The False Promise of Net Price as an Affordability Metric¹

Braden J. Hosch, Ph.D. Stony Brook University

Abstract

Net price represents an institution's cost of attendance less grant aid received by students, and it has been heralded as the best available measure of affordability for colleges and universities. This promise, however, is overstated because the cost of living components that figure into net price calculations are ill-defined and unevenly calculated. This paper examines the variability in cost of attendance determinations and finds that 43.6% of all institutions fall outside of a \$6,000 window centered on a county-level estimate for 9-month living costs. This wide variation in components of room and board, transportation, and other expenses for commuter students has been overlooked, and it confounds net price calculations to make net price a problematic metric to measure affordability or use in accountability systems.

Significant scholarly and public attention has focused on increases in sticker prices of colleges and universities (Kane, 2010; Baum & Ma, 2012), and the policy response has historically been to increase spending on student financial aid (Dynarski, 2002). As a principal funding mechanism for higher education in the United States, Federal Student Aid grant and loan programs delivered \$137.6 billion to almost 14 million students (U.S. Dept. of Education, 2013). This equates to almost \$10,000 per student receiving aid and approaches just under a third of the almost \$500 billion spent on higher education annually.²

Distribution of these aid dollars based on the size of the gap between the total cost of attendance of their college or university, less an estimated contribution from the student and his or her family. The resulting amount to be paid by the student, or "net price," has gained traction as more representative cost to families for a year of higher education than sticker price (Kelly, 2011). Net price figures prominently in the White House College Score Card as well as the watch lists published annually in the College Affordability and Transparency Center as required by the Higher Education Opportunity Act of 2008, and it is believed net price will be the metric used to gauge affordability for the Obama Administration's planned Postsecondary Education Rating System (PIRS).

Significantly less attention in the scholarly literature, however, has been paid to net price, with examinations providing large descriptive statistical overviews (Horn & Paslov, 2014), discussion of the net price calculators required by the Higher Education Opportunity Act (Fallon, M., 2011; Pope, 2011; Piccoli, 2012), and the watch lists also required by HEOA (Field & Newman, 2013). Very little work has been conducted on the actual components of cost of attendance beyond tuition and fees, in particular the cost of room and board and other expenses, especially for those living off campus. Rather, they are taken as a given. Notably, the Higher Education Act of 1965, as amended, explicitly states these expenses are "defined by the institution" (20 U.S. Code § 1087(II) "Cost of attendance"). Even cursory evidence suggests institutions have adopted disparate and incomparable approaches this determination of costs. These disparities point to a need for research to answer important policy questions about how variation in determining living expenses that comprise costs of attendance and the resulting net price amount contributes to the equitable and optimal distribution of federal student aid dollars.

¹ This paper draws significantly on a collaboration with Robert Kelchen (Seton Hall U.) and Sara Goldrick-Rab (U. of Wisconsin-Madison) for a larger project examining cost of attendance. See Kelchen, Hosch & Goldrick-Rab (2014). I am grateful to these research partners for their contributions in development of methodology and analysis. ² In FY 2012, all higher education institutions spent just over \$485 billion (Ginder & Kelly-Reid, 2013).

Methodology

The study principally relies upon data from the 2013 Integration Postsecondary Education Data System (IPEDS) Institutional Characteristics (IC) survey, and includes all institutions in the universe for which costs for full-time, first-time undergraduate students were reported for room and board expenses (not with family) and other expenses (not with family). Institutions in U.S. Territories and outlying areas were excluded because data to construct county-level estimates for living costs were generally unavailable. Two institutions classified as administrative units but still reported these charges were excluded, for a total of 6,438 institutions in the 50 United States and the District of Columbia (see Table 1 for a breakdown by sector). Among these, 4,130 institutions were "academic year reporters" – those institutions reported living costs and tuition for the academic year; the other 2,308 were "program reporters" – those reporting charges and costs by program. On the IPEDS IC survey, program reporters provide living costs for a 1-month (4-week) period which is then multiplied across the length of the program. These costs were normalized to nine months to compare to academic year reporters, and all costs in this paper are adjusted to reflect nine months.

As observed in a 2009 study from the Government Accountability Office in examining how estimated family contributions might be regionally adjusted, the principal challenge in comparing living costs is to adjust for regional and local variation. To control for these effects, county-level estimates for living expenses were generated for all institutions using an approach modeled on the on the MIT Living Wage Calculator (Glasmeier & Arete, 2014). Data were gathered independently from what is available in this online tool, however, and an effort was made to use resources that would have been available for building the living cost allowance budget for the 2013-14 academic year. In instances where county-level or more granular costs were unavailable, data were adjusted by the 2013 County Cost of Living Index (COLI) from the Council for Community and Economic Research to account for regional differences. This methodology is the same as used by Kelchen, Hosch & Goldrick-Rab (2014) and findings draw upon the same data set.

Estimates for Room & Board

U.S. Department of Housing and Urban Development 50th Percentile Rents for FY 2012 were the source for housing expenses. These data are collected and reported separately by county, and so regional adjustments are built into the data set. Values for a zero bedroom (efficiency) apartment are used for college cost of living estimates.³

U. S. Department of Agriculture Food Plans: Cost of Food for June 2012 were the source for food (board) expenses. The low-cost food plans for men and women ages 19-50 were averaged to arrive at a cost of \$218 per month. This figure was adjusted by the county-level COLI to account for local variation in costs. The sum of food costs and housing costs added together represent the county-based estimate for room and board costs comparable to what institutions report in IPEDS.

Estimates for Other Expenses

Costs for transportation, health care, and miscellaneous expenses together comprise the estimate for expenses other than room and board. The 2012 Bureau of Labor Statistics Consumer Expenditure (CE) Survey for individuals under 25 years old (Table 1300) was the source for transportation expenses, costs for operation and maintenance of a car were used to estimate student costs, but costs for capital outlay, and depreciation were not included. These amounts were \$1,931 per year (\$161 per month) for gasoline and motor oil and \$1,322 per year (\$110 per month) for other expenses such as financing, maintenance and repairs, license fees, etc. The CE Survey was also the source for miscellaneous expenses. Included in this category were personal care products and services at \$372 per year (\$31 per month), \$249 per year

³ NASFAA (2013) issued guidance for financial aid officers that budgets for living expenses does not require living with roommates; only about 40% of institutions are NASFAA members.

(\$21 per month) for fees and admissions, and \$360 per year (\$30 per month) for miscellaneous expenses. These amounts totaled to \$981 annually or \$82 per month.

Health care costs were estimated based on average per person costs for health insurance premiums by state in 2010 as compiled by the Kaiser Family Foundation. For the states for which data were unavailable (Alaska, Kansas, Nevada, Ohio, Oklahoma, and Texas) the national average of \$215 was used but adjusted using the county-level COLI in those states only. Costs for actual out-of-pocket medical expenses were not included in estimates, nor were costs for child care or taxes.

Limitations and Caveats

A uniform method to estimate exact cost of living is elusive both because variation of potential costs at the individual level is wide within institutions as well as local geographic variation. Individuals who have higher health care costs or even basic child care costs will have higher expenses, although it may not be reasonable to account for such circumstances through professional judgment allowed to financial aid administrators under current regulations. While county-level estimates are superior to the College Board approach to estimate costs within 24 metropolitan statistical areas, variation in costs can still be wide within a county; in dense urban areas, rents can change dramatically over the span of a few blocks, although some expectation for commuting is reasonable.

Findings

The data already available in IPEDS show that for students not living with their families, the cost of living represents half (49.8%) across all institutions. These proportions do not decrease markedly for oncampus room and board costs, where such costs are applicable. Notably in the 2-year public sector where most community colleges are classified, and almost none have campus housing, more than two-thirds (70.5%) of the costs of attendance is simply living costs. Similarly, in the public 4-year sector, living costs represent 59.1% of the cost of attendance, indicating they exceed charges for tuition and required fees. Even in the sectors where cost of attendance is the highest and sticker prices regularly fall into the \$25,000-\$45,000 range, living costs average a third to just under a half of the total cost of attendance.

Sector	Institutions (N)	Not with family costs for room & board and other expenses as percent of total cost of attendance
4-year or above	2,534	43.7
Public	634	59.1
Private not-for-profit	1,200	35.6
Private for-profit	700	43.5
2-year	2,109	57.8
Public	1,019	70.5
Private not-for-profit	126	49.3
Private for-profit	962	45.4
Less-than 2-year	1,797	48.9
Public	228	58.8
Private not-for-profit	66	50.2
Private for-profit	1,503	47.3
Grand Total	6,438	49.8

Table 1. Reported Living Costs (Not with Family) 2013-14 As Percent of Total Cost of Attendance

Cost of attendance assumes in-state charges for tuition and fees when applicable.

Kelchen, Hosch and Goldrick-Rab (2014) summarized descriptive statistics for county-level estimates for living costs; tables 2 and 3 draw directly from this work. Highest costs were unsurprisingly in major metropolitan areas, especially in California and the North East. In fact, just over half of all institutions in the study (N=3,511) were located in the top quartile of counties by estimated cost of living. Living costs in this quartile ranged from \$12,940 for total costs in Merced County, California, home of Merced College, to over \$24,000 for institutions in the five boroughs of New York City. Suffolk County, where Boston, Massachusetts is located, for instance, has an estimated nine-month cost of living of \$22,743; Los Angeles County's estimated nine-month cost of living is \$18,144. The other half (48%) of institutions are located in counties in first three quartiles by living cost; variation in estimated cost of living was less than \$4,000 from the minimum to the top of the 2nds quartile of counties. These costs ranged from a low of \$9,126 in Randolph County, Arkansas, where Black River Technical College is located -- to just under \$12,940 in Mohave County, Arizona, home of Mohave County Community College in Kingman.

	Room & Board Costs			Other Costs				
					Health			
_	Housing	Food	Total	Transp.	Care	Misc.	Total	Total
Min	2,862	1,665	4,572	2,061	1,224	621	4,077	9,126
25th pctile	3,969	1,872	5,877	2,331	1,809	702	4,860	10,863
50th pctile	4,662	1,944	6,606	2,421	1,890	729	5,040	11,678
75th pctile	5,623	2,068	7,711	2,565	2,025	774	5,371	12,940
Max	12,051	3,690	15,489	4,590	3,933	1,386	9,189	24,426
Mean	5,040	2,003	7,039	2,490	1,990	753	5,233	12,272
SD	1,572	214	1,719	266	457	80	682	2,213

Table 2.	Summary of	of County-Level	l Cost of Living	Estimates, 9	Months, All U.	S. Counties*

* Includes only counties that have at least one higher education institution in the study population, county N = 1,448; in Virginia, some of these geographical units are cities but treated as counties here.

Perhaps, most strikingly, while over half (56.4%) of institutions were found to report cost of living expenses within \$3,000 above or below the county-level estimate, more than two out of every five institutions (43.6%) reported cost of living amounts that were outside of a \$6,000 window centered on the county-level estimate. In many instances, institutions that were less than a mile apart reported living costs for nine months that were different by over \$10,000. More institutions (32.8%) reported living costs more than \$3,000 below the county-level estimate, while 10.8% reported living costs \$3,000 or more above the county-level estimate.

Levels of variation differed by sector. Among public 4-year institutions, almost three quarters (71.6%) were within \$3,000 of the county-level estimated cost of living, but only just over half (55.4%) of private, not-for profit 4-year institutions and 60.6% of private, for-profit institutions were within this range. In the two-year sector, almost two-thirds (63.2%) of public 2-year institutions reported living costs within \$3,000 of the county-level estimate, and over half (53.1% and 58.5%) of private, not-for profit and for-profit institutions in this sector were within this range. In the less-than 2-year sector, which is dominated by smaller institutions that may have fewer resources to dedicate to research cost of living, less than half (45.3%) of institutions reported living costs within \$3,000 of the county-level produces estimates that are slightly high, but even if this were the case and a correction downward adopted, the same basic proportion of institutions would still fall outside of the +/- \$3,000 range.

		Institutional Living Cost Allowance					
	Institutions	Above Estimate	Within \$3,000	Below Estimate			
	Institutions	By \$3,000+	of Estimate	By \$3,000+			
Sector	Ν	Pct	Pct	Pct			
4-year or above	2,534	8.3	60.9	30.8			
Public	634	9.5	71.6	18.9			
Private not-for-profit	1,200	7.8	55.4	36.8			
Private for-profit	700	8.1	60.6	31.3			
2-year	2,109	10.1	60.4	29.5			
Public	1,019	7.7	63.2	29.1			
Private not-for-profit	126	15.9	53.1	31.0			
Private for-profit	962	11.9	58.5	29.6			
Less-than 2-year	1,797	15.1	45.3	39.6			
Public	228	14.0	40.8	45.2			
Private not-for-profit	66	4.5	48.5	47.0			
Private for-profit	1,503	15.8	45.8	38.4			
Grand Total	6,438	10.8	56.4	32.8			

 Table 3. Institutional Living Cost Allowances (over 9 months) for Off-Campus Students Compared to County-Level Living Cost Estimates, by Institutional Sector and Control

Finally, differences in tightly defined geographic areas were stark. Given that the 2014 NEAIR Annual Conference is held in Philadelphia, the reported costs for Philadelphia County are presented here (see Table 4), but other geographic areas show similar levels of variation. The estimated living cost for the county were \$16,020 for nine months, and among the 35 institutions in the county, just two institutions reported living costs more than \$3,000 above this amount; these were La Salle University, where the reported costs were \$20,250 for nine months and the National Massage Therapy Institute, where reported costs were \$19,530 for nine months. Nineteen institutions reported living costs within \$3,000 of the county-level estimate and fourteen institutions reported costs more than \$3,000 below the county level estimate. The lowest of these was the LT International Beauty School \$3,744 for nine months of living expenses, which is likely a reporting error, but the next two lowest institutions were Peirce College, reporting living costs of \$9,355. The detail map (Figure 1) perhaps best depicts how variation in this geographic region is not rationally distributed, and illustrates the underlying challenge to the validity of living costs as currently reported in IPEDS and used for the construction of financial aid budgets.

Discussion

What becomes clear from the data is net price is rendered unreliable as a way to measure colleges for maintaining affordability. For any college that has a substantial proportion of commuters, net price is substantively affected by a cost of living budget that may have been determined that is not comparable to other colleges. As we saw in the case of institutions in the Philadelphia area, variation in costs even in a tightly defined geographic is inexplicably wide, with a difference of over \$16,000 between the highest and lowest reported cost of living budget for nine months in the county, but even within about one square mile in Philadelphia proper, costs varied by over \$10,000 for nine months of living costs. Because cost of living comprises one third to two third of the cost of attendance budget and an even larger share of net price, once grant aid has been subtracted, any comparison of net price is more often measuring the cost of living attributed to commuting students.

	Allowance Reported By Institution			Estimated	Reported - Estimated	
Institution Name	Room & Board	Other	Total	Living Cost	Amount	Percent
La Salle University	16,200	4,050	20,250	16,020	4,230	26.4%
National Massage Therapy Institute	11,835	7,695	19,530	16,020	3,510	21.9%
Drexel University	14,415	3,950	18,365	16,020	2,345	14.6%
Curtis Institute of Music	13,000	5,140	18,140	16,020	2,120	13.2%
Temple University	11,410	5,790	17,200	16,020	1,180	7.4%
Jna Institute of Culinary Arts	12,550	4,600	17,150	16,020	1,130	7.1%
University of the Sciences	13,578	3,396	16,974	16,020	954	6.0%
Star Career Academy-Philadelphia	10,287	5,670	15,957	16,020	-63	-0.4%
Hussian School of Art	10,578	5,164	15,742	16,020	-278	-1.7%
Pennsylvania Academy of the Fine Arts	12,730	2,610	15,340	16,020	-680	-4.2%
Prism Career Institute-Philadelphia	9,549	5,265	14,814	16,020	-1,206	-7.5%
Orleans Technical Institute	9,549	5,265	14,814	16,020	-1,206	-7.5%
Moore College of Art and Design	12,790	2,000	14,790	16,020	-1,230	-7.7%
Saint Joseph's University	13,232	1,500	14,732	16,020	-1,288	-8.0%
University of Pennsylvania	12,922	1,798	14,720	16,020	-1,300	-8.1%
Lincoln Technical Inst-Ctr City Phila	9,342	5,157	14,500	16,020	-1,520	-9.5%
Lincoln Technical Inst-NE Philadelphia	9,342	5,157	14,499	16,020	-1,521	-9.5%
Lincoln Technical Inst-Philadelphia	9,342	5,157	14,499	16,020	-1,521	-9.5%
Philadelphia University	10,514	3,820	14,334	16,020	-1,686	-10.5%
Restaurant Sch at Walnut Hill College	9,825	4,350	14,175	16,020	-1,845	-11.5%
Aviation Inst of Maintenance-Phila	6,510	7,056	13,566	16,020	-2,454	-15.3%
Empire Beauty School-Ctr City Phila	6,174	6,687	12,861	16,020	-3,159	-19.7%
Empire Beauty School-NE Philadelphia	6,174	6,687	12,861	16,020	-3,159	-19.7%
Chestnut Hill College	9,008	3,100	12,108	16,020	-3,912	-24.4%
The University of the Arts	9,576	2,313	11,889	16,020	-4,131	-25.8%
ITT Technical Institute-Philadelphia	7,495	4,383	11,878	16,020	-4,142	-25.9%
Kaplan Career Institute-Philadelphia	5,607	6,084	11,691	16,020	-4,329	-27.0%
Kaplan Career Institute-Franklin Mills	5,607	6,084	11,691	16,020	-4,329	-27.0%
The Art Institute of Philadelphia	5,610	6,078	11,688	16,020	-4,332	-27.0%
Metropolitan Career Ctr CompTech Inst	7,427	4,195	11,622	16,020	-4,398	-27.5%
Jean Madeline Aveda Institute	6,993	4,176	11,169	16,020	-4,851	-30.3%
Holy Family University	8,872	1,290	10,162	16,020	-5,858	-36.6%
Community College of Philadelphia	6,660	2,695	9,355	16,020	-6,665	-41.6%
Peirce College	6,190	1,600	7,790	16,020	-8,230	-51.4%
L T International Beauty School	2,997	747	3,744	16,020	-12,276	-76.6%

 Table 4. Comparison of Living Cost Allowances to Estimated Living Costs, Philadelphia County



Figure 1. Philadelphia Detail Map -- Reported Living Costs (Not with Family) for Nine Months, Selected Institutions

Estimated county-level cost of living for nine months: \$16,020

Use of this measure to rate or rank colleges is even more problematic. The watch lists mandated by HEOA published in the College Affordability and Transparency Center are designed to flag outliers in net price, but the variation in cost of attendance described here, suggests these institution may be penalized for how they have determined their cost of living budgets. Further, once institutions turn attention to managing net price, the cost of living budget – as a significant and somewhat hidden component of net price becomes an easy way manage net price and game the system. Indeed, Kelchen, Hosch and Goldrick-Rab (2014) found that a sizable proportion of institutions dropped their cost of living budgets year to year for commuters, while rarely or never doing this for students living on-campus. Conversely rating or ranking systems that use net price, such as the *Washington Monthly* College Guide (2014) and *U.S. News & World Report*'s Best Value Schools (2014), may potentially flag outliers on the other tail of the distribution, again providing incentives to manage net price by underestimating cost of living expenses.

Such gaming has potential to harm students in multiple ways. Most obviously a net price figure communicated to consumers that is potentially thousands of dollars different from actually costs subverts the entire point of providing net price in the first place. Second, when institutions construct living cost budgets below what is realistic – and under-budgeting appears to be three times as prevalent as over-budgeting, students will qualify for less federal and state aid and may find that they do not have enough resources to meet basic expenses while pursuing their studies. At the very least, risk for financial issues to derail academic progress increases as a result of under-budgeting. Third, for students attending the one out of eleven institutions that reported cost of living expenses above the county-level estimates, borrowing exceed what is actually needed and contribute to unnecessary debt. It is also possible that the inflation of this cost of living budget prompts more federal or state grant aid than is needed to be awarded, thus reducing aid that other students might have received.

Recommendations

A number of potential policy solutions could correct or at least mitigate the problems with how cost of living budgets are constructed:

- 1) The federal government should either determine living costs, taking regional adjustments into account. While politically difficult, HUD fair market rents, military Basic Housing Allowance, and federal travel per diem allowances set precedence for such determination.
- 2) Absent a federally set amount, Reauthorization of the Higher Education Act should authorize the Secretary of Education to set a rigorous method to determine living costs.
- 3) Net price should not be included in federal ratings nor in third party rankings unless statistically adjusted to remove cost of living variation.

Regardless of the outcome of policy changes, some ancillary recommendations emerge for the short term and on an ongoing basis

- 4) Institutional researchers should examine cost of living in their local area, identify reported costs of other institutions in their area, and assist in budget construction
- 5) More research should be conducted to identify reasonable estimates for living expenses at geographic scales that make sense for colleges; particular attention should be placed on health care and transportation estimates
- 6) The research community should take a more active role in interrogating reliability and validity of educational statistics that gain national traction. As more political momentum gathers to identify measures for accountability and distribution of resources, policy must be informed by rigorously interrogated underlying data, and at present levels of error and anomalies in extant data sources remain relatively undocumented.

References

- Baum, S. and Ma, J. (2012). Trends in College Pricing, 2012. Trends in Higher Education Series College Board Advocacy & Policy Center. Retrieved May 24, 2014 from http://trends.collegeboard.org/sites/default/files/college-pricing-2012-full-report_0.pdf.
- Bureau of Labor Statistics (2013). Consumer Expenditure Survey, 2012. Retrieved August 15, 2014 from http://www.bls.gov/cex/2012/combined/age.pdf.
- Dynarski, S. (2002) The consequences of lowering the cost of college. National Bureau for Economic Research Retrieved January 9, 2014 from http://users.nber.org/~dynarski/2002%20Behavioral.pdf.
- Fallon, M. (2011). Enrollment management's sleeping giant: The net price calculator mandate. *Journal of College Admission* 211 p.6-13.
- Field, K. and Newman, J. (2014). Have U.S. 'shame lists' helped lower tuition? Probably not. *Chronicle of Higher Education*. February 28, 2014. 60.24, p. 17.
- Ginder, S.A., and Kelly-Reid, J.E. (2013). Enrollment in Postsecondary Institutions, Fall 2012; Financial Statistics, Fiscal Year 2012; Graduation Rates, Selected Cohorts, 2004-09; and Employees in Postsecondary Institutions, Fall 2012: First Look (Provisional Data) (NCES 2013-183). U.S. Department of Education. Washington, DC: National Center for Education Statistics. Retrieved January 29, 2014 from http://nces.ed.gov/pubsearch
- Government Accountability Office (2009). Federal student aid formula: Cost-of-living adjustment could increase aid to a small percentage of students in high-cost areas but could also further complicate aid process. Retrieved March 15, 2014 from <u>http://www.gao.gov/new.items/d09825.pdf</u>.
- Horn, L. and Paslov, J. (2014). Out-of-Pocket Net Price for College. Data Point. National Center for Education Statistics, NCES 2014-902. Washington, DC.
- Kane, T. (2010) *The price of admission: Rethinking how Americans pay for college*. Brookings Institution: Washington, DC.
- Kelly, A. (2011). Nothing but net: Helping families learn the real price of college. Education Outlook. No. 10. American Enterprise Institute for Public Policy Research.
- Kelchen, R., Hosch, B., and Goldrick-Rab, S. (2014). The costs of college attendance: Trends, variation, and accuracy in institutional living cost allowances. Retrieved November 6, 2014 from http://wihopelab.com/publications/Kelchen%20Hosch%20Goldrick-Rab%202014.pdf.
- National Association of Student Financial Aid Administrators. (2013). Developing the cost of attendance. *Monograph*. No. 24, June.
- Piccioli, M. (2012). Net price calculator, six months in. University Business. 15.3, p.47-48.
- Pope, J. (2011). New tool will give clearer picture on college cost. Community College Week. 24.6, p.10.
- U.S. Department of Education (2013). Federal Student Aid Annual Report 2013. Washington, DC. Retrieved March 25, 2014 from <u>http://www2.ed.gov/about/reports/annual/2013report/fsa-report.pdf</u>.
- U.S. Department of Agriculture (2012). USDA Food Plans: Cost of Food report for June 2012. Retrieved August 10, 2014 from <u>http://www.cnpp.usda.gov/USDAFoodPlansCostofFood/reports</u>
- U.S. Department of Defense (2014). Basic Allowance for Housing. Retrieved October 26, 2014 from http://www.defensetravel.dod.mil/site/bah.cfm.
- U.S. Department of Housing and Urban Development (2012). FY2012 50th Percentile Rents: Data by County. Retrieved August 10, 2014 from <u>http://www.huduser.org/portal/datasets/50per.html</u>