



KELLEY SCHOOL OF BUSINESS

INDIANA UNIVERSITY  
Indiana Business Research Center

Onward and Upward with the Cost of College

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# INDIANABUSINESSREVIEW



**SUMMER 2013**  
VOLUME 88, No. 2

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# Table of Contents

## Onward and Upward with the Cost of College

Timothy Slaper and Amia Foston explore the rising cost of a degree and examine three big questions when it comes to higher education: Who benefits? Who pays? And are we getting our money's worth?

## From the Editor

The golden ticket hasn't been hiding in a chocolate bar—it's a college degree! Or so it seemed until the Great Recession hit: graduates found it more difficult to land jobs, student debt became harder to pay off, and the cost (and price) of college seemed to have no ceiling. This issue of the IBR examines the cost and price of college and whether there can be a balance acceptable to all.



# Onward and Upward with the Cost of College

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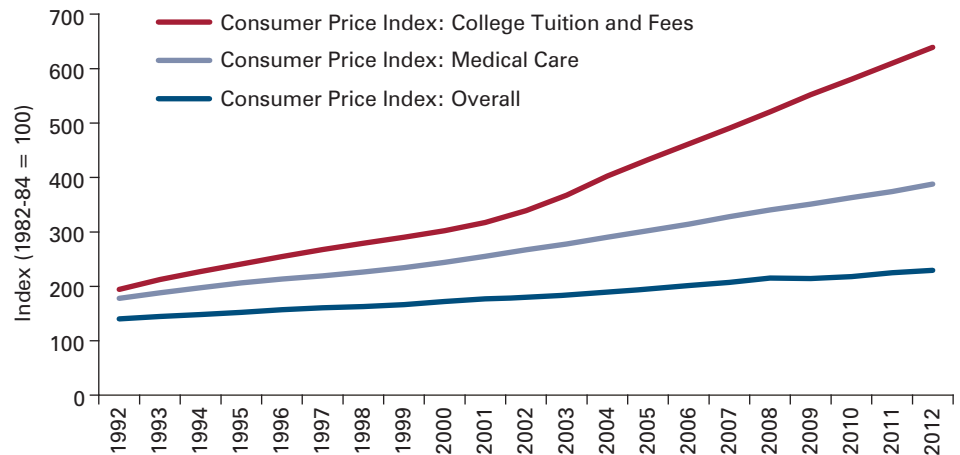
A few days before a “student strike” at Indiana University this spring—a strike to protest rapidly rising tuition and fees, among other things—a panel was assembled to discuss the cost of, and who should pay for, higher education. The panel consisted of an IU sociology professor, IU’s Treasurer, a state legislator (also a faculty member) and an economist.

The three broad questions on higher education were: Who benefits? Who should pay? Is it worth it?

Regarding the latter question, several recent studies have questioned if obtaining a college degree is still worth it. All have responded with a resounding yes, with an occasional proviso. Studies have consistently shown college graduates have higher lifetime earning potential than high school graduates, but the magnitude of the payoff varies dramatically by college major. Such studies are somewhat retrospective: They look at past performance and current cost/benefit relationships and project them into the future. But is that reasonable? Will the rising costs of obtaining a college degree one day surpass the benefits? With tuition costs rising at triple the rate of inflation—as shown in **Figure 1**—will college degrees still make financial sense?

After decades of tuition increases outpacing inflation, colleges and universities are now operating under more intense scrutiny. Various stakeholders ranging from state legislators to nonprofit associations to concerned parents and students have been demanding more accountability from higher education institutions to justify their costs and document their benefits. Indeed, the *Wall Street Journal* reports that while the 2013-14

**FIGURE 1: Change in the Cost of College, Medical Care and the General Price Level, 1992 to 2012**



Source: U.S. Bureau of Labor Statistics

sticker price for both private and public colleges and universities rose, it was the smallest increase in a dozen years.<sup>1</sup>

This article examines the three big questions that the panel tackled: Who benefits? Who pays? Are we getting our money’s worth? To keep categories clear and distinct—what is a cost to students is revenue to the university—the term “cost” refers to the operating cost of a university. The term “price” refers to the cost of tuition and fees.

## The Cost of Higher Education

Why has the price of higher education significantly outpaced inflation over the past several years? Before one can answer that question, one must be careful to differentiate between the private outlays of tuition and the broader public expenditures in terms of state and federal support and costs internal to the institution. Economists like to examine one thing at a time, if they can, and hold all other factors constant, “ceteris paribus.” The first cost to be examined here is the cost of

delivering higher education. Why are universities so expensive to run?

Many economists would argue that universities are only remotely disciplined by market forces, at least on the cost front. The athletics and premium facilities “arms race” is an example of universities being driven by (responsive to?) market forces. Universities can pass along increased operating and facility costs to the students, at least up to a point. What drives these internal cost increases?

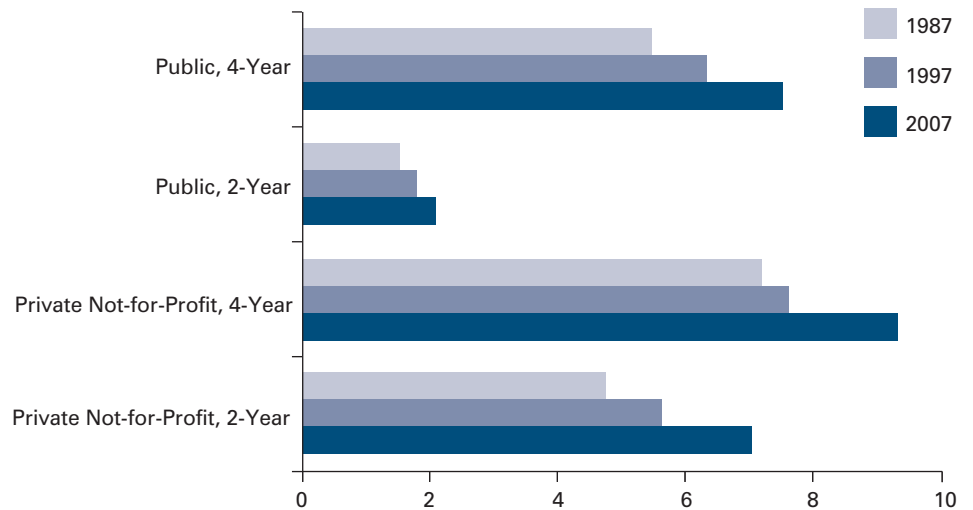
Some recent studies have identified the rising number of administrators as a factor. For example, a *Wall Street Journal* article reported the executive administrative payroll at the University of Minnesota rose more than 45 percent from 2001 to 2012. This increase, in comparison, doubled the rate of student growth (22.4 percent) and nearly tripled the teaching payroll (15.6 percent) over this same period.<sup>2</sup> Another similar report<sup>3</sup> found that between 1993 and 2007 the administration category at the nation’s leading universities<sup>4</sup> had the highest percent increase in spending per student (61.2

percent), compared to instruction (39.2 percent) and research and service (37.8 percent). Some reasons suggested for the increasing number of administrators include creating new offices (e.g., Diversity, Equity and Inclusion and Sponsored-Research Programs). University administrators have pointed to the need to address diversity issues and comply with federal regulations and mandates as the reason for the surge in full-time staff.

**Figure 2** shows that the growth of “administrative bloat” has been concentrated in the four-year colleges and universities. Before storming the gates to protest administrative bloat—IU’s Treasurer MaryFrances McCourt said she gets about 20 emails a week on this topic alone—it can’t explain the dramatic rise in tuition and fees. Based on the report, “25 Ways to Reduce the Cost of College,” cutting administrative bloat by 5 percent would have saved the average student at a public four-year university \$107 in 2007.<sup>5</sup> If the analysis of the authors of the report, and their data, are correct, this would imply that cutting bloat by 20 percent would net a mere \$430 per student. So while bloat may be one cause of rising costs—and one that could be relatively easily addressed—ratcheting back administrative bloat by 20 percent wouldn’t even pay for one semester’s books.

In a study released earlier this year, Martin and Hill (2013) tested two competing explanations about rising higher education costs. The first explanation states that cost increases are due to internal decisions of the university. This is more formally called Bowen’s rule, but the term “internal drivers” is more straightforward. In this case, faculty earn a premium through reduced teaching loads and, thereby, reduce their teaching productivity—the number of students taught per professor. In the internal forces case, revenues are seen as largely

**FIGURE 2: Full-Time Equivalent Administrative Employees per 100 Full-Time Equivalent Students, 1987 to 2007**



Source: Figure 6.3 in “25 Ways to Reduce the Cost of College,” Center for College Affordability and Productivity, September 2010. Used with permission.

unconstrained. University revenues can be raised from benefactors (alumni or wealthy donors), student tuition and, in the case of public schools, the state government. The university raises all the money it can and spends it on “quality education.”

The other explanation is that external forces drive costs higher, called Baumol’s cost disease. In this case, the cost drivers are fixed productivity—it still takes the same amount of time to give lectures or grade papers—and government mandates. In addition, the rising competition for university faculty and staff from outside the academy leads to rising salaries and wages. In other words, real university wages and benefits are run-up by the business sector hunting for talent.

The researchers tested which explanation had more validity by asking a simple question: “If funds were tighter, would universities focus more of their resources on their core mission of teaching and conducting research and strive for greater efficiency in administration?” The most recent economic downturn that pinched public institution’s state revenues allowed researchers to study this question. Martin and Hill (2013) found that tight revenue

since 2008 reversed the previous decline in university productivity and accelerated the trend in economizing on the use of tenure-track faculty. The researchers found university administrative behavior observed under easy revenue (1987 to 2007) and tight revenue constraints (2008-2010) is consistent with internal decisions causing most of the cost increases. They noted that if the 133 universities studied kept their 1987 staffing patterns unchanged during the loose revenue period, the real cost per student would have increased by \$5,317 per student as opposed to the \$13,181 change.

While internal forces may account for a majority portion of the increase in graduate debt, not all operating cost pressures account for the rise in tuition. Forty percent of the change in tuition is due to external pressure on salary and benefits (and program changes). Martin and Hill also asserted that the most significant changes between loose constraints (easy revenue) and tight constraints (tight budgets) are the shifts in productivity. Tight budgets force an increase in the academic share of a university’s total cost. Their model also suggests the optimal staffing ratio of over two tenure-track faculty

members per full-time administrator, but the current average ratio is the reverse—two full-time administrators for one faculty member.

To summarize the last two points, administrative staff hiring may be increasing at rates greater than student enrollment, but it cannot account for the dramatic increase in tuition and fees. Meanwhile, it appears that other internal forces are driving the costs of university education higher.

### **Let Those Who Benefit Pay**

It probably doesn't matter to the average college student whether tuition is rising due to Bowen's rule or Baumol's disease. What matters to the student and the student's parents (and maybe the future spouse) is, what is the student paying? To the student and the parent, paying less is better, maybe even "more just." Lobbying the state or federal government to pay a larger share of the cost is a persistent quest.

The question of "Who should pay" is better addressed once one can assess who benefits from a university degree.

Higher education benefits can be divided into private (market and non-market) and public components. For most individuals, the private benefits of higher education come readily to mind: higher earnings. And to the extent that local, state and federal governments can capture a portion of those higher earnings through taxes, they too share in the monetary gain.

The non-market benefits—those extending beyond the individual—are trickier to conceptualize and more difficult still to measure because there is no observable market transaction. According to McMahon (2009, 2010), private non-market benefits correspond to the ways individuals use their human capital at home or in their communities. Examples of social benefits include "contributions to democratic institutions, human rights, political stability, lower state

welfare costs, lower health costs, lower public incarceration costs, contributions to social capital, to the generation of new ideas..." These social or "general welfare" benefits—mostly non-pecuniary—are enjoyed by the individual as well as family, community, state and nation. McMahon claims that there is a significant government (local, state and federal) underinvestment in two-year and four-year colleges and universities, which in turn, contributes to a nationwide skill deficit.

Whether a nationwide (or statewide) skill deficiency exists is a major topic of discussion and—even if all can agree on what a skill is—the presence of this gap indicates that there is an underinvestment in higher education. One of the panelists—the state legislator—raised a similar concern and cited an example from more than 50 years ago. In light of the Cold War and the Soviet launch of Sputnik in 1957, the U.S. poured resources into the space program and other technologies to, as they may have said back then, "Beat the Ruskies!" It was a matter of national pride, if not national survival, and the government had an active role in providing resources to expand the country's human capital pursuant to winning the Cold War. While the challenges of today may not be as existential or as singular, certainly there are intractable problems that are of sufficient scope that they warrant providing additional resources to build the stock of human capital to solve them.

Thus, given that the benefits of higher education range from private-individual to public-societal (and many points in between), the mixed model of funding seems to align those who benefit with those who pay.

Moreover, students should have skin in the game. While McMahon's research suggests the cost-sharing ratios between individual and

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government may need revision, other research supports the need for students to foot the bill for a portion of their postsecondary education. Hamilton (2013) found a negative relationship between the amount of parental aid received and students' grade point averages (GPAs). Put simply, students who pay perform better. There is a caveat. While parental aid decreases student GPA, it increases the odds of graduating because, she posits, the lack of resources is the most common reason students stop, or drop, out. This suggests that the mixed model aligns benefits with costs and removes some disincentives to underperform.

### **Getting the Revenue-Cost Equation Right**

The mixed model of funding—student tuition, state support and benefactors—to reflect the mixed model of benefits may suggest that there is an optimal balance. Reasonable people may disagree what that balance is, however. As students watch their tuition rise at nearly four times the rate of inflation while state appropriations for state-supported schools decline, they are probably not

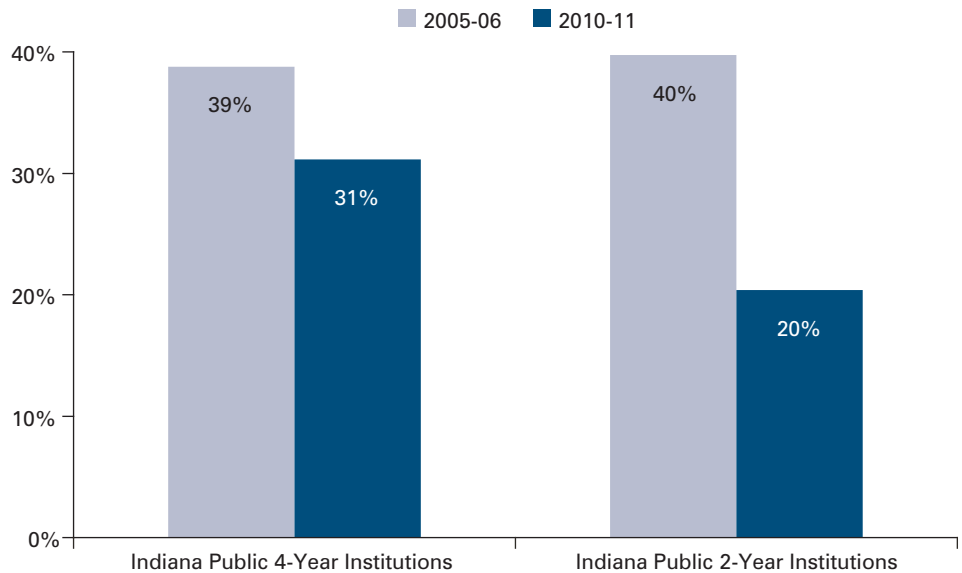
thinking that the current system is balanced. Indeed, the balance of cost sharing for public higher education has shifted toward the student within the last generation. States are rapidly becoming minority shareholders in the higher education of their citizens. **Figure 3** shows how state appropriations for Indiana’s public two-year and four-year universities have changed in recent years.

On average, Indiana’s public two-year institutions experienced a more dramatic decline (20 percentage points) in state appropriations as a percentage of core revenues,<sup>6</sup> compared to Indiana’s public four-year institutions that decreased 8 percentage points from 39 percent to 31 percent.

In most cases, higher education appropriations decreased because states experienced rising costs in public K-12 education, medical care, social services and corrections, in addition to slow revenue growth resulting from the prolonged economic stagnation.

There is at least one more force at play in finding the right balance: fighting the rising cost of delivering higher education. In line with Martin and Hill’s findings, the Center for College Affordability and Productivity published a policy

**FIGURE 3: State Appropriations as Percent of Core Revenues: Indiana’s Public Institutions, 2005-06 and 2010-11**



Source: National Center for Education Statistics, Integrated Postsecondary Education Data System

paper in 2010 suggesting several ways that colleges and universities could achieve true cost reform. The strategies are summarized in **Table 1**. The first four categories, “Use Lower Cost Alternatives” to “Exploit Technology,” are those more akin to decisions or policies internal to the university. The strategies to “Improve Competition” are more akin to the external forces discussed above. In other words, most of the cost-saving

actions are those that the university itself can implement.

Although some of their proposed strategies are viewed as more controversial than others, some colleges and universities have tried one or more of these strategies with varying degrees of success. For example, several universities, including two in Indiana—Ball State University and Manchester College—have created three-year bachelor’s degree options for their students, but

**TABLE 1: 25 Ways to Reduce the Costs of College**

Use Lower Cost Alternatives	Use Fewer Resources	Efficiently Use Resources	Exploit Technology	Improve Competition
Encourage Community College Enrollment as a Gateway to Four-Year Degree	Reduce Administrative Staff	Improve Faculty Utilization	Move Classes Online	Subsidize Students
Promote Dual Enrollments	Cut Unnecessary Programs	Increase Teaching Loads	Reduce Textbook Costs	Ease Transfer
Reform Employment Policies	End Athletics Arms Race	Encourage Degree Completion	Digitize Libraries	Reform Financial Aid
Three-Year Bachelor’s Degree	Overhaul the FAFSA		Outsource Email	Reform Accreditation
Outsource More Services	Eliminate Excessive Research		Use Course Management Tools	Promote Competition
	Streamline Redundant Programs			
	Promote Collaborative Purchasing			

Source: Center for College Affordability and Productivity, 2010

early results show these programs are not currently popular. According to a 2011 *Washington Post* article, Ball State enrolled 29 students in their Degree in 3 program, while Manchester registered 20 students in their Fast Forward Program.<sup>7</sup> This slow start, however, does not mean three-year bachelor's degree programs will never grow in popularity.

Many institutions, often due to budget constraints, have also faced the arduous task of identifying and cutting unnecessary programs.<sup>8</sup> Viewed broadly as an institutional strategy of last resort, campus-wide committees evaluate all academic and non-academic programs on several criteria. The most prominent measures gauge whether the program under review is mission-critical, in demand and financially viable.

The Center for College Affordability and Productivity also encourages colleges and universities to outsource their email to cut costs. Maintaining an in-house system can be costly. Temple University reportedly saved nearly \$1 million after outsourcing its email services to Google.<sup>9</sup> Among institutions that had outsourced their email services by 2011, Google was the primary provider followed by Microsoft.<sup>10</sup> Both service providers have worked with their respective colleges and universities to ensure compliance with federally mandated privacy laws.

The grand solution to finding the right balance of revenues and the best methods of cost containment may not be readily apparent, but it is clear that all parties have a role to play.

### **Competing for Resources**

A frequent economic prescription for lowering costs and improving innovation is to reduce the friction in the marketplace. In short, encourage competition. But will this remedy work for higher education? It is too early to tell. Long-held practices and entrenched interests may work

against competition and maintain "information asymmetry."<sup>11</sup>

Transparency—complete information on the prices students pay or the costs associated with delivering educational services—has been difficult for higher education consumers to attain. Universities have competed for external resources—tuition from students and parents—in a rigged marketplace.

Toma (2012) argued that colleges and universities compete on prestige and reputation because consumers do not have adequate information to objectively evaluate potential postsecondary institutions on price, quality and post-graduate outcomes. For example, the prices to attend are readily posted on the web, but the official sticker price can significantly overstate how much students would have to pay once their financial aid package is taken into account. Since colleges and universities typically only offer financial aid packages to applicants depending on their academic prowess or financial need, students have to apply to multiple institutions before they could begin any true price comparisons.

Assessing quality is a separate challenge. Without objective metrics on institutional or program quality, students and parents are forced to rely on proxies like cost, selectivity and rankings—and there are many ranking agencies, methods and outcomes. Because many students choose schools based on various combinations of these prestige factors, many colleges and universities are consumed with gaining prestige to make themselves more attractive to potential applicants. This quest for prestige in higher education has been likened to the profit motive in corporations. Moreover, Jeff Selingo, the editor at large of the *Chronicle of Higher Education*, recently argued in his blog "to reduce the cost of higher education to students and families, improve learning,

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and ultimately the value of the degree, colleges and universities need to abandon this prestige race that encourages a one-size-fits-all model.”<sup>12</sup> College Measures<sup>13</sup> has endeavored to become a disruptive technology in the prestige model, just like the microchip and wireless communications were a disruptive force that helped to lead to the disintegration of the Soviet Bloc. The goal for College Measures is to level the playing field between consumers (students and parents) and colleges and universities by making objective institutional performance criteria readily available. Eliminating information asymmetry for consumers would increase competition between institutions of higher learning across the performance measures that matter to parents and students and likely lower costs and increase innovation.

College Measures has created college data tools for public two-

year and four-year institutions nationally to allow students, parents and policymakers to evaluate institutional performance in several contexts. In addition, their Economic Success Metrics program works with state agencies to make graduates' earnings publicly available. This allows consumers to compare salary variations of different majors by institution and type of degree. Currently, these data are publicly available in Arkansas, Colorado, Tennessee, Texas and Virginia.

There is another arena for resource competition, an internal one. Universities need to get better at allocating scarce resources to their most productive educational uses, even if it means rethinking the classroom, the programs and the facilities. Admittedly, this process will be gut-wrenching as some university functions and programs may not survive.<sup>14</sup>

Mark Gottfredson and Keith Aspinall (2005) propose an approach that applies to universities as well as businesses. Complexity—too many products and service offerings—can decimate profits, or in the case of nonprofit organizations, open the sluice gates of red ink. Their first example of a business shunning “innovation” in new product development and sticking to simplicity is the wildly popular In-N-Out Burger. Don't bother going there if you want a salad, or a chicken sandwich or a fancy coffee; they sell four things: burgers, fries, shakes and sodas. Could it be that universities are over diversified?

Paying customers—parents, students and state legislatures—deserve an answer to this prickly question: are the policies (some mandated by government entities) and the array of programs at publically funded institutions of higher learning keeping many of our young adults in debt for an additional five or 10 years?

## Conclusion

When the panel was asked about whether a student's selection of major mattered when it comes to getting a job after graduation, the consensus answer was: “No. Employers want smart people who can analyze, problem solve and communicate. The major doesn't matter.” This may be a satisfactory answer to a room full of honors students (the panel was organized by an honors program), but not the average college student. Literature majors with a C+ average may do well by hedging their bets and minoring in something like computer science or statistics. Majoring in a STEM discipline would not only improve one's chances of gainful employment, but would also accrue added benefits to society at large, whether eradicating malaria, inventing low-carbon alternatives to producing energy or deflecting a massive incoming asteroid.

Toward the end of the panel discussion, a student distributed flyers announcing the student strike and the list of demands. In addition to lowering tuition and fees, there were demands that included labor and wage policies and stopping cost-cutting measures such as privatization or outsourcing. It could have been summed up as “lower your price but not your costs.” The demands did not reflect those presented in “25 Ways to Reduce the Cost of College” or, for that matter, any appreciation that there is such a thing as trade-offs. Reducing the cost of college will involve gut-wrenching, anger-inducing trade-offs. Indeed, there has been quite a row in Texas over pushing for a for-profit mentality and increasing faculty productivity in state-supported universities.<sup>15</sup>

The last person to pose a question to the panel desperately wanted to end on an upbeat note. After all the bad news of rising operating costs, administrative bloat, run-away tuition inflation and declining state

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“Universities need to get better at allocating scarce resources to their most productive educational uses, even if it means rethinking the classroom, the programs and the facilities.”

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revenues, was there any good news? Re-stating that university degrees are still a good investment was a positive. But if one had had the presence of mind at the time, one would have proposed turning the negatives of the cost of college—making a university's books balance—into an opportunity. Require that each freshman take a course on the finances of universities. They would engage in financial simulations. Make costs meet revenues. Placate competing constituencies. Plan for the future. The course could also include a few modules on personal finances. Who knows, students might turn out to be both better managers of their money and better consumers of education. They may also learn something about trade-offs. ■

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