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ALIGNING STUDENT AND INSTITUTION INCENTIVES IN HIGHER EDUCATION FINANCE

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Incentives and the Business of Higher Education

Higher education, depending who you talk to, is a generator and transmitter of knowledge, a provider of opportunity and social mobility, a trainer of skilled workers for employers, a driver of economic development or any or all of the above. But alongside its lofty goals, it is also a big, complex \$600 billion business that provides paychecks to four million people (Snyder 2013).

Sometimes what colleges and universities have to do as businesses to generate revenue is consistent with their academic goals. But often they have to choose one over the other. The financial transaction that produces most educational revenue in the United States is essentially “cash-for-credits.” Students pay for instruction by the credit hour, which is roughly equivalent to one hour of classroom instruction per week for the length of a full term. Many states allocate their own funding by the credit hour as well, amplifying the business incentives produced by tuition. With cash-for-credits, institutions that want to increase revenue either have to raise the price per credit, enroll more students or sell more credit hours to each student.

While credit hours are bought and sold in the financial transaction, colleges advertise and students aspire to something else—better jobs, quality education, prestigious degrees—that the credit hours do not guarantee. This system works well for higher-income students who can afford to choose among institutions and select those that reliably deliver on their promises. It also works well to facilitate the expansion of credit-bearing courses for which institutions can charge more than they cost to teach. Cash-for-credits does not, however, provide a sustainable foundation for other things that public higher education needs to do: focus on low-income students who cannot afford the full cost, offer courses in high-cost technical and scientific disciplines, invest in advising and long-term academic planning, give credit for work at other institutions or coordinate with potential employers.

Any attempt to reform higher education to do those things better has to either work financially on a cash-for-credits basis, or change the funding system, as some states have started to do. To change the revenue model for institutions, for example, Tennessee became the first state to

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base virtually all of its higher education spending on student outcomes. The other reforms in the Complete College Tennessee Act required a new way of approaching state finance. Other states, like Indiana, have made smaller but still significant bets on outcomes-based funding, and institutions are starting to use the formula metrics to calculate the value of particular outcomes and formulate their budget requests (University of Southern Indiana 2013).

Similarly, to change incentives for students, three states (Oklahoma, Indiana, and Washington) now offer all low-income middle school students free tuition at any public college or university if they can do what it takes to be admitted. Indiana also recently changed its criteria for financial aid renewals so students get more support based on progress toward degree and can use funds in summer to stay on track.

Some institutions, too, are trying to re-think their approach to tuition and financial aid, although they are limited in what they can do unilaterally in a competitive market and within the rules set by state and federal governments. In 2013, a group of institution leaders from Texas and several other states began to develop an approach to "completion management" as a counterweight to "enrollment management", with its increasing focus on recruitment and revenue (Completion Management Institutional Working Group 2013). The University of Texas at Austin in particular has focused on formal experiments to find working strategies to encourage progress among disadvantaged student groups and continues to test and deploy new ideas in a spirit of continuous improvement (Tough 2014).

Proposals to reform the system of financing higher education should start with understanding the range, size and variety of existing revenue sources and incentives in the business. Ideas to reform the finance system will not work unless they are appropriately sized, timed and aligned with the other priorities and incentives students and institutions are juggling. They also should recognize the ways in which the current system is already working well and focus on filling in gaps rather than duplicating incentives in other revenue sources.

States like Tennessee and Indiana, and institutions like the University of Texas have taken the lead by innovating in ways that others can learn from and adapt. Even in those cases, however, much more revenue still flows to institutions through cash-for-credits tuition payments than through state outcomes-based funding or innovative student aid programs. In the long term, changing federal aid policy may be the most effective way to get higher education to focus less on managing enrollment and more on managing outcomes (see sidebar "Healthcare and Higher Education"). But there is much that states can do that does not depend on the federal government to act first.

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Three Budgets, Three Perspectives on Financial Incentives

There are three common ways of talking about higher education budgets, each with different implications for incentives: the total institutional budget, the “core” educational budget, and the student budget.

First, there is the total budget reflected in colleges’ audited financial statements—the \$600 billion slice of the U.S. economy made up of postsecondary institutions. This budget includes virtually all revenues and expenditures that pass through institutions, many of which may not be related to core instructional or educational programs—dormitories, hospitals, research centers, athletic programs, etc. This budget is important because, at the end of the day, it has the only bottom line that has to balance. It also shows the full range of financial priorities that an institution and its leaders are balancing, each with a different business model and set of competing incentives (e.g., housing, food service, entertainment, healthcare, sponsored research). Especially for large, complex institutions, the scale of other revenue sources may dwarf an outcomes-based funding scheme. Yet as large as it is, the total institutional budget does not reflect the full cost of higher education since it does not include student expenses that are not paid to the institutions themselves.

The second budget, the “core” or “educational” budget, is the cash-for-credits component of the business. It includes direct expenses for instruction as well as indirect expenses for administrative and institutional support. On the revenue side, it is primarily tuition and government appropriations. (At a few wealthy institutions, endowment income and gifts also contribute significantly to the core budget, but the amounts are very small where most students enroll.) The “core” budget is what institutions, states, and organizations like the Delta Cost Project and the State Higher Education Executive Officers (SHEEO) are usually talking about when referencing how much education costs and who pays for it. Calculations of state or institutional spending or revenues per student are based on this budget. It also excludes students’ non-tuition expenses, even when they are paid to the institution.

The third budget is the budget from students’ point of view, including variations such as “sticker price”, “net price” or “cost of attendance. Tuition and fee expenses in the student budget are core revenue for institutions. Discussions about student budgets usually note discounts to the cost of attendance that result from designated financial aid sources. But the discount built into resident tuition rates as a result of state general fund subsidies to institutions is rarely shown as part of the cost of attendance even though, without those subsidies, students would have to pay much more. On the other hand, the student budget includes expenditures and revenues that are not part of the institutions’ balance sheets but that also have to be funded. Books and supplies for 28 million full-time equivalent students at the College Board’s estimated allowance of \$1,200 per student add another \$34 billion to the national cost

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of higher education. Living expenses (or the cost of students' time away from work) are even more significant. At the federal minimum wage, the time that students could be working to pay for rent and groceries would add up to another \$320 billion per year.

Well-structured incentives should take each of the three budget perspectives into account, but often are geared more toward one than the other. A tuition reduction, for example, might be a significant part of an institution's budget but not enough to overcome students' other costs of attendance, which states and institutions do not include on their own books. Likewise, an incentive in outcomes-based funding for institutions to graduate students in four years might not be enough to overcome federal and state financial aid programs that do not pay for a full course load or for summer attendance. And the entire stakes of an outcomes-based funding program for a flagship institution might be less than could be earned from a single large federal research grant. Understanding the different incentives in the three budgets can help ensure that reforms are appropriately targeted and sized for the task.

What Does the Existing Financial System Support?

Institutional Incentives

Higher education institutions, their leaders, faculty and staff, want students to do well; that is why many of them got into the business, and it is a source of professional and personal satisfaction. The 2013-2014 Higher Education Research Institute faculty survey describes what faculty thought were top priorities for their institutions. The student outcomes in **Chart 1** were at the top of the list, even edging out the importance of prestige (Eagan, et al. 2014). The priorities in the chart that relate to instruction, research or service represent what institutions see as the social impact for their institutions.

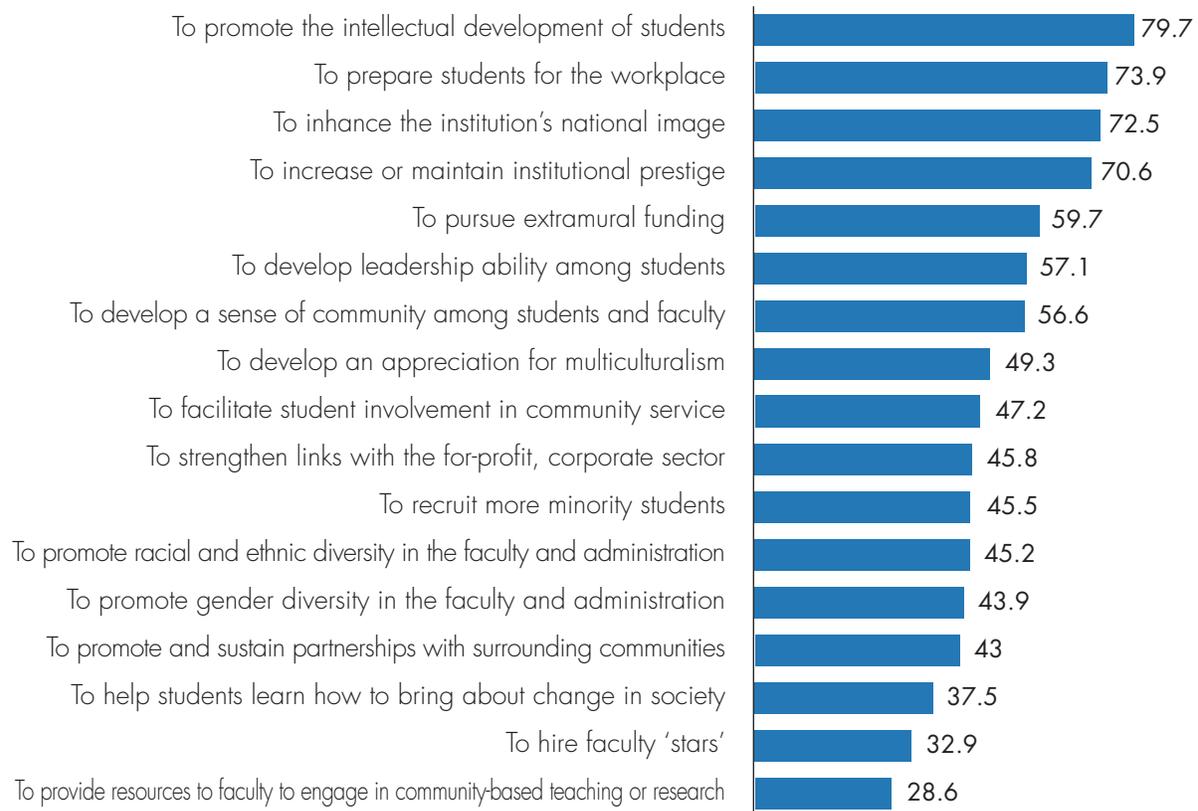
On the other hand, doing those things, no matter how well, does not necessarily pay the bills. So for an institution that wants to survive, grow or otherwise thrive financially, where can it look for revenue to sustain itself? To what extent does the financial model support the academic goals?

HEALTH CARE AND HIGHER EDUCATION

By 2020, much of the health care sector in the United States will have completed a transition away from so-called "fee-for-service" payments, which have historically served to reward medical providers who perform the most and highest-paying billable procedures, to payments based largely on populations, risk profiles and outcomes. Government payments under Medicare and Medicaid for patients with chronic conditions, amounting to more than \$300 billion annually, are transitioning to different versions of the new payment model, and large private insurers are undertaking parallel changes to their own reimbursement systems. This transformation has had sustained and generally bipartisan support at least since Congress commissioned a National Academy of Sciences study in 2007 that called attention to misalignments between the health care goals of the Medicare system and the financial incentive structure that sustains it (Board on Health Care Services, Institute of Medicine 2007).

Chart 1. Institutional Priorities

(% of faculty reporting priorities as “important” or “very important” to the institution as a whole)



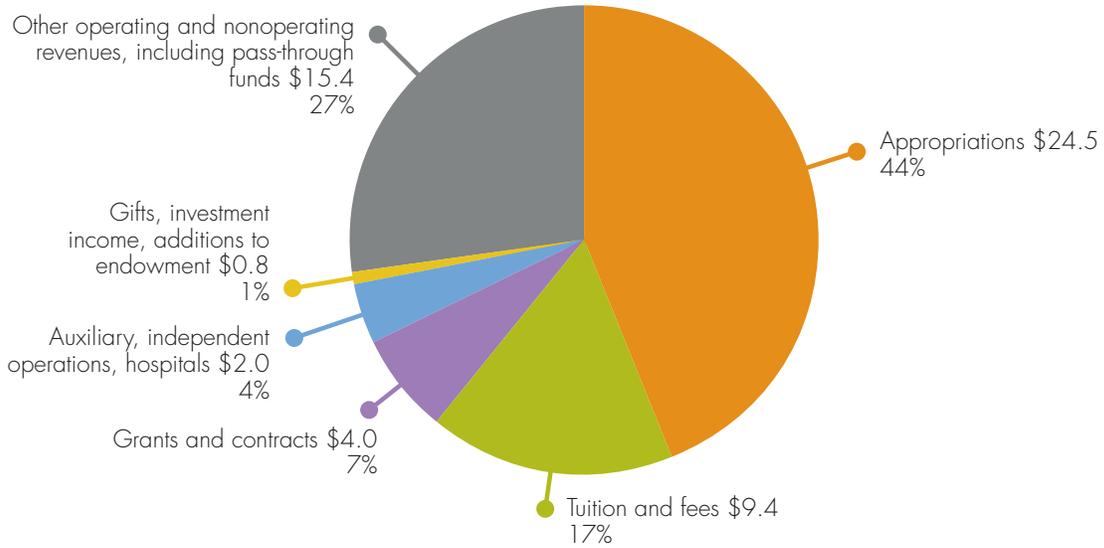
Source: 2013-14 HERI Faculty Survey

Charts 2 and 3 show, at a national level, where money comes from to support the day-to-day operations of two-year and four-year public institutions. Colleges seeking to balance or grow their budgets can attempt to increase revenues by pursuing additional appropriations, tuition, research contracts and grants, private philanthropy or auxiliary business income.¹ Two-year colleges rely heavily on appropriations, which is only one of many sources for four-year colleges (some more than others). Detail on each source, including the strategies institutions employ to increase revenue can be found in *Appendix A: Institutional Revenue Sources and Incentives*.

As in any business, postsecondary leaders who pay attention only to short-term priorities at the expense of longer-term objectives related to quality, reputation, stakeholder perceptions and satisfaction, will eventually run into big problems. On the other hand, where short-term incentives are misaligned with long-term priorities, institutions are forced to trade one against another, with a significant downside either way.

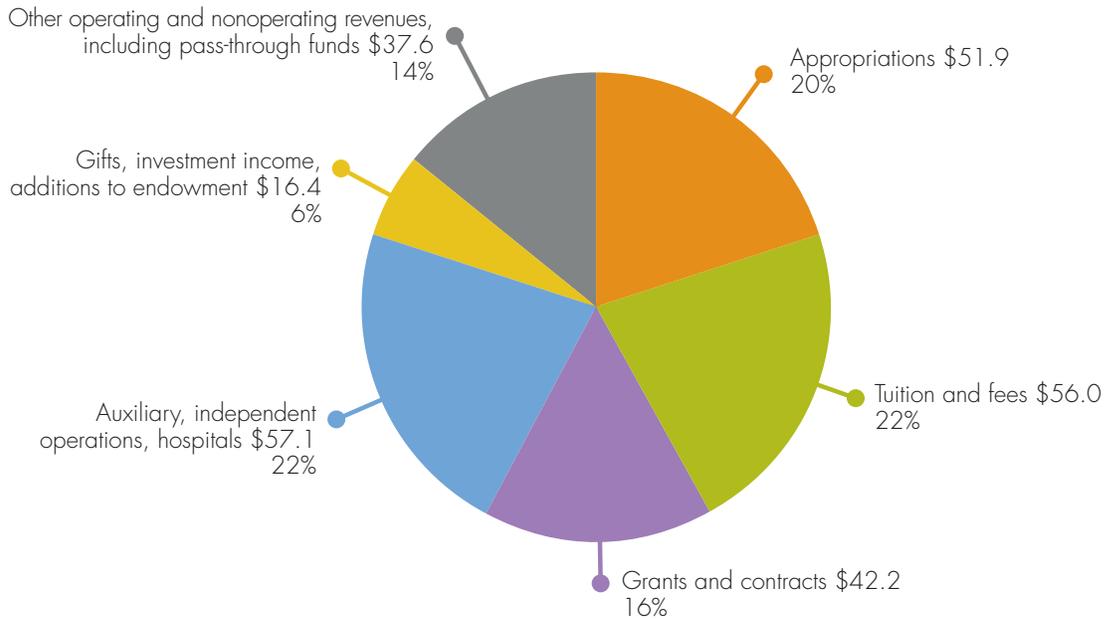
¹These numbers are from the *Digest of Education Statistics for FY 2013*. Other key resources that describe higher education revenue streams in much more detail include the *State Higher Education Executive Officers (SHEEO) Finance survey (State Higher Education Executive Officers 2014)* and the reports and updates from the *Delta Project on Postsecondary Costs reports (Desrochers, Lenihan and Wellman 2010)*.

**Chart 2. Revenues of Public Two-Year Colleges
(\$ Billions and % of Total), 2012-13**



Source: Postsecondary Analytics summary of IPEDS Finance Data

**Chart 3. Revenues of Public Four-Year Colleges and Universities
(\$ Billions and % of Total), 2012-13**



Source: Postsecondary Analytics summary of IPEDS Finance Data

Student Incentives

Institutional revenues and expenditures are only part of higher education's financial equation. Students' non-tuition expenses are also a required part of the total investment needed to provide the education. Especially at public institutions, the amount spent on this side of the ledger can equal or exceed institutional expenditures, and therefore requires revenue streams of similar magnitude.

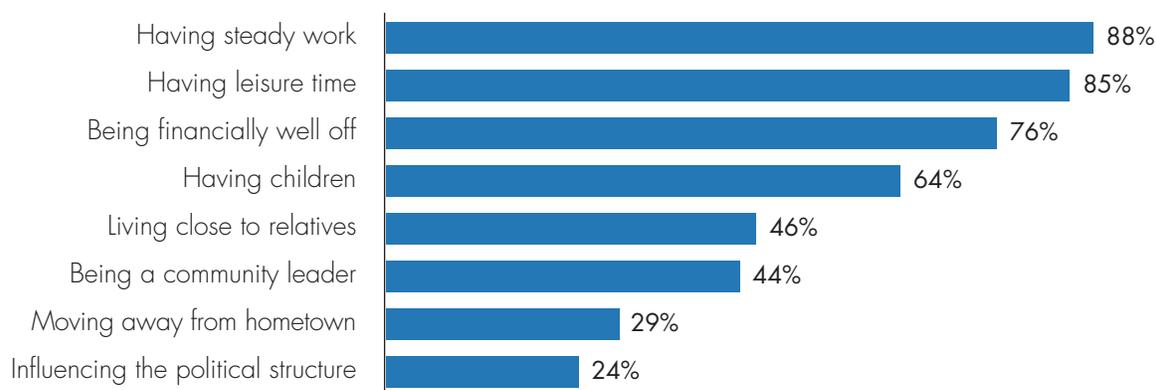
Like institutions, students also are balancing long-term goals and short-term needs. Long-term, students want to minimize the cumulative cost of their education, which is affected not just by annual charges, but also by time-to-degree and interest payments. They would see that cost as an investment in greater lifetime earnings, improved quality of life, personal growth, social status, etc. But that long-term view may be an unaffordable luxury when faced with paying this semester's tuition or rent bill.

Long-term, students see the cost of education as an investment in greater lifetime earnings, improved quality of life, personal growth, social status, etc. But that long-term view may be an unaffordable luxury when faced with paying this semester's tuition or rent bill.

Most students entering college for the first time—at any age—plan to get a credential, with 11% aiming for a certificate, 16% for an associate degree, 68% for a bachelor's degree and just 4% for some outcome other than graduation (National Center for Education Statistics 2010). Their personal goals as they enter college are diverse but with some common ground. **Chart 4** shows 88% citing the importance of steady work, 85% wanting to have sufficient leisure time, 76% aiming to be financially well off and smaller numbers citing other goals such as raising children, being a community leader or choosing where to live (National Center for Education Statistics 2012). These proportions roughly parallel the responses in the faculty survey.

As with institutions, students have short-term financial needs that have to be met: tuition, books, room, board, transportation, childcare, unanticipated emergencies, etc. **Charts 5 and 6** show the

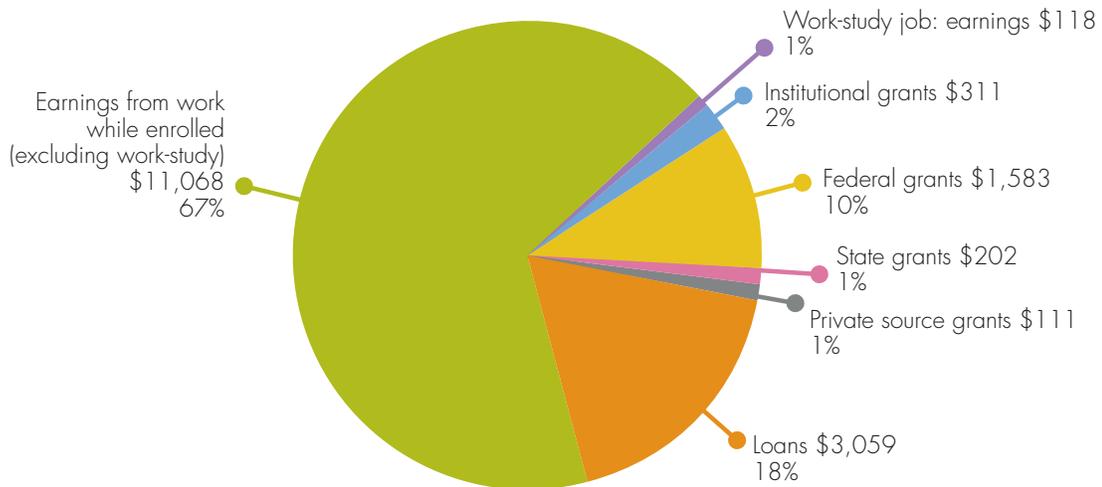
Chart 4. Students' Long-Term Goals. Beginning College Students' Stated Personal Goals (2004)



Source: 2013-14 HERI Faculty Survey

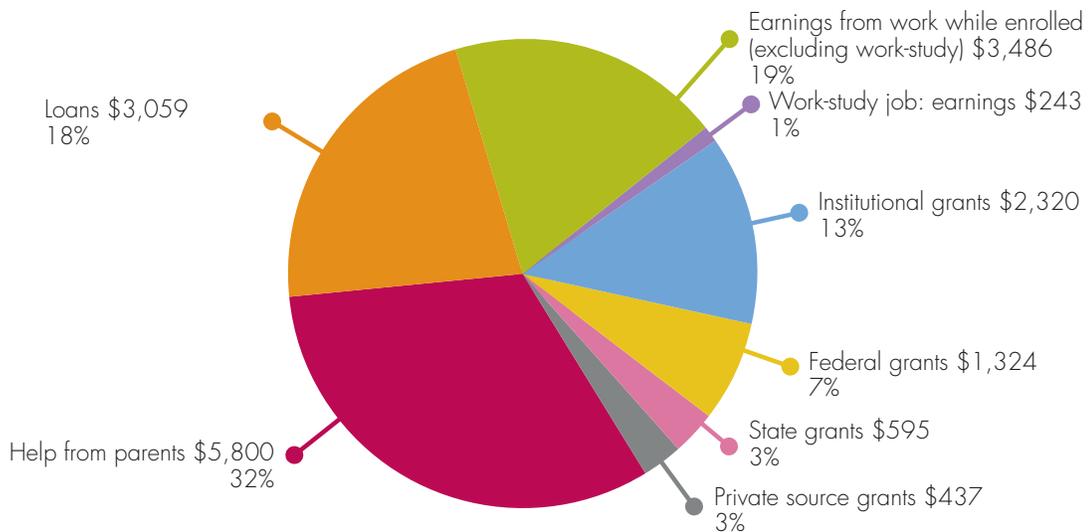
average amounts dependent and independent students respectively derive from different sources.² These, alongside institutional expenditures, should be part of a full accounting of the payment system in the sector. And as with institutions, each source of revenue for students involves a set of built-in incentives and choices that may or may not be well aligned with their long-term academic, economic and personal self-interest. Detail on incentives in student budgets can be found in *Appendix B: Student Financial Resources and Incentives*.

Chart 5. Revenues Sources of Independent Students, Public Institutions, Avg. 2011-12



Source: Postsecondary Analytics summary of NPSAS 2012 Datalab Powerstats query

Chart 6. Revenues Sources of Dependent Students, Public Institutions, Avg. Reported 2011-12



Source: NPSAS 2012, Postsecondary Analytics summary from Powerstats

²Data are from the National Postsecondary Student Aid Survey 2012. Note these charts focus on revenue sources available while enrolled and do not include other resources students might draw on to cover college costs, such as credit card debt, spending from savings, summer income, child support, or gifts from friends or relatives other than parents.

Alignment and Conflict between Students and Institutions

Students and institutions share common academic goals, but in their business relationship students are the customers and institutions are selling a service. One has an interest in minimizing expense and the other benefits from maximizing revenue. Even if institutions do not want to make revenue their first priority, they are likely competing with institutions that do, and risk losing financially if they try to change the rules of the game on their own.

Tuition is the negotiating ground between students' and institutions' financial interests. It creates incentives for institutions that rely on it for revenue, enabling them to offer the services they do, but creates barriers for students who are footing the bill. Sometimes the barrier is just too high—students cannot enroll and progress if they cannot afford tuition.

But the fact that enrollment costs something also can be an incentive not to overuse it by taking more classes than needed, repeating courses excessively, etc. For students who can afford to pay for their education, the tuition "copayment" may help keep costs down for states that are also paying part of the bill. Policies designed to limit institutional tuition in order to keep students' expenses down may risk reducing positive incentives for colleges to grow or meet demand when there are students willing and able to pay.

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Incentives and Behavioral Economics: How to Craft Policies that Succeed

A classic economics textbook would represent the higher education market with a simple graph illustrating students' response to price—if demand rises faster than supply, tuition prices go up, reducing demand, and so on until prices settle at a stable level. In practice, even large tuition increases have failed to reduce demand for many institutions, because a college education is perceived as essential, especially for traditional-aged middle and upper income students. Adult and low-income student enrollment, by contrast, tends to be more responsive to market conditions—prices, financial aid, employment opportunities—because the opportunity costs are often higher and more sharply felt.

Recently, economists have been paying attention not just to the traditional cost-benefit approach to decision-making, but to contextual and psychological factors that shape how we approach decisions. In higher education, these factors can shape students' choices, and help or hurt the effectiveness of the money spent trying to influence those choices (Baum and Schwartz, *Student Aid, Student Behavior, and Educational Attainment* 2014, Boatman, Evans and Soliz 2014).

Among the contextual factors that help determine the effect of a particular policy, other than just the amount of money invested, are:

- **Immediacy: Short-term is better than long-term.** People value the present much more than the future. For example, to a freshman considering the possibility of eventually running out of eligibility for financial aid—since many programs have limits on the number of years or

semesters of eligibility—a \$10,000 loss five years from now might not outweigh the \$500 present cost of taking an additional course.

- **Predictability and Transparency: Clarity without invisibility.** Programs with complex rules or that do not make clear commitments and clear demands, will not have the same effect, dollar for dollar, as those that do. The complexity of higher education pricing is as much a barrier as the actual prices students pay.
- **Saliency: Feeling as well as thinking.** Incentives of equal sizes can have different impacts depending on how people perceive them. A \$100 tax credit, \$100 refund on a bursar's bill, \$100 cashiers check and \$100 bill are financially equivalent to the provider's balance sheet, but probably affect recipients' behavior in different ways. Tax credits, in particular, have the same effect on the federal budget as a grant program of the same size, but are poorly timed and have complex rules that limit their effect.
- **Defaults: Best choice as the norm.** There is a tendency to default to the status quo or to do what is easiest. If the default choice is generally a good one, there is less potential for poor decision-making and later regrets.

Aligning Incentives in Institutional and Student Revenue Sources

Ideally, students' and institutions' incentives would be aligned, and what they do to meet short-term needs would also support their long-term goals. But the current incentive system is rife with conflicts and contradictions. **Chart 7** summarizes these incentives by breaking down the cost of a single bachelor's degree at a public institution—about \$120,000 including both institutions' and students' costs for four years of full-time enrollment. It shows relative scale of incentives for institutions and typical students (both high and low-income) and lists factors that determine the amounts for each institution or student. These are purely financial considerations that institutions and students have to weigh against each other and against their academic goals. Higher income students and more financially secure institutions will be under less pressure to respond to short-term financial incentives than low-income students or financially stressed colleges.

State legislatures, systems of higher education, private foundations and more recently the federal government are increasingly interested in testing

new ways to pay institutions and support students. Key types of reform include:

- Changing **state and local appropriations** through outcomes-based funding to focus on gaps in existing financial structures, especially with regard to degree completion and service to low-income students.
- Changing **tuition and financial aid** so that students have more support for short-term choices (to enroll in summer or in 15 credits per term, for example) that will help meet long-term goals (like completion).
- Changing the **service** being "sold" to focus on major milestones, actual learning and completion.

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Chart 7. What Incentives Go Into a Typical \$120,000 Bachelor's Degree?

What Institutional Choices Raise Revenue?

Short-term

Recruit, enroll and retain in-state students
Engage in formal and informal lobbying
Maximize formula results (enrollment, outcomes, staffing, square feet, etc.)
Create or participate in special projects, earmarks

Long-term

Demonstrate value to the state
Cultivate supportive alumni network

Leading reformers

Outcomes-based funding in TN, IN, OH. Newer or smaller programs in many other states, still less than 5% of state funding nationally.

Short-term

Meet demand for courses: offer what paying students want
Recruit, enroll and retain students who can pay
Maximize number of paid credits per student
Minimize credits transferred in or waived
Maximize students' eligibility for federal, state aid
Maximize tuition rates
Flat-rate tuition: minimize course loads within range
Per-credit tuition: maximize course loads

Long-term

Build reputation to grow student demand

Leading reforms

Free 2-year tuition for some or all students (TN, OR)
Competency-based education (private colleges, N. Arizona, U of Maine PL, Kentucky Comm. & Tech Colls.)

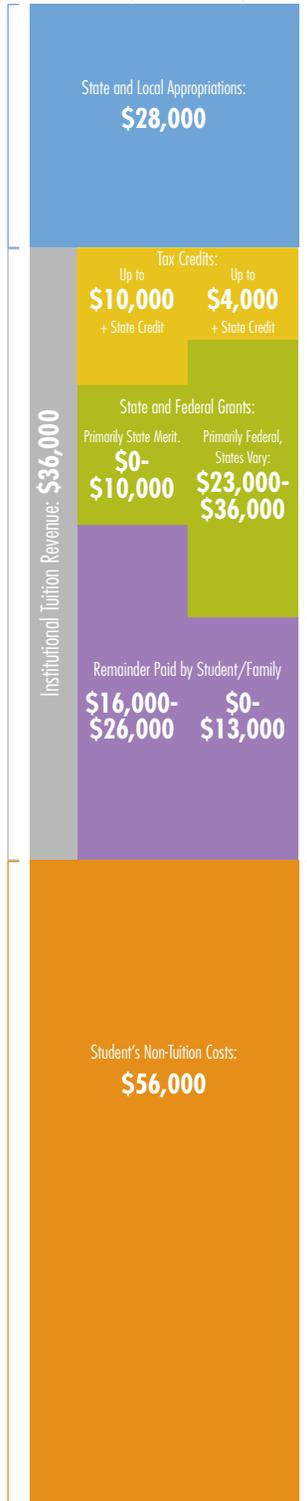
Short-term

Maximize revenue from auxiliary businesses (residence halls, food service, bookstores)
Compete with other providers

Leading reforms

Guided pathways
Remedial education reform
Transfer guarantees (FL)

Mid-/High-Income Students
Lowest-Income Students



What Student Choices Increase Benefit or Reduce Cost?

Short-term

Attend in-state public institution to get resident tuition
Compete for admission: subsidy is merit-based at selective schools
Maximize credits enrolled each term
Choose high-cost majors/courses with bigger subsidy
Enroll year-round
Maintain 2.0 GPA, no minimum progress requirements

Long-term

Maximize total credits or years enrolled

Short-term

Attend part- or full-time since benefit is not prorated
Plan expenditures carefully to maximize benefit

Long-term

Limit enrollment to four years

Short-term

Attend in-state institution (state aid)
Enroll in 12 credit hours (federal and most states)
Enroll only in fall or spring (federal and most states)
Meet eligibility requirements
Maintain 2.0 GPA (federal) or higher (state), make satisfactory academic progress (SAP)

Long-term

Limit total time or credits taken to program maximum

Leading reforms

Funding to take 15 credit hours (MN, IL, WA)
Availability in summer
Incentives for progress and course completion (IN)
Institutional incentives for student progress (CO)

Short-term

Choose lowest-cost acceptable institution or course
Flat rate tuition: maximize course load within range
Per-credit tuition: minimize course load
Maximize transfer/acceleration credit

Long-term

Minimize total paid credit hours for degree or goal

Short-term

Minimize direct expenses (books, supplies)
Reduce course load or do not enroll in order to work, care for dependents, etc.
Choose institution or courses based on non-tuition cost factors (schedule, distance)

Long-term

Reduce time-to-degree within institution
Choose institution(s) with shortest time-to-degree

Leading reforms

Statewide "15 to Finish" Campaigns (HI, UT, IN)

Realigning Incentives in State and Local Appropriations

In recent discussions in statehouses around the country, “performance” or “outcomes” based funding³ is usually described as a particular type of policy reform in which states or systems of higher education change part of their funding allocation to align with goals in a way that differs from the rest of the budget system (Jones 2013).

State and local appropriations should be used to pay for things that other revenue sources do not cover, but that are high priorities for the state. In most cases, these will include:

- **Completion of degree programs or other large units of coherent educational achievement.** The work of putting together and delivering courses is funded largely by tuition or enrollment revenue. But a degree is worth more to students than the same number of credits without a degree, and requires more institutional work to deliver. Despite that cost and that value it usually produces no short-term economic benefit for institutions.
- **Enrollment and progress for low-income students,** to compensate for the fact that they do not bring as much revenue to the institution through tuition or auxiliary businesses and are therefore not a sustainable component of the business without additional revenue streams.

A majority of states have implemented some form of outcomes-based funding in at least one sector of higher education. Yet it remains a small percentage of the overall resource pool. Chart 7 puts the current generation of state performance or outcomes-based funding into the context of the competing revenue and incentive systems outlined in the previous section.

Of the \$74 billion annually that states and local governments appropriate to higher education, only about \$3.2 billion was allocated through these mechanisms in the most recent year tracked. Most of that is in just two states, Tennessee and Ohio, with the remaining states allocating less than two percent of their total state appropriations and less than one percent of their overall higher education budgets based on the outcomes.

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³Outcomes-based funding models are an evolved form of “performance funding,” which refers to a broad set of policies linking allocation of resources to accomplishment of certain desired objectives. Historically, postsecondary performance funding models were often add-ons or bonuses to base institutional allocations that institutions earned for meeting various goals or benchmarks. Additionally, many of these earlier models included measures focused more on inputs or processes than student progression and outcomes and were not intended to drive increased student completion. Today’s outcomes-based funding models similarly seek to create incentives for and reward progress toward a set of stated goals, and have a direct link to the state’s higher education attainment needs and place primary emphasis on student completion, though they often include measures beyond student progression and completion. Advanced outcomes-based funding models also determine how a significant portion of the state’s general budget allocation to institutions is determined.

While these amounts may help bring important trends to light and focus institutions' attention on the metrics included, the scale is not yet at the point where institutions would be able to thrive financially by focusing entirely on student success and social impact, knowing that revenue would go hand in hand with results.

Before Tennessee Outcomes Formula	With Outcomes Formula
<ul style="list-style-type: none"> • Student completion reduces enrollment, and therefore appropriations revenue 	<ul style="list-style-type: none"> • Student completion increases appropriations revenue
<ul style="list-style-type: none"> • Transfer/acceleration credit reduces appropriations revenue 	<ul style="list-style-type: none"> • Transfer/acceleration credit increases appropriations revenue
<ul style="list-style-type: none"> • Allocations based on fall enrollments only 	<ul style="list-style-type: none"> • Formula encourages year-round progress
<ul style="list-style-type: none"> • Only enrolled credit hours increase funding 	<ul style="list-style-type: none"> • Anything that increases completion increases funding
<ul style="list-style-type: none"> • Students count equally, regardless of their tuition-paying capacity 	<ul style="list-style-type: none"> • Low-income and adult students have priority

Tennessee shows what an alternative state funding system could look like. Thousands of dollars depend on each student's outcomes, on average, compared to other states where the amounts are measured in hundreds or tens. Funded outcomes are mostly measures that do not already have built-in incentives— serving low-income students, awarding degrees, reaching progress benchmarks.

Even in Tennessee, however, three quarters of the institutions' total revenue continues to flow from sources outside of the outcomes system and only 12% of the total revenue pie relates directly to student outcomes. Institutions that pay no attention to the other 88% will be unlikely to thrive.

Realigning Incentives in Tuition and Financial Aid

Like state appropriations, tuition and financial aid should be reoriented to support progress toward milestones. They should be based on milestones toward completion that have fixed total prices with associated financial aid awards and monthly payment plans for those who need them. The price students pay should be set based on the average instructional and support cost needed to reach the milestone. It should no longer be possible to run out of financial aid before finishing a degree, or for a student to pay for two or four years of full-time attendance and still come up short financially before graduation.

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Tuition and financial aid should be reoriented based on milestones toward completion.

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Fixed prices provide students with financial certainty and institutions with incentives to manage costs. They have replaced variable pricing for expensive and complex services, like hip replacements, in other industries. Middle-income families can at least lock in tuition rates through prepaid tuition plans in many states, although the risk of running out of credit hours remains. Low-income students

and borrowers, however, continue to bear a greater risk that their investment in credit hours will not produce a marketable degree.

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Indiana Financial Aid Reform

In 2013, Indiana modified its primary state financial aid programs so that the amount of funding students receive depends partly on their progress toward the degree. Students who complete at least 30 credit hours per year are able to renew their grants at a higher level than students who complete less. With one of the larger state financial aid programs in the country—more than \$300 million annually—this shift represented a major reorientation of incentives in the state. While it is too early for definitive results, early data suggest higher rates of student progress, with substantially more students taking and completing 30 credits per year (Indiana Commission for Higher Education 2015).

Pre-2013 Indiana Financial Aid	Post-2013 Indiana Financial Aid
<ul style="list-style-type: none"> • More emphasis on grades for renewal, above and beyond degree requirements 	<ul style="list-style-type: none"> • Less emphasis on grades, more emphasis on progress
<ul style="list-style-type: none"> • Bonus awards fixed for four years based on high school performance, which students can't change 	<ul style="list-style-type: none"> • Bonus awards initially based on high school, renewal bonuses based on college progress
<ul style="list-style-type: none"> • No alignment with state appropriations to institutions 	<ul style="list-style-type: none"> • Consistent with outcomes-based funding to institutions, which also focuses on student progress
<ul style="list-style-type: none"> • Not available during summer 	<ul style="list-style-type: none"> • Available year-round
<ul style="list-style-type: none"> • Tied to credit hours rather than complete programs 	<ul style="list-style-type: none"> • Students must have degree maps⁴
<ul style="list-style-type: none"> • Four-year limit on aid, but four times the annual credit renewal requirements did not add up to a bachelor's degree 	<ul style="list-style-type: none"> • Short-term incentives better aligned with long-term policy

Most states continue to follow the federal government in capping their financial aid awards at 12 credit hours per term or the equivalent. Programs like Indiana's provide a counterweight to the incentives built into federal aid. Three other states—Minnesota, Washington, and Illinois—go up to 15 credits. West Virginia has tied renewal of its broad-based merit scholarship to completion of 30 hours per year, a change to which Judith Scott-Clayton attributes a significant rise in graduation

Most states continue to follow the federal government in capping their financial aid awards at 12 credit hours per term or the equivalent. Programs like Indiana's provide a counterweight to the incentives built into federal aid.

⁴This is a separate requirement of the legislation that does not make individual student funding contingent, but signals legislative interest in making sure that aid funds are closely linked to coherent academic programs.

rates (Scott-Clayton, *On Money and Motivation: A Quasi-Experimental Analysis of Financial Incentives for College Achievement* 2011).

Monthly Payment Plans

Many private colleges have payment plans that allow students and parents to spread out their tuition and other charges over a twelve-month period rather than having to come up with an unmanageable lump sum. As tuition increases at public institutions, there will be increasing demand for this type of service. Arizona State University, as one example, now offers a 12-month zero-interest payment plan (Arizona State University 2015) with a \$100-\$200 enrollment fee.

Without Payment Plan	With Payment Plan
<ul style="list-style-type: none"> • Significant lump sum charges at the beginning of the year or each semester 	<ul style="list-style-type: none"> • Equal monthly payments
<ul style="list-style-type: none"> • Recourse to high interest credit cards 	<ul style="list-style-type: none"> • Usually no interest, some have enrollment/administration fee
<ul style="list-style-type: none"> • Long-term loans taken out for short-term cash flow 	<ul style="list-style-type: none"> • Only need loans for expenses that cannot be covered in the current year
<ul style="list-style-type: none"> • Federal and state tax credits arrive long after the expenses they are designed to defray 	<ul style="list-style-type: none"> • Payment schedule overlaps with tax season

Payment plans serve both the institution and students well. Many are administered by third-party vendors such as HigherOne (formerly SallieMae), but they can be done in-house, too.

Other pricing models are also emerging among private colleges and providers. Western Governors University and Southern New Hampshire University's "College for America" have all-you-can-learn pricing plans with regular incremental payments based on time rather than credit hours. Such a structure creates a strong incentive for students to progress as much as they can, as well as an incentive for the organization to retain them.

Aid like a Paycheck

Payment plans can be helpful for students who are paying their own way. For students who depend primarily on financial aid, especially at community colleges, the direction of payment is often reversed. Some of the financial aid students receive goes to institutions to cover the cost of tuition and fees. The remaining amount is "refunded" to students to cover their other expenses—books, supplies, rent, food, transportation, etc. Low-income students would, if not in college, normally be under great pressure to work full-time jobs (or more than full-time). Being a student is one of their jobs, and the part of their financial aid that goes to pay expenses is replacement income they need to survive.

One way to better align incentives produced by existing resources could be to change the disbursement practice for these financial aid refunds, so that they more closely resemble what they actually are—replacement “wages” for students to study more and spend less time on outside work. There are a number of potential advantages to changing the system.

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Standard Disbursement	“Paycheck” Disbursement
<ul style="list-style-type: none"> • “Refund” appears in bank account without much explanation or context 	<ul style="list-style-type: none"> • Students receive paychecks that make the connection clear between schoolwork and payment
<ul style="list-style-type: none"> • Large lump sum payments are difficult to budget; easy to run out too soon 	<ul style="list-style-type: none"> • Regular installments reduce risk of cash flow crisis, increasing work hours
<ul style="list-style-type: none"> • Students who withdraw end up owing money they no longer have, creating hassles for themselves and institution (on top of other consequences of dropping out) 	<ul style="list-style-type: none"> • Money has not all been disbursed if students withdraw
<ul style="list-style-type: none"> • Timing of refunds makes it difficult to attach performance standards/conditions 	<ul style="list-style-type: none"> • Academic support is built in; at minimum, students check in when picking up checks
<ul style="list-style-type: none"> • Grant and loan money intermingled in bank account; loans issued before needed 	<ul style="list-style-type: none"> • More opportunity to distinguish grants from loans, keep loan disbursements last

MDRC has pilot tested Aid Like a Paycheck at two colleges and, because of the promising early results, is currently conducting a large scale random trial (Ware and Weissman 2013) for which preliminary findings should soon be available. In addition to assessing the impact on students, the project is exploring how colleges could make the difficult administrative transition to incremental payments and what resources would be required. It may be that the best time to make that type of change would be as part of a larger suite of reforms geared toward better alignment of resources and incentives.

One caveat for Aid as a Paycheck as a model for national or federal reform is that so far it has explored what happens when payment terms change for a subgroup of students at a handful of institutions while the larger higher education context remains unaltered. The administrative challenges have been significant, for example, but that is largely because they are pioneering an area where standard practice is different. Unlike a localized trial, a statewide or national overhaul would change the incentive structure not only for students, but for institutions enrolling those students and all of the organizations that support students who depend on aid.

Aligning Incentives by Redefining the Higher Education Service

City University of New York (CUNY)

Many institutions are recognizing the academic value of packaging curriculum in larger units, both for the clarity it provides to students and for the pedagogic value of being able to create systematic connections among courses that are more challenging when the schedule is a free-for-all. Part of the “work” of higher education is in the creation and curation of sequences of related experiences. Unlike the design and delivery of individual courses, the design and delivery of programs or groupings of courses, is not tied to a short-term revenue stream.

Selective private colleges often provide carefully structured curriculum and advising for their students, who are usually from higher income backgrounds, but low-income students at community colleges and open access institutions may be the ones who can benefit the most from a more carefully packaged education experience. The City University of New York’s Accelerated Study in Associate Program (ASAP) addresses that need by structuring an entire associate curriculum and related services into a single package (City University of New York 2015) that is offered to students as an alternative option to the traditional model.

Evaluation of the ASAP program shows dramatically improved results for students going through the more structured experience. In a controlled experiment, among the many measures that showed improvement, MDRC found that students who needed developmental (remedial) classes had a 15 percentage point increase in graduation rates after two and a half years compared to the control group (Scrivener and Weiss 2013). On a cost per credit hour basis, the ASAP program was more expensive than traditional instruction, but on a cost per degree basis, it cost less. As long as we continue to set prices in credit hours, it will be difficult for programs like ASAP to compete or scale up, since their input costs are higher.

Unlike the design and delivery of individual courses, the design and delivery of programs or groupings of courses, is not tied to a short-term revenue stream. Low-income students at community colleges and open access institutions may be the ones who can benefit the most from a more carefully packaged education experience.

Traditional Model (CUNY) and Elsewhere	ASAP
• Piecemeal curriculum and scheduling, course-by-course	• Curriculum and support services packaged in “blocks”
• Limited advising, usually optional	• Comprehensive, intensive, and required advising
• Unpredictable pricing	• Predictable pricing and aid
• Frequent conflicts with off-campus employment	• Assistance finding employment compatible with full-time block schedule
• College is not responsible for transition afterward	• Career/transfer planning built into program

Related efforts to improve the packaging, sequencing, advising and “choice architecture” of higher education have been championed by Complete College America under the heading of “GPS” or “Guided Pathway Systems” (Complete College America 2013). More radical or disruptive models, like competency-based education or MOOCs, promise to do away with the traditional teacher/student framework altogether. What many of these offerings or proposals have in common is a decreased reliance on the course or credit hour as the primary quantitative measure, in favor of “blocks,” “pathways,” “competencies,” or “maps” that aggregate education at a higher level than the course. The Carnegie Foundation for the Advancement of Teaching has defended the credit hour as a necessary invention, which it may well be (Silva, White and Toch 2015). But it could be preserved as an internal accounting measure, like clock hours for employees, without being the primary unit for payment and reimbursement.

Finance, Progress and Outcomes

Each of the innovations described above represents a significant shift in philosophy and approach in its domain. Each also solves a problem that the others leave unanswered. Tennessee has emphasized progress over enrollment in funding institutions. But what is in it for students? How can they be encouraged to progress more rapidly through their degree programs?

Indiana has made progress a cornerstone of its state aid program for students. But what is progress? Is it just a collection of courses?⁵

The ASAP program at CUNY represents an offering that is more than the sum of its credit hours—integrated, easier to complete and quite likely of greater economic value than haphazard collections of credit hours. But how does it scale up and who pays for the additional work required to provide that kind of integration and coherence?

Both in the payment systems (Indiana and Tennessee) and in the packaging of the service (ASAP), the focus is on responsibility for a person’s whole education over longer periods of service, greater coordination among providers and measurement of key outcomes. Parallel efforts to parcel out costs and support (Aid Like a Paycheck) also show how higher education could move toward a system of insurance-like premiums based on populations, risk and value-added outcomes and benefits that align better with students’ other expenses and income streams.

States and the federal government will have to do more if we want a system that does better than catering to high-income students or generate low-cost billable credit hours. Following the lead of the most innovative states and projects, policymakers and higher education advocates should be working on solutions that:

- **change the rules of the game to encourage and support degree completion**, recognizing the limits on what institutions can do on their own;
- **account for risk and reward value-added outcomes**, since the most challenged students need the most help;

⁵The state decided, probably with good reason, not at first to make a direct link between the requirement that all students have specific academic plans and the progress requirements of the financial aid program. But the bundling of undifferentiated credit hours could be a first step or placeholder toward clearer definitions of progress.

- **address both institutional and student financial constraints**, and do not just shift problems from one to the other;
- **close the financing gaps between what is needed and how higher education is funded**, and avoid duplicating incentives for behaviors that are already sufficiently rewarded, and
- **create incentives in the short-term**, for students and institutions that finance progress toward long-term goals.

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APPENDIX A: Institutional Revenue and Incentives

Appropriations

Overall, appropriations remain the largest revenue category for public higher education, although the balance is much higher (44%, \$24.5 billion) at community colleges than at four-year institutions (20%, \$51.9 billion). The state is the largest source of appropriations, followed by local government (primarily for community colleges in some states) and then the federal government for a small number of institutions (such as military academies). Even in states with very small shares of funding coming from appropriations, the legislature is still typically larger than any other annual “donor” and lobbying approaches have much in common with capital giving campaigns.

Institutions have little direct control over appropriations, which have declined steadily as a proportion of overall budgets over the last several decades (State Higher Education Executive Officers, 2014). Appropriations are, however, subject to influence, both in the aggregate amount and in the allocation and terms associated with each year’s budget. Given the importance of this revenue stream to institutions, considerable energy is spent seeking taxpayer dollars in both public and in more discreet ways. Historically, many states at one point or another have had formulas that linked appropriations to student enrollments. While a few of these are still in at least occasional use, the connection has weakened or disappeared in many systems. This revenue stream varies widely by state and system.

Incentives—Appropriation Revenue Strategies

- **Political engagement**, through lobbyists, direct contact with legislators, indirect mobilization of public support, etc.⁶
- **Enrollment management** of eligible students (usually state residents), where there remains an active enrollment-based formula that drives allocations.
- **Conservatism** (in the nonpartisan sense) in states or systems where base appropriations are rolled over from year to year with minor adjustments.
- **Monopoly or market share** preservation, where state funds are perceived as a limited pie to be divided among as few participants as possible.
- **Maximizing other funding factors** and meeting conditions associated with an allocation, which includes the new generation of outcomes-based funding formulas, as well as formulas based on square footage or numbers of faculty/staff, collective bargaining agreements, special proviso language, etc.
- **Year-end spending**, sometimes haphazard, to avoid building financial reserves that could be interpreted as “surplus” funds to justify reducing future appropriations.

⁶For example, one study, which found little other systematic financial benefit of athletic programs, did find a correlation between increased levels of state appropriations and the numbers of state policymakers invited to the skyboxes of institutions with major football programs (Clotfelter 2012).

Tuition and Fees

Tuition and fees account for a higher proportion of revenue (22%, \$56 billion) than appropriations at four-year colleges but less than half as much as appropriations (17%, \$9.4 billion) at two-year institutions. As appropriations have waned as a proportion of overall revenues, tuition has become a much more significant component of public institution funding, creating reasons to compete for tuition revenue as private colleges and universities have always done. Tuition and fee revenue is most directly related to institutional strategy and policy, and a significant consulting industry has grown up around helping institutions to maximize their revenue (McGrath, 2014).

Some of the strategies to generate tuition revenue are well aligned with the social mission of institutions, to the extent that the services provided in exchange for tuition fulfill that mission. But tuition produces other institutional incentives that can run counter to its nonfinancial bottom line. Business officers described some of the pressures they are under in a recent survey (Jaschik & Lederman, *The 2014 Inside Higher Ed Survey of College and University Business Officers*, 2014). 80% of chief business officers at public institutions agree or strongly agree their institution is more focused on market limits on the ability to raise fees than it was five years ago; 74% say they are more focused on increasing net tuition revenue; 55% say they are more focused on recruiting full tuition-paying students; 90% say they are more focused on enrollment management; and 66% say they are more focused on “profitability” of academic programs.

Incentives—Tuition and Fee Revenue Strategies

- **Increasing recruitment of** paying or externally funded students.
- **Improving retention of** paying or externally funded students.
- **Increasing numbers of paid courses/credit hours** taken per student.
- **Increasing tuition and fee rates** to the maximum that the market or state policy will allow.
- **Engaging politically**, where state policy or politics constrain potential tuition revenue.
- **Maximizing** student access to external financial aid sources (grants and/or loans).
- **Creating or expanding new “fees”** in cases where tuition or other fee rates are constrained.
- **Differentiating tuition**, charging higher fees for more expensive programs to offer or for programs where there is less competition.

The tuition incentive only operates as long as students have resources to pay. Low-income undergraduates and adult students typically require subsidies, either through direct appropriations or financial aid programs. When subsidies are not available, the financial bottom line requires institutions to focus on students and programs that are self-funding—often this means graduate and professional programs, out-of-state or international students, or undergraduates from more financially secure backgrounds.

Grants and Contracts

Especially for four-year research institutions, contracts and grants from the federal government or other external funders can be a major source of revenue, accounting for 16% of revenue (\$42.2 billion) in the four-year sector, often in the form of research contracts, but only 7% of revenue (\$4 billion) at two-year institutions. These funds are earmarked for specific people or projects and cannot be easily shifted around; they are also a major source of support for faculty and graduate students in the sciences. In federal contracts, moreover, institutions also are permitted to add a percentage—50% is typical—to the direct expenditure amount as “indirect costs” to support facilities, administration, libraries, etc., which are necessary for the research to be possible but cannot be easily broken out from other institutional expenses (U.S. Department of Education, 2015).⁷ Both the financial dimension and the prestige associated with major grants make them attractive to institutions and they are one of the sources of the magnetic pull of the “very high research” university designation. Other grants can be more service-oriented as in agricultural extension, or employee training for a particular company, etc.

Incentives—Grant and Contract Revenue Strategies

- **Applying for research grants and contracts** specifically supported by the federal government or other funders.
- **Recruiting faculty and researchers** with existing funding or likely to bring in contract and grant support.
- **Engaging politically**, especially at the federal level, to influence overall funding levels or influence specific decisions.
- **Cultivating relationships** with industry, foundations, and government agencies.
- **Fulfilling existing contract obligations** prior to any non-contractual use of resources.

Although states are usually perceived as having the biggest financial stake in postsecondary education, when grant and contract support is put together with the money that flows to institutions indirectly through Pell grants and loan subsidies (direct or implied), the federal government’s contribution to the higher education industry exceeds the size of state and local government appropriations (Pew Charitable Trusts 2015). This helps explain the significant lobbying presence of individual institutions and associations in Washington, D.C.

⁷A common mistake is to report that 50% of a federal grant is indirect cost, but that is the amount added to the direct expense, so the proportion of the total grant would be 33%.

Auxiliary Enterprises, Independent Operations, Hospitals

Especially at four-year institutions, the business side of higher education spans many economic sectors. Universities own and operate clinics and hospitals, farms, factories, power plants, residential and commercial property, restaurants, bookstores, sports teams, entertainment complexes, police departments, and educational “franchises” in the United States and abroad. While these functions, in principle, support the core instructional, research and public service functions, they can employ hundreds or thousands of people on a campus, require time and attention from campus leadership and involve complex stakeholder relationships that can affect the strategic direction and focus of a university. They can also be profit centers that provide surplus revenue for the core mission of the university (or, by choice or accident, loss leaders that deplete other revenues). Overall, these enterprises collectively account for about the same share of revenue (22%, \$57.1 billion) as tuition and appropriations at four-year institutions but a relatively small share (4%, \$2 billion) at two-year institutions.

Incentives—Auxiliary/Independent Business Revenue Strategies

- **Identifying and meeting market demands** of paying customers/stakeholders in revenue-producing businesses.
- **Fulfilling contract terms** before there can be any discretionary use of resources.
- **Leveraging the institutional brand** for competitive advantage.
- **Expanding institutions’ physical and economic footprint** within and beyond the home town.
- **Recruiting and admitting students who can afford the cost of auxiliaries** (e.g., housing, catering, parking, athletic facilities).
- **Maximizing prices** subject to market or regulatory constraints to bring in the most possible revenue.

In many metropolitan areas, higher education is one of the major local industries, and the local news and chamber of commerce agendas are full of evidence of the economic impact of institutions on the economy. Often this relates just as much to the satellite operations—housing developments, hospitals, stadiums, merchandise—as to the core academic service of the institutions. College presidents typically sit on local councils and have leadership roles in their communities.

Gifts, Investment Income, Additions to Endowment

Private philanthropy and use of endowment funds have a growing but still relatively small role in average public college and university budgets, although a few flagship universities rely on these sources to a much larger degree. Gifts and investment income accounted for about 6% (\$16.4 billion) of revenue at four-year universities and just 1% (\$0.8 billion) at two-year institutions. While institutions have less direct control over this revenue source than over tuition, many are turning to aggressive fundraising as one strategy to fill in the gap left by receding state support. This source, however, is probably the least evenly distributed, with a small number of institutions accounting for the lion's share of the total, while it remains negligible share at the colleges most students attend.

Incentives—Gift and Investment Revenue Strategies

- **Fundraising and outreach** to donors and potential donors.
- **Creating or expanding programs** that appeal to current or potential donors.
- **Building new facilities** or creating programs in donors' names.
- **Hiring or contracting with investment advisors** to maximize investment returns.
- **Meeting terms or wishes of donors** including actual or prospective, living or dead, when funds are conditional.

Other Financial Supports

The list above is not exhaustive, but includes the major categories reported in audited financial statements and in reports to the federal government through the Integrated Postsecondary Education Data System. Other components of institutional resources that have implications for incentives include:

- **Use of local, state and federal tax advantages.**
- **Use of capital assets** including both tangible (buildings, land) and intangible (legacy, brand).
- **Savings** from reduced expenditure in low-priority areas, institutional overhead.

APPENDIX B: Student Financial Resources and Incentives

Earnings from Work

Earnings from work while enrolled in college are by far the largest source of funds for independent students (67%) and the second largest (26%) for dependent students. Independent students, the majority at community colleges, tend to be enrolled at lower intensity, so the additional time they spend working is a tradeoff against time they could be spending on education. While “working” students are sometimes described as a distinct species, there is in fact a continuum. Two-thirds (66%) of all undergraduate students work at least some of the time. When working students in 2012 were asked if they identified primarily as a student or primarily as an employee, four out of five working students at public four-year institutions and three out of five working students at public two-year institutions said they were students first and employees second (National Center for Education Statistics, 2012). Even dependent students, the majority at four-year institutions, still derive significant income from work, with most students at every income level reporting at least some part-time work while enrolled.

Incentives—Employment Revenue Strategies

- **Working** more—hours, or in more physically or mentally demanding jobs.
- **Optimizing** the work schedule for the best paying shifts.
- **Changing jobs** when higher paying positions are available.
- **Acquiring or improving skills** with immediate workplace value.

The amount of time students spend working is not something that is entirely out of the hands of institutional leaders and policymakers, since it is partly a function of institutional culture and the structure and availability of financial aid and related services such as childcare, transportation, family housing, etc.. Given that there are only a fixed number of hours in the day, an hour spent working in a job unrelated to a student’s academic program is an hour not available for classwork, along with any additional time needed for transportation and preparation. And when making work a priority, students may make scheduling decisions based on their employment rather than their best academic interest. On the other hand, work that is well aligned with academic programs—paid internships or co-ops, some types of work-study or in-field employment—has the potential to contribute to rather than detract from academic performance.

Work-Study

Work-study is worth mentioning separately because it receives significant attention in policy circles. On average across the country, work-study remains a trivial slice of students’ revenue pie, at just 2% for dependent students and 1% for independent students. In practice, this is because a small number of students is employed through work-study, but the few who do have positions derive a significant share of their income from it. Most work-study funding is federal, and has been allocated using historical formulas that bear little relation to where most students enroll or where financial need is greatest. Based on recent research, Judith Scott-Clayton has suggested that when work-study

takes the place of existing off-campus employment students are more likely to progress in their programs, but when it results in students working more hours than they otherwise would, it may be detrimental to academic progress (Scott-Clayton & Minaya, Should Student Employment Be Subsidized? Conditional Counterfactuals and the Outcomes of Work-Study Participation, 2014).

Incentives—Work-Study Revenue Strategies

- **Cultivating positive relationships** with potential on-campus employers.
- **Meeting and maintaining academic eligibility** requirements (course loads, grades, etc.).
- **Selecting academic programs** or courses based partly on related work-study opportunities.

Loans

Perhaps the most controversial and problematic source of funds for college students is loan debt, which is the largest resource for dependent students at public institutions (29%) and the second largest for independent students (19%). Loans have the clearest trade-off against the long-term bottom line, as interest charges can raise the cost of education over the long term, even as they provide immediate funding for college expenses. On the other hand, loans can reduce the need to work, shortening time-to-degree and reducing the opportunity cost of college.

Incentives—Maximizing Loan Cash Flow

- **Borrowing up to the maximum** allowed through federal programs.
- **Seeking private student loans**, often with higher rates and less advantageous terms.
- **Borrowing outside the formal student loan system**, using credit cards, payday lenders, friends, relatives, etc.
- **Making timely payments** on credit that requires installments while still enrolled.

Surveys and experiments show widely varying sensitivities to indebtedness, which means that the same loan amount might produce very different incentives for different students (Palameta & Voyer, 2010). Students who are highly sensitive to indebtedness may borrow less than what they need to attend full-time and graduate on schedule, which could have the perverse result of increasing their overall costs because of the additional time spent in school (Boatman, Evans, & Soliz, 2014). On the other hand, students who borrow carelessly with little concern about future repayment may reach the borrowing limit on subsidized loans before they complete their program, and be forced either to stop or drop out or to turn to more costly loan alternatives.

New options for federal loans, such as income-based repayment, limit students' future risk when they borrow, but the possible effects of these options on decisions about whether and how much to borrow are unclear (Carey, 2015). The new repayment plans produce something resembling a cross between a loan and a progressive tax on graduates' earnings. As more students and former students work their way through the system, their successors will likely watch how debt affects them under the new programs. If borrowing becomes less scary as a result, loans could become a bigger part of students' budgets.

Income-based repayment plans also change the long-term calculus for students' return-on-investment. Now that balances can be forgiven after just 10 years for borrowers who go into public service or nonprofit careers, the federal government is likely to pick up a large part of the cost of education for many teachers and other civil servants. That may dramatically improve the comparative return on investment for teachers, public defenders, prosecutors and other civil servants whose costs of education are high and salaries below the thresholds for the plan.

The prospect of loan forgiveness, however, also reduces students' and institutions' incentives to keep expenses down. Georgetown Law School has gone as far as promising to make students' loan payments for ten years until forgiveness kicks in, and has built the cost of those payments into the price of tuition, essentially making the federal government liable for the entire cost of education (Matthews, 2013). That kind of misalignment is possible, in part, because of the disconnect between education sticker prices, which drive aid calculations, and actual costs, which can be much higher than those prices at public institutions or much lower at private institutions.

Federal Grants

Federal grant aid accounts for 10% of total resources for both dependent and independent students; most of this is in the form of Pell grants, which are based on financial need (but it also includes veterans' benefits and smaller financial aid programs). It is not evenly distributed. It is a much larger percentage of support for those who qualify, who would typically have proportionately less available from other source, such as parents, and zero for students above the qualification thresholds.

Incentives—Federal Grant Aid Strategies

- **Graduating from high school and enrolling in college** are the basic initial requirements to qualify.
- **Meeting and maintaining academic eligibility requirements** (“Satisfactory Academic Progress”) to renew funding.
- **Switching institutions** if failing to renew at the first institution.
- **Limiting income from work** or other sources that affect Pell eligibility.
- **Meeting the requirements to be considered independent** for income and asset calculations.
- **Optimizing course loads** to maximize financial aid or refunds.

Pell Grants create a strong, positive link between grant aid and college attendance up to 80% of a normal course load, but also create an expectation that low-income students should progress more slowly than their higher-income counterparts (Baum, Conklin, & Johnson, Stop Penalizing Poor Students, 2013). The grants are pro-rated based on the number of credit hours taken, but only up to 12 hours, while 15-16 hours would normally be required to complete an associate degree in two years or a bachelor's in four.

The cost of any additional credits—both in tuition, books and additional time away from work—is not subsidized. At community colleges, Pell grants typically exceed the cost of tuition, which is usually charged by the credit hour rather than the full-time flat rate typical at selective colleges.

Students who choose to take more than 12 hours will have less money for rent and other costs than those who stay within the ceiling. Since a normal course load for on-time graduation is 15 hours, students (and the federal government) may end up with higher long-term costs even if short-term cash flow is improved by taking 12 hours per term.

At the margin, Pell or other grants that exceed the cost of tuition could encourage students to attend a low-cost college partly or entirely for the net cash flow they receive, to which they might also be tempted to add loans. To the extent that these students end up doing well, that is a desired effect of the program, but in cases where there is little real intent, ability or desire to succeed, the incentive could result in wasted resources—not just the grants themselves, but also the state subsidies to institutions where the students enroll and the students' own time and energy that could have been put to more productive use. In practice it is very difficult to know in advance what students' capacities and intentions might be and attempts to narrow the scope of the program could end up keeping out those who have the most to gain. But once enrolled, the sooner institutions and the federal government can assess ability to benefit based on initial performance, the more resources can be directed to high-risk, high-potential individuals who will experience the greatest return on investment.

State, Institutional, and Private Grants

State grants account for a much smaller share of resources than federal grants, at just 3% for dependent students. About two-thirds of this amount is based on financial need; most of the remaining third depends on academic merit (National Center for Education Statistics, 2012).

Institutional grant aid, on the other hand, is a significant resource for dependent students at public institutions, at 13% of the total. But most of it is not need-based. Likewise, with private or outside grant aid (3% for dependent students), less than half is based on financial need. Independent students receive very little grant aid from public institutions, states or private sources—only about 1% of the total from each category.

Strategies to qualify for need-based state, institutional or private aid are similar to those for federal grants, which typically reproduce the mixed incentives of Pell Grants.⁹ But since most non-federal grant money is not based on need, students wanting to maximize state, institutional and private merit based have additional options as well. The incentives below are limited to those that are different from those shared with Federal Grants.

Incentives—State, Institutional, Private Grant Aid Strategies

- **Choosing where to enroll** (institution or state) based on net price or biggest discount offered.
- **Meeting and maintaining** unique eligibility requirements.
- **Attempting to boost GPA** by working harder or by selecting easier courses (e.g., avoiding STEM), or withdrawing from and repeating courses with low grades.
- **Applying for and meeting specific criteria** to qualify aid from diverse sources.

⁹Most state grant programs follow the federal government in capping benefits at 12 credit hours per term, amplifying the incentives created by Pell grants. Minnesota and Illinois are the exceptions, prorating their state award programs based on 15 hours per term instead.

Unlike federal aid, which incentivizes higher education in general (influencing students' choice to participate in higher education or not), state and institutional aid programs are often designed to affect choices of students who would have attended college anyway, but might have chosen a different institution or state. In that sense, they can produce results for individual institutions or states, but only at the expense of another institution or state, with no net change in college outcomes for the country as a whole. Sometimes, too, the choices students make as a result of specific institutional pricing or aid incentives may not be in their own interest, if the short-term incentive of a scholarship or discount encourages them to choose an institution or program that will provide fewer long-term benefits.

Parental Support

For dependent students, the estimated average parental support at public institutions was estimated at about 32% of the total.¹⁰ Yet this number reflects a relatively small percentage of students getting large amounts of support. About a quarter of dependent students reported receiving no help from parents (even though they are presumably claimed on the tax form), and more than half said they received less than \$1,500.¹¹ Independent students, by definition, do not receive parental support.

Incentives—Parental Support Strategies

- **Negotiating with parents** over levels of support.
- **Meeting any conditions imposed** on parental support, such as choice of institution, courses, housing arrangements, etc.
- **Communicating regularly** about financial and academic issues.
- **Allowing parents to claim the standard deduction** on tax forms.

The incentives created by parental support are probably widely varied, but savvy or cost-conscious parents are likely to keep an eye on students' academic choices and performance, providing guidance that independent students or first-generation students do not receive.

¹⁰This number was not reported directly in the survey results table, but was estimated based on a weighted average of the midpoint of the categorical responses when students were asked to estimate a range of parental support received for the year (e.g. those estimating between \$2,001-5,000 were assigned \$3,500), including zeroes. The median response was \$1,000-\$1,500.

¹¹Some students may not recognize in-kind contributions, such as free room and board, as the financial support, even though it should be accounted for as support.

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