



ISSUE BRIEF #2: METRICS FOR IMPROVING  
COST ACCOUNTABILITY

**(HINT: NOT MORE DETAILED COST ACCOUNTING...)**

The funding squeeze facing much of American public higher education is neither short-term, nor small. To the contrary, the gaps between funding and the public need to increase access and degree attainment are large and growing. Meeting the educational requirements of the future will require new money, at a level that will not be forthcoming unless policymakers and the public are convinced that colleges and university leaders are serious about managing costs effectively.

But even the best case scenario for state and federal funding shows that increases in those sources by themselves won't be enough to achieve access and attainment goals while maintaining quality and affordability. Realistically, the major source of "new" money for future programs will come from reallocating resources already embedded in institutions' base funding.

Thus, whether the goal is to increase support from a state legislature, or improve strategic capacity for resource allocation – or both – finding resources to meet the needs of the future will require better accountability for costs in higher education. Only that will persuade a skeptical public that resources are justified, and guide strategic investment and reallocation decisions within institutions.

One of the barriers to improved cost accountability lies in the metrics of cost analysis. Higher education costing techniques are based on accounting information, and do not translate well into program and performance measures. They don't easily distinguish between transactional costs (e.g., the amount it costs to run the English department) and performance measures (how many credit hours the English department generates). They are also static, and don't put information into context – and don't show spending trends over time, or anticipate future changes in resource use. For policymakers, be they board members or state legislators, the metrics offer no help in making decisions about relative effectiveness or efficiency in resource use, or where and how to spend discretionary revenues to increase performance.

Small wonder then that studies have shown that routine use of cost metrics for policy-level decision making in higher education is rare. Most fiscal reporting focuses on revenues (whether or not they go to core purposes), tuition and fees, and financial aid. *How* the money is spent is something that remains shrouded in too much mystery. Several national efforts to address this problem have largely come to naught – probably because those common methodologies are simultaneously not nuanced enough for internal audiences, and far too detailed for policy-level work.

In the hope of advancing the discussion, the Delta Project has developed several recommendations for aggregate measures of costs for policy audiences. Using data already in the public domain through the National Center for Education Statistics Integrated Postsecondary Education Data System (IPEDS), the measures can be displayed for individual institutions, or aggregated into sector-level measures. They help policymakers – board members, state officials, and federal audiences – see simple patterns that will help them answer questions about where the money comes from; who’s paying for higher education; where the money goes; and what it buys.

1: REVENUES: Total operating revenues per FTE student enrolled, and the proportion of them that go to educational and related purposes. At the institutional level, governing boards and presidents can use that measure to assess revenue trends for their institution in comparison to peers, and to develop fund-raising plans that meet educational needs. At the state and federal levels, the measures can help policymakers focus on what revenues are available for core purposes, as opposed to those that are targeted to specific activities.

2: SPENDING: Operating budget spending per FTE student enrolled, organized into three broad categories of expenses:

- education and related (E&R) spending per student (instruction, student services, and the instructional share of academic support, operations and maintenance, and institutional support);
- educational and general (E&G) spending per student (education and related expenses plus organized research and public service); and
- total operating expenses per student (all operating expenses including auxiliary enterprises).

Looking at changes over time in spending across these broad categories helps to focus on the proportion of spending that is going to educate students, versus the amount that goes for research and public service, and for auxiliary enterprises. The metrics provide a platform for examining spending and educational performance, both for student access and success. (Definitions and examples of the calculations used to create these measures are provided at the end of this brief.)

3: COSTS AND TUITION: The relation between changes in sticker prices and changes in education and general spending per student, used to evaluate whether tuition increases are driven by increases in spending, or by shifts in subsidies.

4: SUBSIDY PATTERNS: An evaluation of changes in the portion of educational and related costs that are paid by students versus those that are covered by an institution (or a state). Such information helps to answer basic questions about who pays, and who benefits, from higher education – as well as about the balance of financial responsibility among a student, an institution, and a state.

5: COSTS AND PRODUCTION: Trends in spending on education and related expenses for all students, in relation to degree and certificate attainment. Measuring costs relative to productivity illuminates issues about productivity, and helps institutional leaders and

policy officials think about attainment goals – particularly how spending can be managed to improve attainment without sacrificing quality. (This category is clearly the most problematic, because of the weak connection between spending and quality.)

Along with providing answers, all of the measures listed above raise important questions. And well they should: higher education is a complicated enterprise, and many of its fiscal issues can't be addressed by easy measures. Ultimately, success is measured by values as well as value. Better accountability for costs isn't the only route to engaging those issues, but it can help.

## **Definitions for Measures Using IPEDS data:**

### **1) Revenues**

*How it's calculated:*

- Sum together current operating revenues per FTE student from all sources; revenues can also be aggregated into five subcategories as shown below.
- Revenues = net tuition revenue + state and local appropriations + (private gifts, grants, and contracts + investment returns + endowment earnings) + (federal appropriations, grants, and contracts + state and local contracts and grants) + (auxiliary enterprises + hospitals + independent operations + other sources)

*What it tells us:*

This metric shows the primary sources of operating revenue and how those revenue sources have changed over time.

### **2) Educational Spending**

#### Education and Related (E&R) costs per FTE student

*How it's calculated:*

- Sum together spending on instruction and student services, plus a portion of spending on academic and institutional support and for operations and maintenance of buildings.
- $E\&R = \text{instruction} + \text{student services} + (\text{education\_share} * (\text{academic support} + \text{institution support} + \text{operation/maintenance}))$

*Where:*

$\text{Education\_share} = (\text{instruction} + \text{student services}) / (\text{instruction} + \text{student services} + \text{research} + \text{public service})$

*What it tells us:*

This metric estimates the amount of spending on student-related educational activities. E&R spending is sometimes also called a “full cost of education” measure.

### Education and General (E&G) costs per FTE student

#### *How it's calculated:*

- Sum together spending on all activities other than auxiliary enterprises and hospitals.
- $E\&G = \text{instruction} + \text{student services} + \text{research} + \text{public service} + \text{academic support} + \text{institutional support} + \text{operation/maintenance} + \text{net scholarships/fellowships}$

#### *What it tells us:*

This metric measures institutional spending on all activities, except self-supporting enterprises (e.g. bookstores, dining halls, hospitals, etc.). The difference between E&R and E&G spending is largely explained by sponsored research and public service.

### Total operating expenses (OE) per FTE student

#### *How it's calculated:*

- Sum together spending on all activities, including auxiliaries, hospitals and other independent operations.
- $OE = E\&G + \text{auxiliary enterprises} + \text{hospitals} + \text{independent operations} + \text{other operations}$

#### *What it tells us:*

This metric measures institutions' total spending on all activities, including those that are largely self-supporting. Though this is a metric often used by institutions, it typically includes expenditures that are not directly related to students' education.

## **3) Tuition-Spending Comparison**

#### *How it's calculated:*

- Apply the growth rate for education and general spending per FTE over a period of time (e.g. 2002-2006) to the in-state average for tuition and fees ("sticker price") for the base year (e.g. 2002) to calculate what tuition would have been in the most recent year had it grown at the same rate as spending.
- Calculate the difference between the actual base year sticker price and the estimated sticker price for the most recent year, and divide that by the actual difference between the sticker price in the base year and the most recent year.

#### *What it tells us:*

This metric shows the proportion of tuition increases that are attributable to spending increases (and, alternatively, revenue- or cost-shifting). For instance, a number of 25 percent shows that 25 percent of the increase in sticker price tuition between 2002 and 2006 can be attributed to increased spending, and 75 percent comes from cost-shifting to make up for revenues lost from elsewhere. In some

instances, where education and general spending per FTE student is declining, all of the increase in sticker price tuition is attributable to cost shifting rather than spending increases. This occurred between 2002 and 2006 at public master's institutions and community colleges.

#### **4) Student and Subsidy Share of Education and Related Spending**

##### Student Share

###### *How it's calculated:*

Divide net tuition revenue (total tuition revenue minus tuition revenue recycled as student financial aid (i.e. institutional grant aid)) by institutional spending on education and related services for a particular year.

###### *What it tells us:*

This metric tracks how much of the institution's core academic costs are being borne by students through tuition. It is an extremely useful metric for guiding policy conversations about who pays—and how much they should pay—for educating students.

##### Subsidy Share

###### *How it's calculated:*

Subtract net tuition revenue from institutional spending on education and related services to get the subsidy amount, and then divide the subsidy by education and related spending.

###### *What it tells us:*

This metric tracks how much of the institution's core academic costs are being borne by the institutions through public support, private giving, and investments. It is the complement of Student Share of Education and Related Spending (i.e. adding the two together equals 100 percent), and is useful for guiding policy conversations about who pays—and how much they should pay—for educating students.

#### **5) Education and Related Spending per Student Completion**

###### *How it's calculated:*

Divide institutional spending on education and related services by the number of student completions (certificates and degrees) for a particular year. For trend analyses, use the Consumer Price Index (Urban Consumers) to adjust for inflation.

###### *What it tells us:*

This metric gauges output (certificates and degrees) in relation to input (spending). This indicator should be used with caution, for two reasons:

- Completion data do not account for successful transfers to four-year institutions and completion of non-credit workforce training programs. This particularly impacts community colleges.
- There are currently no comparative measures of student learning outcomes available, which means that this indicator cannot account for the quality of the certificates and degrees awarded.