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Time is not on our side

Part 1 of 2

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<u>Time is not on our side</u>

<u>(Part 1 of 2)</u>

This is the first part of a two-part article that explains why many of the policies that shape the financial outlook for Berkeley – the state's flagship public university and a bellwether for the sector – are likely to create budgetary pressures that could compromise our current standards of excellence and access. While this is troubling from an institution-specific perspective, the implications reach far beyond our campus. Data regarding the return on investment in public higher education leave no doubt about the positive impact on economic growth, employment and an expanding tax base, not to mention the benefits that accrue to our graduates and, by extension, society as a whole.[1] As I will show, our current path is financially unsustainable and inconsistent with achieving Berkeley's stated educational and social objectives – providing a first-class education to as many students as possible and producing transformational research.

While other countries are investing heavily in building the capacity of their higher education systems, partly because research shows this is central to innovation and competitiveness, the policies that govern the UC system are on a path that will seriously underfund what is widely regarded as the best public university system in the world. This is particularly worrisome against the backdrop of the labor market shortages that many of the fastest growing Californian enterprises confront and the time and effort that has been spent to build the UC system. After many years of state disinvestment the current trajectory offers little hope of a remedy. Time is not on our side.

While it is tempting to believe that reductions in our operating expenses are the key to long-term stability and sustainability, it is fairly easy to illustrate that it is not possible for costs to become consistent with current revenue projections if we are to maintain the current standards of access and excellence. As explained below, Berkeley launched an aggressive multi-year initiative designed to increase administrative efficiency saving a targeted $75 million per annum. However, while universities can undoubtedly become more efficient, there is simply not enough "there there" to balance the books, absent a significant decline in the very performance metrics the state and ourselves would like to see. Additionally, while online education may one day prove to have significant educational and financial benefits, a lot of research needs to be done to demonstrate the efficacy of distance learning and how best to achieve the desired pedagogical results. It also seems clear that the financial impact of this important innovation is likely to vary enormously across the spectrum of higher-education institutions. At Berkeley we do far more than merely convey information to our students and believe deeply in the benefits of face-to-face interactions with faculty and the importance of undergraduate participation in research endeavors.

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[1] **Return on Investment: Educational Choices and Demographic Change in California's Future,** by Henry Brady, Michael Hout and Jon Stiles, with Shannon Gleeson and Iris Hui. November 30, 2005. University of California, Berkeley, Survey Research Center.

The second part of this article discusses key issues that have to be part of any solution. It argues that we can only achieve a sustainable path if all of the university's stakeholders engage in a serious, fact-based debate and are prepared to make difficult decisions. There is no silver bullet. We need to recognize our successes, as well as be candid about our shortcomings. Together, we need to squarely face the tradeoffs that must be made and ensure that decision-making is aligned with accountability; an important step on the path to being more nimble, innovative and responsive.

Let's start by looking at the big picture; that is, how have the primary sources of financing Berkeley changed over the past decade?

Figure 1. Funding sources for UC Berkeley have changed dramatically.

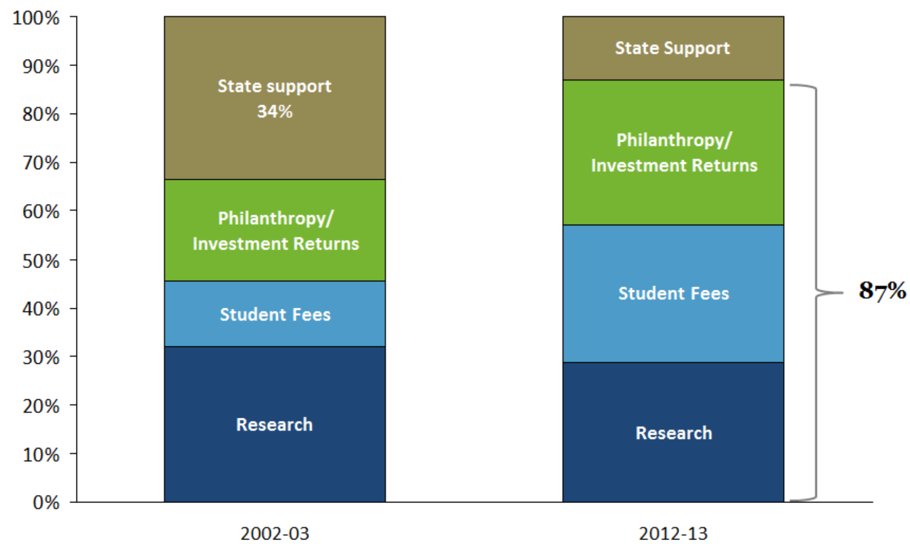

Figure 1 above aggregates most of Berkeley's revenue sources into four large categories:

(a) State Appropriations (funding provided by the state via its annual budget, designated to meet the operating costs – and now debt service – of the universities in the UC system);

(b) Research (contracts and grants from federal, state and private institutions/corporations that are obtained via competitive processes);

(c) Philanthropy (funding from institutions, corporations and individuals via the provision of endowments for academic chairs, annual giving and the investment returns on Berkeley's total endowment/financial reserves); and

(d) Student fees (all payments by undergraduate and graduate students to attend the university).

As Figure 1 clearly shows, there has been a significant shift in the order of importance of these four main sources of revenue. Most noticeably, state appropriations declined from about 34% of total revenue in 2002-03 to about 13% in 2012-13. In absolute dollars, state appropriations declined from about $497 million to $290 over the decade, a decline of about 42% in nominal terms or 54% in real terms (i.e., after adjusting for inflation). By contrast, the other three revenue sources have all increased – to the point where each is significantly more important than state funding. Clearly, Berkeley is a not a publicly funded university if one means that the university derives the majority of its funding from the state budget. This has not been the case for many years.

Before moving on, it is worth making four related points:

- First and foremost, despite this shift in composition of revenue sources, Berkeley is more of a "public" university now than it has ever been, in terms of its mission, values and purpose. To quote just a few facts, Berkeley has a more diverse student body than in the past (in terms of income, gender, ethnicity, etc.), and its capacity to act as a catalyst in terms of social mobility has increased markedly (Berkeley graduates almost as many Pell Grant recipient students as all of the private Ivy League universities combined). Irrespective of the metric that one uses, Berkeley has not allowed the change in its revenue sources to change what it does or what it stands for.[2]

- Second, Berkeley must now compete for its three most important revenue sources against the best private and public universities. Because 87% of our revenue does not result from a legislative process, the need to be market-competitive is essential. This matters in all sorts of ways, including recognizing the need to compete for talent (faculty and staff) in the marketplace. Neither Berkeley nor the rest of the UC system exists in a bubble, cordoned off from the rest of the world.

- Third, the shift in revenue sources has not been matched by a shift in governance or decision rights. On one level, this is out of step with the UC system's own history, which has been characterized by an ability to adapt since its founding in the late 1860's. There has been a rich tradition of devolution of power to the system's campuses, in line with the increased complexity of the UC system and the evolving individuality of each campus. Aside from "funding streams" reform this process seems to have come to a halt, despite the dramatic changes in the underlying financial realities.

- Fourth, the picture does not change if we move from discussing the operating budget to the capital budget – in fact, it gets worse. The state has recently made explicit its de-facto policy of no longer funding any capital expenditures (e.g., retrofitting seismically weak buildings, renovation or the construction of modern new facilities). Most of the new buildings at Berkeley are being funded by a combination of campus debt, philanthropy, private-sector partnerships and additional fees passed via student referenda.

[2] See Part 2 of this article for the relevant metrics.

Let's now look ahead. Figure 2 below presents a breakdown of the major revenue sources that Berkeley received in 2012-13 in absolute dollar terms and as a percent of total revenue. It provides a useful way for us to quantify the overall impact of changes in our sources of funding. Let's start with state appropriations. As we can see, state appropriations provided 13% ($290 million) of Berkeley's total revenue in 2012-13, net of the costs of running the UC Office of the President.[3] The expected 5% increase in this year's state appropriations will therefore result in an increase of 0.6% in Berkeley's total revenue.[4]

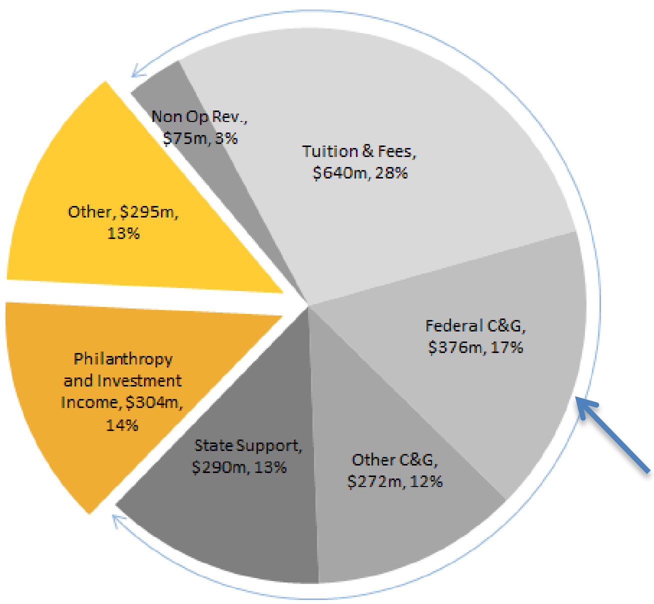

Figure 2.
UC Berkeley Revenue Sources for 2012-13 in millions and percentage of total
(C&G = Contracts and Grants)

Note:
73% of revenues are "constrained"

To put this in perspective, the 5% increase means that Berkeley will receive an additional $14 million per annum after having seen annual state funding fall by $207 million since 2002-03. At this pace, it will take close to 14-15 years to recoup the cuts made over the past decade, ignoring inflation. An alternative way to think about this increase is that it is about the same as the mandated increase in the employer's contribution to the underfunded UC pension system (which is not determined at the campus level). Thus, the 5% increase, by itself, provides no additional funding to meet any other increase in costs over and above the unavoidable cost increase in pension contributions.

In order to secure this increase in state funding, the Regents (the governing body for the UC system) agreed to freeze student tuition, which accounts for about 28% of total revenue (see Figure 2). Straightforward math tells us that this agreement means there will be a $14 million increase on a combined revenue base of just under $1.0 billion (i.e., student tuition + state

[3] UCOP's budget is now about $324 million, which is paid by the 10 campuses. Total state appropriation for the UC system was $2.2 billion in 2012-13; UCOP's budget equals about 14% of this total. UCOP's central administration budget increased by about 6% this year, whereas state appropriations increased by 5%, resulting in proportionately less being available to the 10 campuses that constitute the UC system.

[4] This is simply 13% multiplied by 5%, expressed as a percent of Berkeley's total revenue.

appropriations).[5] The second part of this article will show why the policy of holding student fees constant, followed by large and unpredictable increases, produces deeply suboptimal results for students, their families and the campuses. Nor does this policy protect low- and middle-income families. We will show that a more rational and predictable path would have, in the past, resulted in both lower student fees and more predictability—a lesson that can and should be applied to the future.

If we also conservatively estimate that the revenue flowing from federal and state research contracts and grants ($376 million + $272 million) will stay flat, then about 73% of Berkeley's total revenue will be "constrained" by policy decisions outside of the campus's control. I say "conservatively" because the impact of the federal budget "sequestration" and cuts in research funding at all levels of government can already be seen in our current funding streams.[6] We will have to work hard to maintain current levels.

Thus, the simple math as per current revenue projections is that funds to cover any increase in the cost base of running Berkeley, whether it be related to health costs, competitive salaries, student services, renewed information systems, operations and maintenance, or debt service, have to come from somewhere other than state appropriations, student fees and research contract and grants. It has to come from the "other 27%."

To illustrate the problem, if we assume that the items referred to in the preceding paragraph result in an unavoidable cost increase of about 2% this year (i.e., about $46 million), then there is an "unfunded" gap at the campus level of about $32 million ($46 million cost increase minus the $14 million of revenue from state appropriations). Again, this is likely to prove to be an underestimation. If the historical data for the past 20 years are a guide (and this includes the period when state appropriations were being drastically cut and staff were put on furloughs), total costs will increase by at least 3% to 4%. As mentioned earlier, Berkeley does not exist in a bubble; it pays utility bills, has to maintain its buildings, and it needs to compete in terms of startup packages and competitive salaries for faculty against similarly ranked private universities. And, as noted, the cost of the campus contribution to its pension program is set to increase by the full amount of the annual increase in state appropriations. The resulting financing gap translates directly into less teaching and research being done and the time to graduating being longer.

If we plug the assumptions flowing from the current set of policies into the fairly comprehensive and detailed financial model we have recently built for Berkeley, we find that we will run a material deficit next year. Fortunately, prudent policies in the past have provided Berkeley with adequate financial resources to finance this deficit in the short-term. However, this is clearly not a sustainable medium-term strategy. If we use the same financial model to project the financial results over the next six to seven years, assuming no change in the stated policies, we find that the deficit grows to between $150 and $200 million per annum, far in excess of our financial reserves.

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[5] The same financial reality applies to all 10 campuses.

[6] Indeed, current data indicate that revenue from federal contracts and grants has already declined materially in nominal dollars.

Given that the university cannot run an operating deficit of this magnitude,[7] the implication of the projections is that something very significant has to change. Expenses cannot be cut to balance the books without having a lasting impact on both the access to higher education and the standards achieved. The very metrics that we want to improve, time to degree, how many students graduate, debt levels, etc. will worsen. Something has to happen on the revenue side as well as the cost side. There is no other real solution.

Before closing this first part, it may be useful to provide an overview of the steps that are being taken to reduce administrative costs at Berkeley under our Operational Excellence (OE) program. This is a comprehensive effort to direct as many resources as possible toward teaching and research, and to keep the costs to students down as much as possible.

Figure 3 on the left shows the amount that Berkeley has saved from its OE reforms to date and the projection for the future; Figure 4 on the right shows the investment made to date and future commitments.

Figure 3. Operational Excellence Portfolio Annual Savings
Actual Savings More Than Projection to Date

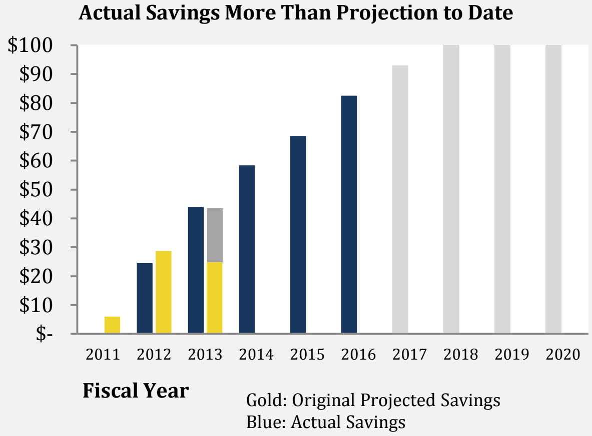
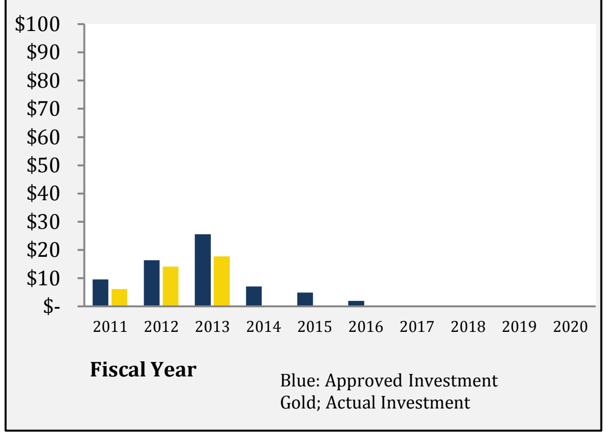


Figure 4. OE Portfolio Annual Investment
Actual Investment Less Than Plan To Date



The goal is to generate more than $75 million in savings ***per annum*** from a total ***one-time*** investment of $75 million over a five-year period. These projects include:

- the implementation of a modern procurement system and the merger of Berkeley's procurement department with that of UCSF,
- the reduction in layers of administrative management and the increase in numbers of people supervised by the remaining managers,
- the creation of a campus shared service center that consolidates many of the transactional administrative functions into one place, with staff using common and best-practice systems,

[7] Except, as explained, on a temporary basis, financed by reserves. In addition, the UC campuses are not permitted to issue debt directly, only at the UC system level. But each campus is set "debt ratio" limits; additional debt issuance must be approved by the Regents and has traditionally only been for capital projects.

- and a complete overhaul in the budget and financial systems.

In total, there are 25 projects dealing with all aspects of running the administrative and finance aspects of Berkeley. I will not go into the further detail here but would direct those interested to a paper dedicated to explaining Operational Excellence.[8]

To date, OE has spent less than budgeted and generated more savings than targeted. All of these savings are used to support our fundamental teaching/research mission. However, this ongoing effort (and it is now accepted that it will be a process of continuous change) has created significant change management issues on campus. Due to long periods of underinvestment in systems/staff and a fairly decentralized structure, the change process is very difficult. Our experience has clearly shown that successfully implementing this type of reform requires resources, serious and continuous management attention, and a staff that accepts the need for change and our strategic priorities. Wishful thinking unsupported by any resources will not work. We have to invest to improve efficiency and maintain competitiveness.

In conclusion, this first part is intended to make the reader aware that the current policy mix will create very real financial challenges for Berkeley and the UC system going forward. It's a warning that something will have to change. The second installment is more uplifting! It shows that Berkeley has successfully weathered the past decades of cuts, retaining its commitment to its fundamental mission and maintaining its rankings among the top universities in the world. But Berkeley is under considerable stress, and the past is not a good guide to what will work in the future. Part 2 discusses how current policies might be adjusted to allow Berkeley to continue to provide a similar level of excellence and access to the public it continues to serve.

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[8] **Doing Much More With Less: Implementing Operational Excellence at UC Berkeley** by Andrew J. Szeri, Richard Lyons, Peggy Huston and John Wilton CSHE.10.13 (June 2013) (http://cshe.berkeley.edu/publications/publications.php?id=446)