaggregates the data according to level and control of institution. The second table disaggregates the data according to degree program and control of institution. Overall, the statutory definition of net price understates the real bottom-line cost by \$2,507 or about 11% of the cost of attendance.

The amount of error in the statutory definition varies according to the type of institution and the degree program. The difference is \$2,230 at public colleges (13%), \$2,302 at non-profit colleges (7%) and \$1,115 at for-profit colleges (4%). The difference is \$2,768 for Bachelor’s degree programs (11%), \$1,536 for Associate’s degree programs (10%) and \$1,264 for Certificate programs (6%).

The error is lower at for-profit colleges (except for Bachelor’s degree programs) because the typical grants are smaller and more students receive grants, causing the average grant and mean grant to be closer. The error is lower at community colleges because community colleges are less likely to award institutional grant money than 4-year colleges. The error is higher for Bachelor’s degree programs because Bachelor’s degree programs cost more and 4-year colleges are more likely to selectively award institutional grants to a subset of the student population.

The first table disaggregates the data by level and control of institution.

Full-Time College Type	COA	% Receiving Grants	Average Grant	Mean Grant	Net Price (Average)	Net Price (Mean)	Difference
Overall	\$22,368	65.3%	\$7,231	\$4,723	\$15,138	\$17,645	\$2,507
Public	\$17,055	59.0%	\$5,437	\$3,206	\$11,619	\$13,849	\$2,230
Public 4-Year	\$18,912	60.4%	\$6,109	\$3,688	\$12,802	\$15,223	\$2,421
Public 2-Year	\$12,630	55.7%	\$3,721	\$2,073	\$8,908	\$10,557	\$1,649
Non-Profit	\$35,296	81.1%	\$12,202	\$9,900	\$23,093	\$25,395	\$2,302
Non-Profit 4-Year	\$35,480	81.2%	\$12,276	\$9,974	\$23,204	\$25,506	\$2,302
Non-Profit 2-Year	\$22,601	67.0%	\$7,031	\$4,710	\$15,570	\$17,890	\$2,321
For-Profit	\$28,638	71.9%	\$3,965	\$2,851	\$24,673	\$25,787	\$1,115
For-Profit 4-Year	\$31,330	68.8%	\$3,913	\$2,691	\$27,417	\$28,639	\$1,222
For-Profit 2-Year	\$26,472	79.0%	\$4,373	\$3,454	\$22,099	\$23,018	\$919

The next table disaggregates the data by degree program and control of institution.

Full-Time Degree Program	COA	% Receiving Grants	Average Grant	Mean Grant	Net Price (Average)	Net Price (Mean)	Difference
Bachelor's Degree	\$24,681	67.0%	\$8,385	\$5,616	\$16,297	\$19,065	\$2,768
Public	\$18,896	60.2%	\$6,106	\$3,679	\$12,790	\$15,217	\$2,427
Non-Profit	\$35,641	81.5%	\$12,398	\$10,109	\$23,243	\$25,531	\$2,288
For-Profit	\$31,791	63.9%	\$4,366	\$2,790	\$27,425	\$29,001	\$1,576
Associate's Degree	\$15,585	60.6%	\$3,898	\$2,362	\$11,687	\$13,223	\$1,536
Public	\$12,678	57.4%	\$3,821	\$2,192	\$8,857	\$10,487	\$1,629
Non-Profit	\$26,012	70.9%	\$6,240	\$4,424	\$19,772	\$21,588	\$1,816
For-Profit	\$29,828	76.7%	\$3,853	\$2,955	\$25,975	\$26,873	\$898
Certificate	\$20,054	67.0%	\$3,828	\$2,564	\$16,226	\$17,491	\$1,264
Public	\$15,085	49.2%	\$4,049	\$1,991	\$11,036	\$13,094	\$2,058
Non-Profit	\$22,589	67.5%	\$5,017	\$3,388	\$17,572	\$19,202	\$1,629
For-Profit	\$22,426	76.1%	\$3,676	\$2,798	\$18,749	\$19,628	\$878

Impact of In-State vs. Out-of-State Public Colleges

The calculations of net price for public colleges and universities are restricted to just in-state students enrolled at the institutions. These net price figures will be inaccurate for students enrolling at out-of-state public colleges and universities.

Bachelor's Degree Full Time Public Colleges	COA	% Receiving Grants	Average Grant	Mean Grant	Net Price (Average)	Net Price (Mean)	Difference in Net Price Definitions
In-State	\$17,987	62.2%	\$5,942	\$3,697	\$12,045	\$14,289	\$2,245
Out-of-State	\$26,892	46.7%	\$8,205	\$3,834	\$18,687	\$23,058	\$4,371
Difference	\$8,905	-15.5%	\$2,263	#137	\$6,642	\$8,768	\$2,126

Impact of Front-Loading of Grants

Some colleges practice front-loading of grants, in which first-year students receive more grant funding than returning students. The public policy argument in favor of front-loading of grants is to ensure that students who drop out as freshmen are left with as little debt as possible.³ After all, students who drop out are three times more likely to default on their loans. But front-loading of grants also makes a college look as though it is less expensive because it has a lower net price during the first year.

When analyzing the front-loading of grants, it is important to disaggregate by degree program and institutional control. Shifts in enrollment from one year in school to the next may yield misleading results. For example, the overall cost of attendance increases significantly from the second to the third year because enrollment in less expensive 2-year degree programs decreases sharply after the end of the second year. Likewise, to the extent that retention and graduation rates correlate with cost of attendance, the mix of colleges will shift to higher-cost institutions in the third and fourth years. Accordingly, the following tables are limited to students in Bachelor's degree programs and the data is disaggregated according to institutional control and selectivity. Even with these restrictions, the cost of attendance

³ Such a benefit could be obtained without front-loading of grants by modifying the college's refund policy to minimize or eliminate the debt of students who drop out during the first year.

figures may differ by year in school, leading to differences in net price even if the grants are similar. Also, even if the average grant is unchanged, the percentage receiving grants may differ (i.e., proportionately fewer students qualifying for grants in subsequent years), leading to a difference in the mean grant.

The net price (mean) for students in years 2, 3 and 4 is \$1,426 higher than for first-year students at public colleges and \$1,312 higher than for first-year students at non-profit colleges. Front-loading of grants also varies by institutional selectivity, with an insignificant difference in net price (mean) at very selective colleges, a \$966 difference at moderately selective colleges, a \$1,118 difference at minimally selective colleges and a \$2,419 difference at open admission colleges.

The next table disaggregates the data by institutional control.

Bachelor's Degree Full-Time Year in School	COA	% Receiving Grants	Average Grant	Mean Grant	Net Price (Average)	Net Price (Mean)	Difference in Net Price Definitions
Overall							
Year 1	\$24,636	71.7%	\$8,648	\$6,197	\$15,988	\$18,440	\$2,451
Year 2	\$24,911	66.5%	\$8,538	\$5,677	\$16,374	\$19,235	\$2,861
Years 2, 3, 4	\$24,694	65.6%	\$8,349	\$5,478	\$16,345	\$19,216	\$2,871
Difference 2 – 1	\$275	-5.2%	-\$110	-\$520	\$386	\$795	\$410
Difference 234 – 1	\$58	-6.1%	-\$299	-\$719	\$357	\$776	\$420
Public Colleges							
Year 1	\$18,160	66.1%	\$6,172	\$4,080	\$11,987	\$14,080	\$2,093
Year 2	\$18,632	59.3%	\$6,024	\$3,573	\$12,608	\$15,059	\$2,451
Years 2, 3, 4	\$19,066	58.4%	\$6,092	\$3,560	\$12,974	\$15,506	\$2,532
Difference 2 – 1	\$472	-6.8%	-\$148	-\$507	\$621	\$979	\$358
Difference 234 – 1	\$906	-7.7%	-\$80	-\$520	\$987	\$1,426	\$439
Non-Profit Colleges							
Year 1	\$35,655	85.2%	\$13,030	\$11,104	\$22,625	\$24,551	\$1,926
Year 2	\$36,084	80.5%	\$12,571	\$10,121	\$23,514	\$25,964	\$2,450
Years 2, 3, 4	\$35,706	80.5%	\$12,233	\$9,843	\$23,473	\$25,863	\$2,389
Difference 2 – 1	\$429	-4.7%	-\$459	-\$983	\$889	\$1,413	\$524
Difference 234 – 1	\$51	-4.7%	-\$797	-\$1,261	\$848	\$1,312	\$463
For-Profit Colleges							
Year 1	\$31,741	57.6%	\$3,680	\$2,120	\$28,061	\$29,621	\$1,561
Year 2	\$31,730	65.7%	\$4,781	\$3,140	\$26,948	\$28,589	\$1,641
Years 2, 3, 4	\$31,698	68.4%	\$4,703	\$3,216	\$26,995	\$28,483	\$1,488
Difference 2 – 1	-\$11	8.1%	\$1,101	\$1,020	-\$1,113	-\$1,032	\$80
Difference 234 – 1	-\$43	10.8%	\$1,023	\$1,096	-\$1,066	-\$1,138	-\$73

The next table disaggregates the data by institutional selectivity.

Bachelor's Degree Full-Time Year in School	COA	% Receiving Grants	Average Grant	Mean Grant	Net Price (Average)	Net Price (Mean)	Difference in Net Price Definitions
Very Selective							
Year 1	\$30,762	70.9%	\$11,482	\$8,143	\$19,281	\$22,619	\$3,339
Year 2	\$30,043	63.8%	\$10,939	\$6,980	\$19,104	\$23,063	\$3,959
Years 2, 3, 4	\$29,123	61.8%	\$10,652	\$6,583	\$18,471	\$22,540	\$4,069
Difference 2 – 1	-\$719	-7.1%	-\$543	-\$1,163	-\$177	\$444	\$620
Difference 234 – 1	-\$1,639	-9.1%	-\$830	-\$1,560	-\$809	-\$79	\$730
Moderately Selective							
Year 1	\$22,932	72.8%	\$8,596	\$6,258	\$14,336	\$16,674	\$2,338
Year 2	\$23,124	68.3%	\$8,271	\$5,647	\$14,853	\$17,477	\$2,624
Years 2, 3, 4	\$22,974	66.6%	\$8,011	\$5,335	\$14,963	\$17,640	\$2,676
Difference 2 – 1	\$192	-4.5%	-\$325	-\$611	\$517	\$803	\$285
Difference 234 – 1	\$42	-6.2%	-\$585	-\$923	\$628	\$966	\$338
Minimally Selective							
Year 1	\$20,812	73.7%	\$7,651	\$5,637	\$13,161	\$15,175	\$2,014
Year 2	\$20,574	64.2%	\$7,083	\$4,548	\$13,490	\$16,026	\$2,536
Years 2, 3, 4	\$20,930	67.9%	\$6,834	\$4,637	\$14,096	\$16,293	\$2,197
Difference 2 – 1	-\$238	-9.5%	-\$568	-\$1,089	\$329	\$851	\$522
Difference 234 – 1	\$118	-5.8%	-\$817	-\$1,000	\$935	\$1,118	\$183
Open Admission							
Year 1	\$17,885	80.1%	\$5,957	\$4,772	\$11,928	\$13,113	\$1,185
Year 2	\$19,263	73.8%	\$5,796	\$4,276	\$13,467	\$14,987	\$1,520
Years 2, 3, 4	\$20,073	73.1%	\$6,212	\$4,542	\$13,862	\$15,531	\$1,669
Difference 2 – 1	\$1,378	-6.3%	-\$161	-\$496	\$1,539	\$1,875	\$336
Difference 234 – 1	\$2,188	-7.0%	\$255	-\$230	\$1,934	\$2,419	\$485

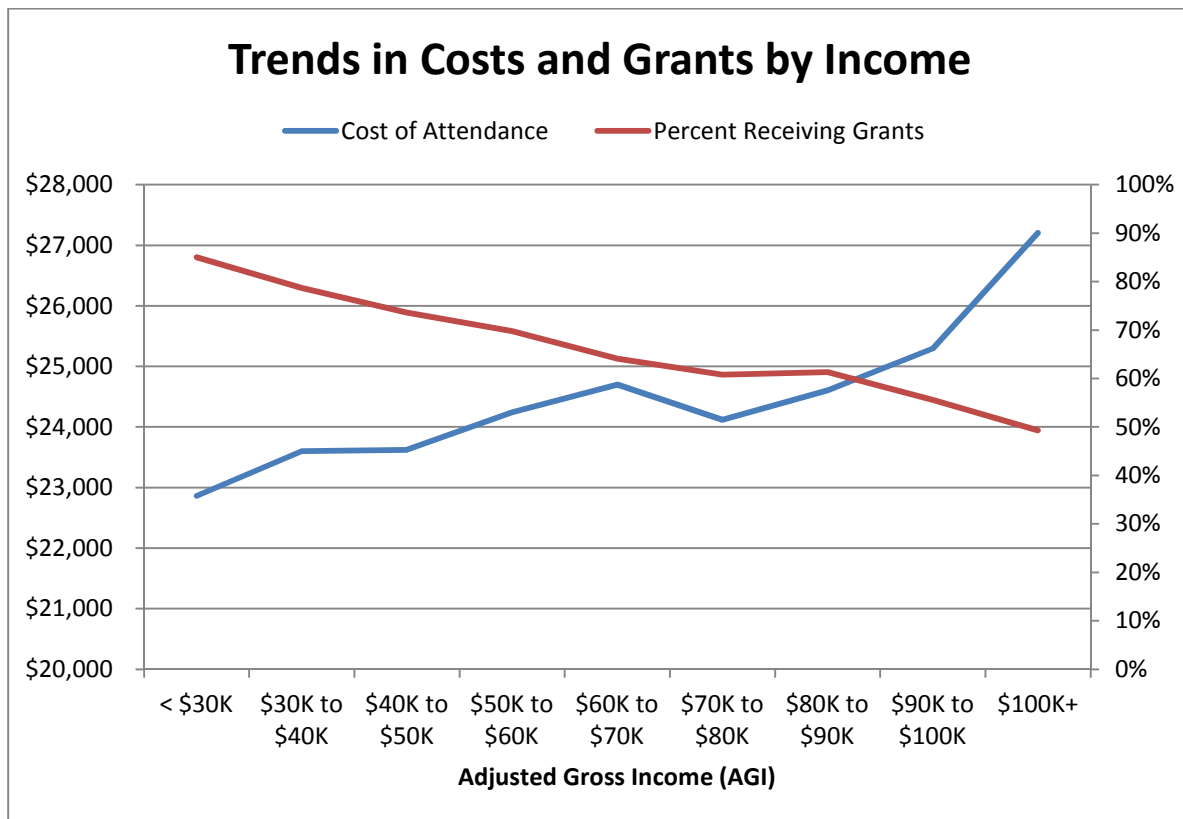
The next table shows how institutional grants and costs vary by selectivity. The percentage receiving institutional grants and the average institutional grant both increase with selectivity, but then so does the cost of attendance. The cost of attendance is higher at more selective colleges even after subtracting institutional grants. The difference between the average and mean institutional grants is also greater at more selective colleges, potentially leading to a greater tendency of net price calculators to understate the net price at these colleges when using the statutory definition of net price.

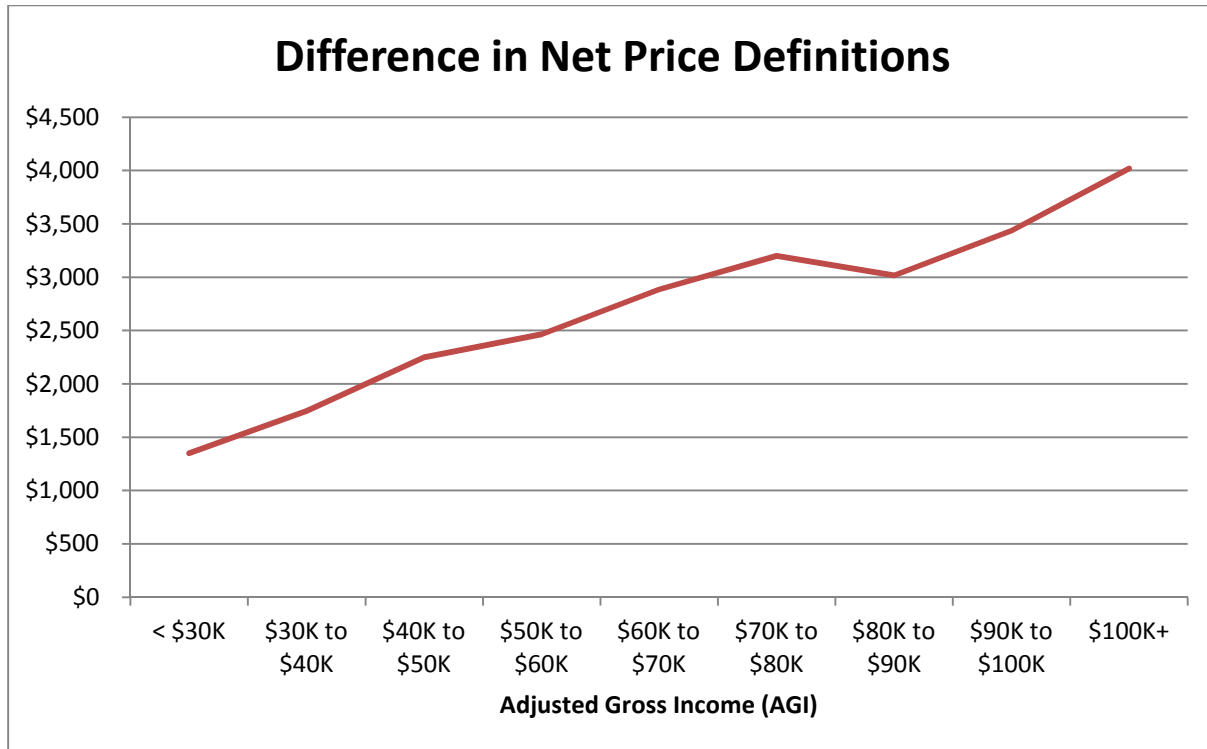
Bachelor's Degree Full-Time Year in School	COA	% Receiving Institutional Grants	Average Institutional Grant	Mean Institutional Grant	Average Minus Mean	COA Minus Mean
Very Selective	\$30,762	49.1%	\$10,340	\$5,073	\$5,267	\$25,689
Moderately Selective	\$22,932	47.7%	\$7,012	\$3,341	\$3,671	\$19,591
Minimally Selective	\$20,812	41.0%	\$5,490	\$2,252	\$3,238	\$18,560
Open Admission	\$17,885	35.9%	\$4,289	\$1,540	\$2,748	\$16,344

Impact by Adjusted Gross Income

As demonstrated by the following table and graphs, the cost of attendance increases with increasing income and the percentage receiving grants decreases with increasing income. The difference between net price based on the average and mean grants increases with increasing income. The difference represents 6% to 10% of costs for families with AGI less than \$50,000, 10% to 14% for families with AGI of \$50,000 to \$100,000 and 15% for families with AGI of \$100,000 or more.

Bachelor's Degree Full Time AGI	COA	% Receiving Grants	Average Grant	Mean Grant	Net Price (Average)	Net Price (Mean)	Difference in Net Price Definitions
Less than \$30,000	\$22,861	85.0%	\$9,004	\$7,654	\$13,858	\$15,207	\$1,350
\$30,000 to \$40,000	\$23,603	78.7%	\$8,192	\$6,447	\$15,411	\$17,155	\$1,745
\$40,000 to \$50,000	\$23,622	73.6%	\$8,521	\$6,272	\$15,101	\$17,350	\$2,249
\$50,000 to \$60,000	\$24,238	69.8%	\$8,172	\$5,708	\$16,066	\$18,530	\$2,464
\$60,000 to \$70,000	\$24,699	64.1%	\$8,041	\$5,156	\$16,658	\$19,543	\$2,885
\$70,000 to \$80,000	\$24,121	60.8%	\$8,165	\$4,965	\$15,956	\$19,156	\$3,200
\$80,000 to \$90,000	\$24,604	61.3%	\$7,793	\$4,777	\$16,812	\$19,827	\$3,016
\$90,000 to \$100,000	\$25,295	55.6%	\$7,737	\$4,302	\$17,558	\$20,994	\$3,436
\$100,000 or more	\$27,205	49.3%	\$7,928	\$3,909	\$19,277	\$23,296	\$4,018





Impact by Expected Family Contribution

The following table demonstrates that except for students with a zero expected family contribution (EFC), the net price and cost of attendance increase and the percentage of students receiving grants decreases with increasing EFC. The difference in the two net price definitions also increases with increasing EFC. The difference in the net price figures doubles after an EFC of 5,000, presumably because of the end of eligibility for the Pell Grant. (Grant recipients, by definition, have the same net price whether it is based on the average grant or mean grant. This threshold corresponds to a 17.5% decrease in the percentage of students receiving grants within the EFC band.)

Bachelor's Degree Full Time EFC	COA	% Receiving Grants	Average Grant	Mean Grant	Net Price (Average)	Net Price (Mean)	Difference in Net Price Definitions
Zero	\$22,546	86.6%	\$9,130	\$7,909	\$13,417	\$14,637	\$1,220
1 to 1,000	\$23,002	92.1%	\$10,108	\$9,312	\$12,895	\$13,691	\$796
1,000 to 2,500	\$23,651	89.6%	\$9,446	\$8,464	\$14,205	\$15,187	\$983
2,500 to 5,000	\$23,457	82.6%	\$7,640	\$6,314	\$15,817	\$17,143	\$1,326
5,000 to 7,500	\$24,026	65.1%	\$8,082	\$5,261	\$15,943	\$18,765	\$2,821
7,500 to 10,000	\$23,847	63.0%	\$7,729	\$4,871	\$16,118	\$18,976	\$2,858
10,000 to 12,500	\$24,164	62.6%	\$7,695	\$4,818	\$16,469	\$19,346	\$2,877
12,500 to 15,000	\$25,388	56.6%	\$8,323	\$4,710	\$17,065	\$20,678	\$3,613
15,000 to 20,000	\$25,412	54.0%	\$7,706	\$4,158	\$17,705	\$21,254	\$3,548
20,000 to 30,000	\$26,512	48.8%	\$7,316	\$3,573	\$19,196	\$22,939	\$3,743
30,000 to 40,000	\$27,431	45.9%	\$8,053	\$3,700	\$19,378	\$23,731	\$4,353
40,000 or more	\$28,160	46.5%	\$7,587	\$3,529	\$20,573	\$24,631	\$4,058

Impact on Dependency Status

The distribution of dependent students among colleges differs from the distribution of independent students, in part due to increased resources available from parents but also in part due to other factors. This leads to differences in net price, especially at non-profit colleges. For this reason it is important that a net price calculator consider the student's dependency status.

Bachelor's Degree Full Time Dependency	COA	% Receiving Grants	Average Grant	Mean Grant	Net Price (Average)	Net Price (Mean)	Difference in Net Price Definitions
Overall							
Dependent	\$24,760	65.8%	\$8,869	\$5,840	\$15,890	\$18,920	\$3,029
Independent	\$24,322	72.2%	\$6,356	\$4,590	\$17,967	\$19,732	\$1,765
Difference	-\$438	6.4%	-\$2,513	-\$1,250	\$2,077	\$813	-\$1,264
Public Colleges							
Dependent	\$18,909	58.6%	\$6,140	\$3,596	\$12,769	\$15,313	\$2,544
Independent	\$18,819	70.1%	\$5,937	\$4,164	\$12,882	\$14,655	\$1,773
Difference	-\$90	11.5%	-\$203	\$568	\$113	-\$658	-\$771
Non-Profit Colleges							
Dependent	\$36,739	81.3%	\$13,045	\$10,610	\$23,693	\$26,129	\$2,435
Independent	\$29,172	82.8%	\$8,649	\$7,161	\$20,524	\$22,012	\$1,488
Difference	-\$7,567	1.5%	-\$4,396	-\$3,449	-\$3,170	-\$4,117	-\$947
For-Profit Colleges							
Dependent	\$32,929	55.9%	\$5,354	\$2,993	\$27,575	\$29,936	\$2,361
Independent	\$31,575	65.4%	\$4,206	\$2,752	\$27,369	\$28,824	\$1,455
Difference	-\$1,354	9.5%	-\$1,148	-\$241	-\$206	-\$1,112	-\$906

The next table distinguishes between the various types of independent student. The differences in the cost of attendance and grants combine to yield significant differences in net price. For this reason it is important for net price calculators to distinguish between dependent students and the three types of independent student instead of just dependent versus independent students.

Disaggregating the data by type of college demonstrates that most of the differences in net price according to dependency status are at non-profit colleges. Public colleges show less volatility in net price among the different types of student.

Bachelor's Degree Full Time Dependency	COA	% Receiving Grants	Average Grant	Mean Grant	Net Price (Average)	Net Price (Mean)	Difference in Net Price Definitions
Dependent	\$24,760	65.8%	\$8,869	\$5,840	\$15,890	\$18,920	\$3,029
Independent, No Dependents, Unmarried	\$23,396	71.6%	\$7,114	\$5,091	\$16,282	\$18,305	\$2,023
Independent, No Dependents, Married	\$24,079	61.0%	\$6,283	\$3,834	\$17,797	\$20,246	\$2,449
Independent With Dependents	\$25,179	76.5%	\$5,781	\$4,424	\$19,398	\$20,755	\$1,357

Impact of Student Residence While Enrolled

Students enrolled in Bachelor's degree programs may reside on campus, off campus or with their parents. The next table demonstrates significant differences in the cost of attendance, grants and net price for each option. For example, students who live at home with their parents tend to enroll at much lower cost institutions that cost a third less (\$9,028) than colleges where the students live on campus and almost a fifth less (\$4,399) than colleges where the students live off campus. The net price figures are \$6,112 and \$4,485 lower, respectively.

These differences may be due to selection bias, since students who live at home with their parents to save money are likely to enroll at lower cost colleges. Also, some colleges set the allowance for room and board to zero for students who live at home with their parents, yielding an artificially lower cost of attendance that does not reflect actual costs. Residential colleges also tend to be more expensive than non-residential colleges. Even so, the magnitude of the differences demonstrates the need to consider the student's plans to reside on or off campus or with parents in the design of net price calculators.

Bachelor's Degree Full Time Residence	COA	% Receiving Grants	Average Grant	Mean Grant	Net Price (Average)	Net Price (Mean)	Difference in Net Price Definitions
On Campus	\$28,070	70.6%	\$10,405	\$7,342	\$17,665	\$20,729	\$3,064
Off Campus	\$23,441	63.7%	\$6,814	\$4,338	\$16,627	\$19,102	\$2,475
With Parents	\$19,042	66.3%	\$6,679	\$4,426	\$12,363	\$14,617	\$2,254

Impact on Part-Time Students

Part-time students have a lower cost of attendance than full-time students, but they are also less likely to get grants and the average grant is lower, yielding a net price (mean) for full-time students that overstates the net price for part-time students by more than half (54%).

Bachelor's Degree Enrollment Status	COA	% Receiving Grants	Average Grant	Mean Grant	Net Price (Average)	Net Price (Mean)	Difference in Net Price Definitions
Full-Time	\$24,681	67.0%	\$8,385	\$5,616	\$16,297	\$19,065	\$2,768
Part-Time	\$14,691	53.2%	\$4,359	\$2,318	\$10,332	\$12,372	\$2,040
Ratio PT/FT	60%	79%	52%	41%	63%	65%	74%
FT – PT	\$9,990	13.8%	\$4,026	\$3,298	\$5,965	\$6,693	\$728

Impact on Transfer Students

While transfer students tend to enroll in colleges with a slightly lower cost of attendance than students who do not transfer, the mean grant is also lower, leading to a slightly lower net price on average. The actual net price at specific colleges, however, may differ more significantly.

Bachelor's Degree Full Time Transfer Students	COA	% Receiving Grants	Average Grant	Mean Grant	Net Price (Average)	Net Price (Mean)	Difference in Net Price Definitions
Never Transferred	\$26,349	68.4%	\$9,195	\$6,287	\$17,154	\$20,062	\$2,908
Transferred	\$25,092	65.1%	\$8,160	\$5,309	\$16,932	\$19,783	\$2,851
Difference	-\$1,257	-3.3%	-\$1,035	-\$978	-\$222	-\$279	-\$57