

The Choices Report

March 2010

Submitted by the University Committee on Planning and Budget
Systemwide Academic Senate
University of California

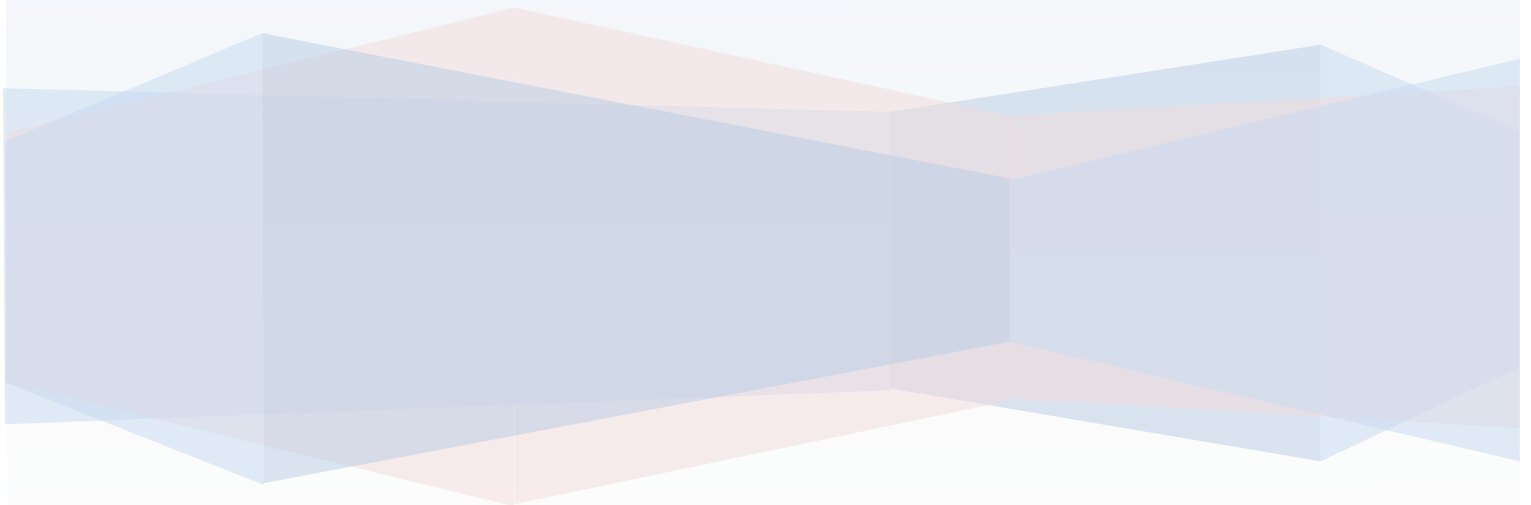


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UCPB gratefully acknowledges the contributions of our interlocutors in the UC Office of the President, in campus administration, and in shared governance throughout the UC system.

Executive Summary

While the major issue facing UC is the state's failure to provide adequate funding to support its mission of teaching, research, and public service, the current funding situation requires UC to take a closer look at some of the revenue streams and efficiencies that are under its control. This report addresses a series of alternatives, in the hope of steering UC *away from false choices* and towards discussion of some tough trade-offs on matters of fee policy, cross-subsidization, salaries and benefits, faculty workload, indirect cost recovery, administration, and a range of potential efficiencies and new revenues.

If UC sought to educate growing numbers of undergraduate and graduate students, but without UC-quality courses, it would reflect only a hollow echo of the Master Plan's promise of access to excellence. If UC research sought to bring innovation and 21st century knowledge to the state, and to attract federal and industry sponsorship in support, but failed to teach the next generation of researchers, it would not be a research university. If UC kept its tuition low for undergraduate, graduate, and professional school students, but did not manage to hire and retain the high-quality faculty and staff needed to push the boundaries of science and the arts, then higher education in this state would gain nothing. UC is the envy of the world because of the quality of its faculty. That quality is the basis for UC's reputation, and its attraction for research sponsors and potential students. The market for top-flight researchers is not local, but global. Our competitors are not municipalities or corporations, but other top universities.

Thus UCPB is willing to discuss any kind of new cut or new revenue idea, except those that would irreversibly imperil the quality of our faculty. If UC decides to raise fees, it can always lower them when funding levels are restored. If UC is forced by funding constraints to educate fewer students, it can always increase enrollments when funding permits. If UC finds it cannot afford a new school or program, it can still open it in five years. When it comes to UC faculty, however, excellence takes only a short time to destroy, but decades to restore.

It is far too easy to characterize the Academic Senate as a self-interested body that stubbornly opposes any cuts to core academic programs. It is true that as long as the Senate reviews potential cuts only piece-meal, it gives a piece-meal response. Budget alternatives are too often non-specific and presented to the Senate without supporting data. The Senate needs to see real choices and real trade-offs in full consultation as our shared governance role requires. So far, only the Senate has proposed a reasonable strategy for funding retiree benefits. Only the

Senate has taken up the Faculty Salaries Plan in an effort to preserve quality. Thus, we reject the characterization that the Senate simply says No.

UCPB would rather raise undergraduate student fees than graduate student fees; and we would rather raise professional school fees than graduate academic fees. We would prefer to increase the tax on auxiliaries than on grants and contracts. We would rather increase non-resident enrollment than non-resident tuition; in fact, lowering non-resident tuition could allow for greater volume, as campuses increase efforts to recruit net-payer non-resident students to potentially offset the “over-enrollment” of UC students not funded by the state. We would rather purchase buildings to get out of expensive leases than build more buildings, but we would rather tap UC’s debt capacity for the pension system than for capital planning. We would rather expand summer session than extension, and we would rather increase class sizes (especially in units still below the average student-faculty ratio) than cut compensation for staff or faculty even further. We would rather modify health benefits than suspend the faculty merit cycle. We would rather reduce undergraduate than graduate enrollments. We would rather merge departments than eliminate them; we would prefer to merge rather than centralize school administration. We would rather cut campus staffing than reduce UCOP staffing levels further. We would rather suspend campus maintenance than reduce graduate block funding allocation. We would rather curb construction than reduce financial aid, and we would rather reduce UCOP's tax on Indirect Cost Recovery than turn away grant support. In terms of administrative efficiencies, there ought to be more dependence on judgment than on more rules, since the latter inevitably spawns a proliferating compliance system. We would rather reduce system-wide research support than campus research support. UC could try centralizing all commodity services and specialist functions, and decentralize generalists in administration.

UCPB believes we must weigh the possibility of tapping UC’s debt capacity against the ability of each campus to pay; we feel that given how conservative UC has been in the past with regard to debt, there is some room to take on additional debt if it is done cautiously and prudently. Summer session and extension could be expanded if they bring additional revenues into the system without damaging graduate student support. In terms of the cost of space for instruction, research, and administration, UCPB is aware of efforts to reduce costly lease payments and consolidate administration; to cover unmet needs, UCPB encourages the purchase of buildings where it allows a significant reduction in lease expenditures. And although raising

student fees is very painful, UCPB sees more headroom on undergraduate fee levels than on professional school fees, which have reached very high levels, and there is concern about sustainability of further hikes. Yet raising graduate academic fees is more problematic, since the majority of the fees for graduate academic students are billed either to faculty grants, or to campus block allocations.

We recommend that UC:

- **Maintain or increase state support**
- **Avoid suffocating core academic programs**
- **Delay the start of any new programs until the core is stable**
- **Adopt a multi-year fee strategy**
- **Increase budget transparency**
- **Balance system-wide needs and campus needs**
- **Disentangle sources of funds but recognize essential cross-subsidization**
- **Avoid stratification and tiering**
- **Increase diversity by recruiting non-resident students**
- **Prioritize retirement funding and total remuneration**
- **Honor its commitment to current employees by rewarding future service under current UCRP plan terms**
- **Consider Pension Obligation Bonds to maintain the health of UCRP**
- **Recognize that online education will not substantially cut cost**
- **Recognize that shifting salaries to grants will have adverse consequences**
- **Overhaul Indirect Cost Recovery**
- **Tax auxiliaries and medical centers**
- **Increase fundraising efforts**
- **Review growth of campus administration**
- **Curb construction projects**
- **Recognize UC Merced's unique situation and fund that campus accordingly**

A LOOK BACK, A LOOK FORWARD

Although California's average personal income grew appreciably over the past quarter century, investment in higher education declined, both in nominal dollars and as percentage of personal income. Correcting for inflation and enrollment growth magnifies the issue.

1a. UCPB's "Futures" and "Cuts" reports

In 2005, UCPB authored a *Resolution on Maintaining the Public Status of the University of California*¹, which was endorsed by the Academic Council in October 2005 and transmitted to the President. The *Resolution* asked the UC Long Range Guidance Team to evaluate the effects of increased reliance on private funds on the instructional, research, and public service missions of UC, including the long term implications of the Compact, and to report results back to the Council. UCPB observed that since the early 1980s, higher education funding in California suffered more than any other major sector of the state budget. It is the only sector to have experienced a reduction in real per-capita funding between 1984 and 2004. The "Compact" did not stop this decline but locked it in. From 2001-02 to 2004-05, the General Fund share of UC Core Funds fell from 60% to 45%.

UCPB's May 2006 report *Current Budget Trends and the Future of the University of California* (the "Futures Report"²) found that private funds in the form of research sponsorship and philanthropy cannot replace lost public funding, which meant that drastically increased fees were the only plausible source of replacement funds (at a level of \$15,000-\$18,000 per student in 2005-06 dollars). The *Futures Report* was widely reviewed and validated, endorsed by Academic Council, and presented to Assembly and Regents in May 2007. Its core recommendation was to request an additional \$1.1 billion in state General Funds to return UC to its 2001 pathway. In January 2007, Academic Council found that UC had experienced a state General Fund shortfall that damaged educational quality and UC's ability to contribute to the public good, even before a new round of proposed cuts (*Resolution of the Academic Council on Returning UC to a Sound Fiscal Base*, January 7, 2007³); Academic Council asked the President to inform the Regents, and called on the Office of the President to publicly oppose cuts to UC.

¹ <http://www.universityofcalifornia.edu/senate/reports/ac.uc.public.status.11.05.pdf>

² <http://www.universityofcalifornia.edu/senate/committees/ucpb/futures.report0506.pdf>

³ <http://www.universityofcalifornia.edu/senate/reports/AC.Budget.resolution.01.07.pdf>

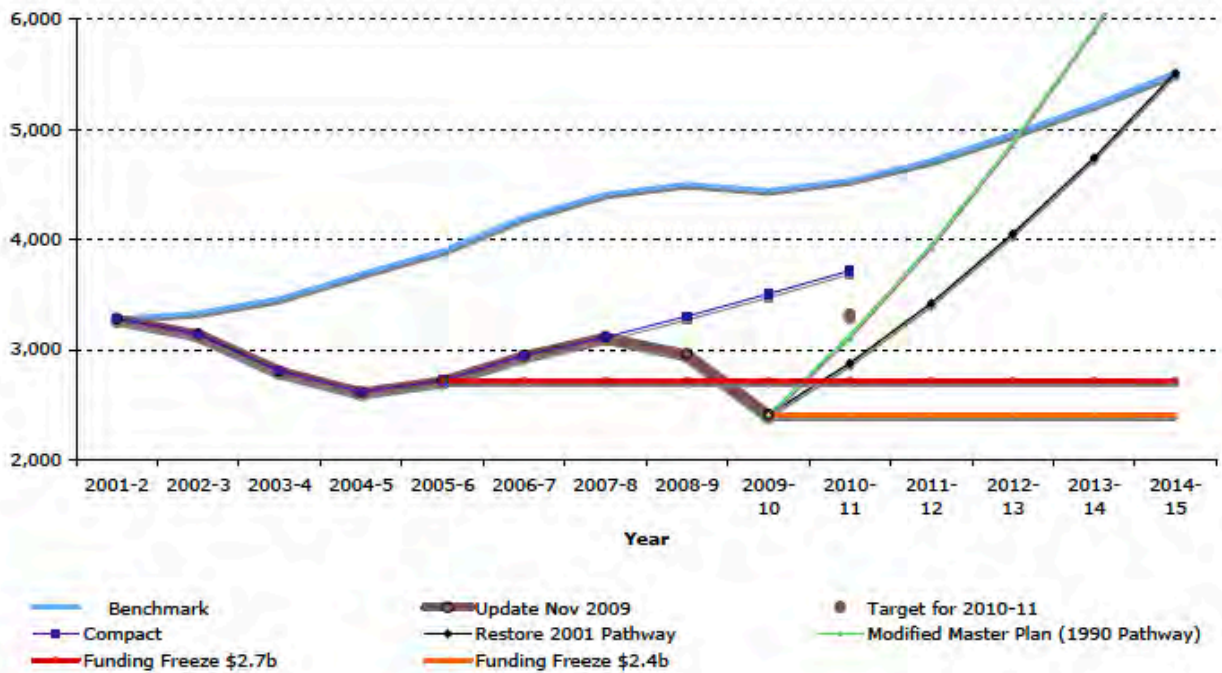
In March 2008, the Academic Council endorsed UCPB's *Report on the Cuts Proposed by California Governor Arnold Schwarzenegger* ("The Cuts Report"),⁴ submitted by Senate Chair Michael Brown to President Robert Dynes on April 8, 2008. It found that in real terms, state investment per student had fallen 30% since 2001-02; that the Governor's May Budget Revision represented a freeze on UC's General Fund budget for 2007-08, and a 10% cut from the Regents' November budget; that to fill the shortfall entirely with student fees would require a 40% one-year fee increase for in-state undergraduates, with more of the same in future years; and that the new budget cuts were likely to turn into a multi-year cycle of cuts. UCPB recommended that OP make a compact with the public to put a floor under its per-student investment, cutting enrollments to match cuts in General Funds, with appropriate notice to the public. Moreover, the Cuts Report stated that as "many government and University officials seem to agree that public funding can indeed be replaced with private funding and partnerships, voters in this scenario have no reason to think that the quality of public universities depends on traditional (higher) levels of public funding." It has become even more evident that advocacy for public funding is paramount for UC. UCPB warned that the only feasible replacement for the lost \$1b or \$2b in state General Fund support (compared to 2001 and 1990, respectively) would be repeated fee increases – until undergraduate student fees reach a level of around \$18,000 per year by 2011, or double their 2007 levels. In sum, for a number of years UCPB has signaled three basic warnings:

- As the University's budget increasingly depends on fee revenues due to shrinking public general funds, UC is seen as trying to "privatize," though it has no endowment that would allow it to do so;
- As fees cannot be raised quickly enough to replace lost state support, permanent austerity forces UC to abandon many academic activities and services;
- As administrators see themselves forced to subject individual programs to "market" criteria, resources tend to flow towards revenue-generating programs, and away from many academically valuable programs that cannot become self-sustaining.

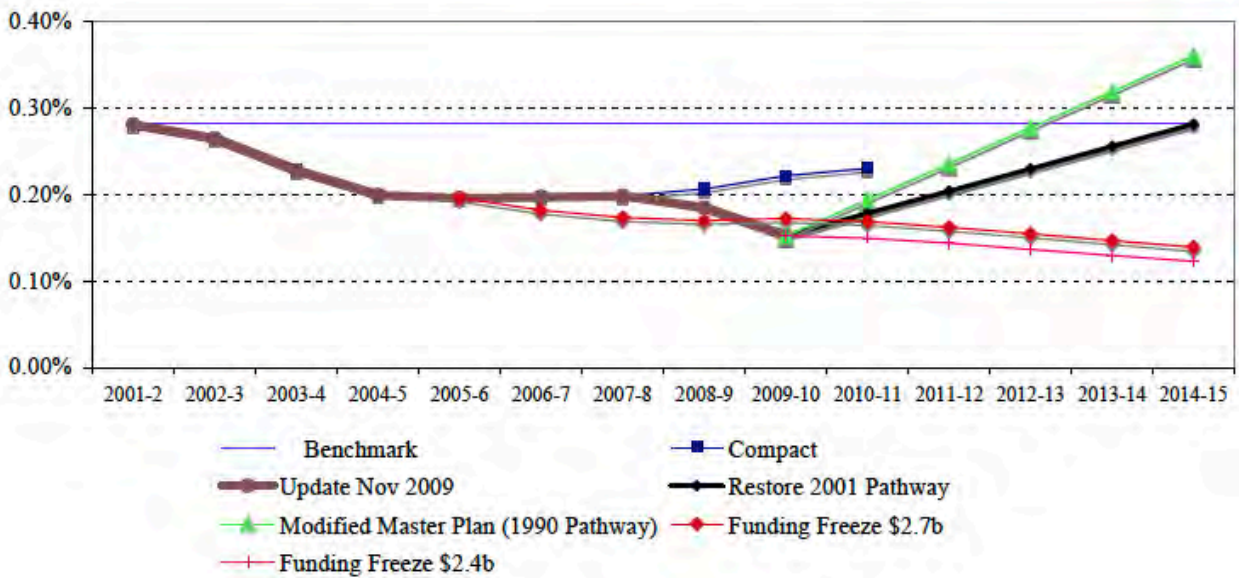
The present report updates projections made in the "Futures" and "Cuts" reports, and highlights concrete choices that must be confronted in the current situation.

⁴ <http://www.universityofcalifornia.edu/senate/reports/cuts.report.04.08.pdf>

State Funds for Operations in Nominal \$: Updated Futures Report Scenarios



State Funding to UC in percent of State Personal Income



1b. Planning and Budgeting for Uncertainty

UCPB's detailed warnings went unheeded, for a variety of reasons. The Senate's part in this may have been a failure to establish a sense of urgency or a coalition of support; it may have undercommunicated the vision laid out, or shared governance did not achieve the necessary connection to real changes in UC's organizational culture. Rather than second-guess the past, we draw attention to potential outcomes of choices still before us. Higher education market research or state funding trend extrapolations do not suffice for this planning process, as UC is assuredly not facing a clear and simple future. Previous UCPB reports tried to add value by evaluating a range of possible scenarios, forecasting outcomes. The present report does not see a range of outcomes so much as a need for robust decision analysis for options that remain viable for public higher education in California. We now turn to a series of *choices* UC faces in planning and budgeting – in relation to student enrollments and fees, to space and construction, to salaries and benefits, and to the true cost of research at UC.

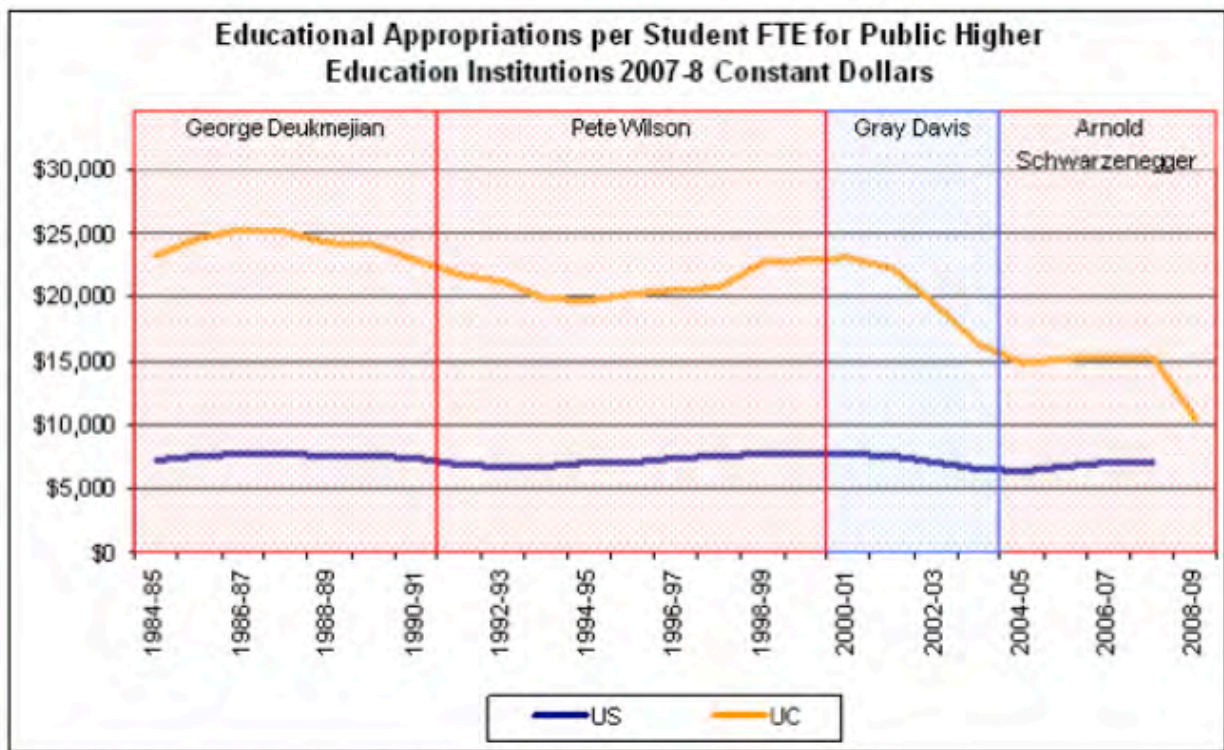
We make concrete recommendations where possible, without forgetting the big picture. Despite considerable uncertainty, at least half a dozen trends can be readily identified for higher education in the 21st century. Institutions of higher learning see themselves in a global context of cooperation and competition. The growing influence of information technology on the creation, distribution, and absorption of knowledge has led some observers to predict a departure from traditional modes of communication and collective memory. An increasing emphasis on interdisciplinary approaches also has both direct and indirect consequences for academic planning. The public-private interface is changing in the research and technology sector, and basic research now relies increasingly on private support. This has also accelerated the use of new performance assessments and priorities for intellectual inquiry; with the implementation of public-private partnerships come not only new performance indicators and benchmarking exercises, but also mutual agreements in teaching, research, and technology transfer. Finally, growing public concern about scientific and technological development, not just in areas like nanotechnology or stem cell research, increased political attention to parameters of universities' contributions to the public good.

Changes occur at different speeds; not all of the above will weigh equally heavily on UC. Any of these trends could be targeted for lengthy study; they are marked here to set a framework for UCPB's thinking about planning and budgeting for the best public research university in the

world, the University of California. State funding for UC declined dramatically – not only relative to purchasing power and population growth in the state, it has also declined more than support for at least one other segment of public higher education in California. Indeed, California Postsecondary Education Committee data show that in 1986-87, at the height of state funding, UC's ratio of state general fund share per student was 48% higher than that for the CSU system, while in 2008-09 UC's ratio was only 8% higher than CSU's. Inversely, student fees in 1986-87 were 70% higher for UC students compared to CSU students (\$2817 versus \$1577 in current dollars), while in 2009 they were 132% higher (\$7371 versus \$3178).

The average per-student expenditure at UC has declined by 25% over the past 19 years. Over the same period, state funding per student declined by 54% – the state used to cover 78% of the total cost of education, it now covers less than half. As the state subsidy declined, the share students pay tripled. In 1990-91, students contributed 13% toward their education; after the 2009-10 mid-year fee increases, students pay 40% of the cost. Private philanthropy and sponsored projects finance specific activities, not the core budget. To replace the (reduced) state support with fees in 2008 would have required raising fees to around \$23,000 a year. Restoring quality (in terms of the funding per student, \$3.25B for 220,000 students) to 2001 levels would have required raising fees to over \$27,000, but this path continues to price students out of UC. The increasing role of student fees notwithstanding, it is worth reiterating that UC currently hopes to continue receiving close to \$3B per year from the state, plus substantial funding for retiree health and pensions. If UC were to start charging whatever the market will bear, with private competitors as our benchmark, the case for remaining a public institution would vanish, and the \$3B could shrink much more rapidly than anyone anticipates. As UCPB pointed out a number of times, the proportion of funds UC can hope to make from rapid steep fee increases (without considering that the state could simply cut more in response) still pales in comparison to what UC would lose if it does not convince the state to preserve its current investment in educating students, and to restart employer contributions to UC's retirement plan. UCPB acknowledges that unlike many other components of the UC budget, student fees are under the control of the Regents. UCPB believes UC must stop reacting to the vagaries of the state budget in setting student fees, and instead adopt a multi-year fee strategy.

We note that EU countries have agreed to a goal of spending 3% of GDP on research and development; they are producing a considerably larger number of graduates per year than the US (3 million vs. just over 2 million); and they have an even greater advantage in the number of doctorates awarded (85,000 vs. 44,000). The Asia-Pacific region is catching up, and may soon rival or surpass the US in scientific publications (where it currently ranks 3rd with 25%, behind the EU with 38% and the US with 33%). Asian and European countries set ambitious goals for their public universities. In an environment of global competition, the message is clear: California must redouble its efforts to remain competitive for talents and ideas, and attract and retain the best students, staff, and faculty.



Sources: State Higher Education Executive Officers, California Legislative Analyst's Office.

http://www.sheeo.org/finance/shef/shef_data.htm

http://www.lao.ca.gov/laoapp/LAOMenus/lao_menu_economics.aspx

TOWARDS A TRANSPARENT BUDGET

It would set up a false choice to frame the issue of transparent budgeting as one of campus self-sufficiency versus system-wide efforts. Advocacy with the state and federal government, personnel standards, human resources and benefits, and educational quality are no doubt best addressed system-wide; on the other hand, there are strong arguments for local autonomy in many other administrative matters.

2a. The Power of 10 and Cross-Subsidization

UC needs to take a comprehensive look at the budget instead of focusing serially on discrete fund sources. UCPB urges open dialogue about *what* is to be funded and administered centrally, including (but not limited to) system-wide research programs, political advocacy, the growth of UC Merced, or rebalancing the allocation formula among campus budgets. Before discussing any ideas for cuts or potential new revenues, current allocation policies and practices need to be fully understood. Historically, budget allocations within UC were subject to significant cross-subsidization. The guiding principle of one University with nine (now ten) campuses meant that each campus be provided with resources to either develop or maintain its status as a major research university. Yet there was little transparency in most areas of the UC budget. Enrollment targets were set, and dollars followed those targets. Before 1990, funding was provided on a weighted basis, with graduate students funded at a higher level; the rationale was that graduate students were more expensive. The effect was that campuses with larger graduate student populations pre-1990 were better funded; indeed, this richer funding was then built in to their base budget! Thus, whenever the base budgets were adjusted, these same campuses were advantaged. Campuses with far higher shares of enrollment growth since that time did receive larger shares of incremental funding, but at an inferior student-faculty ratio.

Moreover, allocations have been tweaked regularly since then, which complicates the picture. In the early 1990s (during the last major UC budget crisis), campuses were given significant flexibility in how they managed reductions. This started a process of taking UCOP out of the details of line-item budgeting, and providing greater discretion to the campuses. It also led to the first compact, with former Governor Wilson. Without rehearsing details of the compact, one of the most significant outcomes was that the University agreed to enroll a certain number of students and the state provided a single marginal rate of funding, regardless of level.

OP implemented a “1%” rule – if campuses stayed within a 1% band of their targeted enrollment, it would receive 100% of the marginal rate of funding. If a campus fell more than 1% below it, it would lose the state funding; and if it was more than 1% above it, some additional funding would be provided.

Throughout the 1990s, OP combined several fund sources before making allocations to the campuses: state general funds, educational fees, non-resident tuition, part of the overhead from federal grants, and a few smaller sources. Under the terms of the compact, allocations to the campuses were provided as: A) funding for enrollment (based on the agreed upon FTE targets) and a control figure for new faculty FTE, configured at the 18.7 to 1 ratio; B) a single inflationary adjustment with instructions to pay for salary increases, benefit cost increases, and non-salary price increases. OP commingled sources of funds when allocating the inflationary adjustment – including a portion of federal overhead recovery, and revenue from non-resident tuition. Each campus was expected to manage, whether or not there was sufficient funding; and some stood to receive C) targeted funding consistent with either the legislature/Governor’s or the UC President’s priorities, i.e. academic preparation programs, or operation and maintenance. Though allocations varied, they were predictable, and campuses could plan the year once the Governor’s January budget was released. There were some behind-the-scenes adjustments, usually in the form of dollars taken off the top of each bucket prior to campus allocations. In theory, funds related to enrollment growth would flow to campuses where that growth occurred; in practice however, a large portion went to fund inflationary costs (utilities, salary increases, benefits) allocated proportionally to base budgets. Campuses were “paying in” different amounts from fees or overhead recovery, but not always getting equitable proportions back.

Around the same time, UCOP began reversing some cross-subsidization. First was how federal overhead is handled. Federal overhead recovery is divided into three buckets – a general fund bucket (referred to as 19933), opportunity funds (discretionary), and off-the-top funds (used to support the costs related to research). The general fund portion was folded into state and other general funds, and allocated to campuses based on their share of the general fund. The other two buckets were allocated to campuses, but there was no precise formula; significant cross-subsidization existed. In 1995, Richard Atkinson was named president of the University, following his tenure as chancellor of the San Diego campus. He presided over San Diego during a time when there was double-digit growth in federal research support. Atkinson objected to the

fact that San Diego generated ~20% of the increase in the overhead yet received only ~11% of it and that, at the other end of the spectrum, Santa Cruz generated ~2% of the increase, yet received ~5% due largely to the fact that it was commingled with other funds and allocated based on each campus's share of the general fund. The outcome was a dramatic change in the distribution formula, such that each campus received 94% of federal overhead – general fund, opportunity funds, off-the-top funds – that it generated (OP retained 6% to fund system wide priorities). As cross-subsidization of Indirect Cost Recovery dollars was discontinued, some campuses saw increases in allocations, others saw decreases.

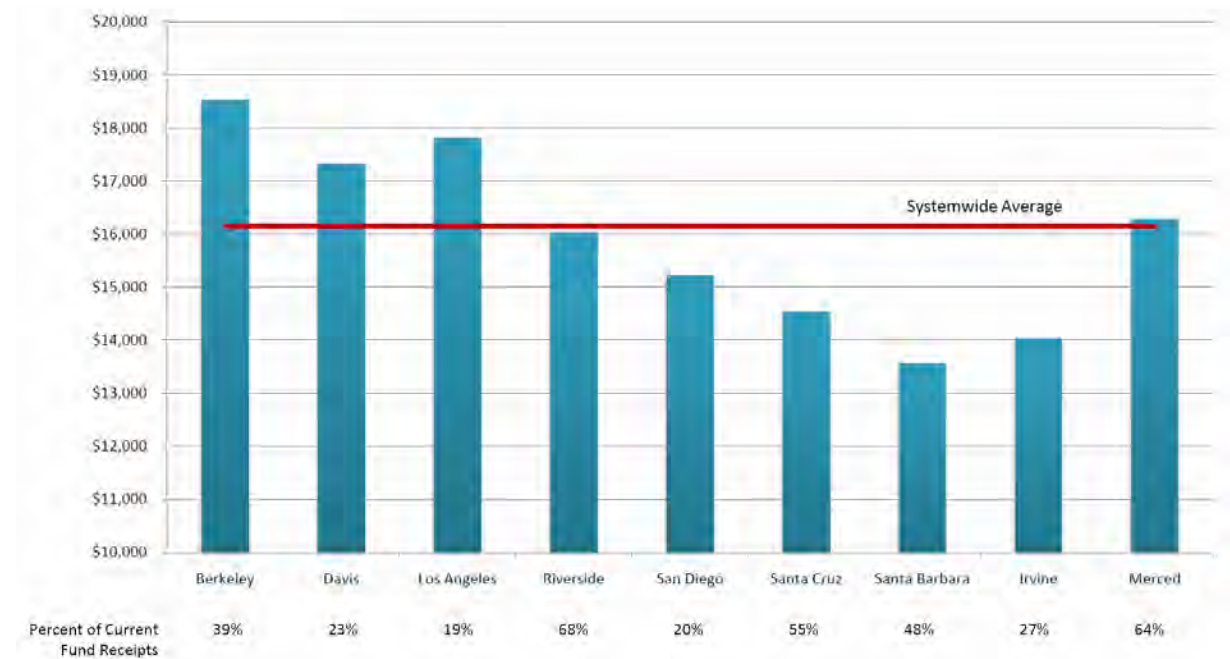
When the state's fiscal situation again became precarious, the University established professional school fees to help offset the reduction in state support. Over time, the number of schools charging increasing professional fees has grown. As a result, some campuses were able to increase local revenues (professional school fee revenue is retained 100% by the campuses); others did not benefit. Another chance to offset state cuts occurred when the state began funding summer instruction. General funds were provided to campuses to reduce summer session fees – keeping campus budgets whole while aligning summer session fees with mandatory system-wide fees. 100% of the income generated during the summer is retained by campuses, again providing a significant financial benefit to older campuses. In 2006, UCOP began giving each campus an enrollment target for undergraduate and graduate non-residents – with the revenue remaining on each campus based on how it was generated. If a campus did not meet its non-resident enrollment target, it essentially received a budget cut; if a campus exceeded its target, it received additional revenue. This effectively reduced the general fund base by decoupling yet another funding stream from general funds. Again, only some campuses were winners. It also set the stage for the current anticipated increase in non-resident undergraduate students on each campus.

That left OP with only one fund source available to address fluctuations in state funding: the educational fee. Here, significant cross subsidization occurs, as campuses with growing enrollments subsidize campuses with slower enrollment growth; earlier, campuses with faster-growing research portfolios were subsidizing campuses with slower-growing research programs.

In short, over time OP has taken a piece-meal approach to decentralizing various fund sources. Each time, the effect was to shift funding from younger, growing campuses to older, more established campuses. Focusing solely on the educational fee does not factor in the flexibility and revenue growth that resulted in decentralizing other funding streams. Further,

campuses are advantaged or disadvantaged by varying UCOP “taxation” rates on different fund sources. For example, under current policy and practice, federal overhead recovery is taxed at 6%; private overhead recovery (depending on when it was generated) is taxed at about 20%; and overhead recovery from clinical trials is not taxed. UC needs to look at the larger picture to develop an allocation strategy that takes into account all major funding streams so that no single fund source bears the fiscal brunt. UC needs a consistently equitable way to treat all revenue streams. The piece-meal approach exacerbates inconsistency; for example, at the same time OP decentralized major revenue streams, it proposed socializing debt service costs for seismically upgrading facilities at two campuses. While this did not occur, after UCPB and others strenuously protested, it is another example of shifting funds from younger, growing campuses to older, more established campuses.

General Funds per Student FTE
(excludes Health Sciences)



UC should ask two basic questions before making any budget adjustment: How much funding does OP need (for system-wide programs, its own operating budget, and to balance funding streams) and how should those costs be covered? What is the basis for determining how much of the total each campus will contribute? Once these two questions are answered, the exact source of funds to contribute could be left up to each campus. Typically, each campus share in UC-wide expenses has been proportional either to enrollment, or to benefits derived, or to base budgets or

ability-to-pay (sometimes adjusted by campus actions already completed). UCPB feels that it is crucial that this determination be made in extensive and transparent system-wide discussions.

OP's core function is to develop UC as a system and to assist each campus in achieving its distinctive vision. This requires cross-subsidization, justified as maximizing quality in the system for the sake of the state of California. But in the course of "piece-meal decentralization" campuses received very unequal amounts of revenue from OP for performing the same activity, while OP continues "taxation" practices that are at best confusing. UC needs an allocation strategy that is transparent, systematic, and develops the system as a whole. The fact is that cross-subsidy is routine and universal in US higher education – indeed it is a cornerstone of academic quality, since basic research in all fields and instruction in many essential fields lose money: the \$85,000 that UC spends per medical student (of which a quarter comes from UC general funds) is merely one example. Furthermore, each UC campus has a number of claims to make about its excellence. UCPB expects that if campus funding is rebalanced correctly, there should be no more grandfathered disproportions anywhere (nor abject underfunding elsewhere). As former UC President Dynes put it in the *Promise & Power of 10 Campus Visits: Final Report*,⁵ the university's quality has come under siege from two fronts: growing competition for top faculty, students, and staff from peer institutions, particularly private universities with large endowments; and a counterproductive temptation to stratify the campuses (and the regions they serve) into "haves" and "have-nots." UCPB reiterates the warning from that report (and many other UC documents) against allowing or encouraging UC stratification, since it would damage UC's reputation irreparably.

2b. Differentials

On this complex background, UCPB opposes funding mechanisms that perpetuate or exacerbate budgetary differentiation or stratification within UC. Instead we call upon UC to recognize above all the system-wide budget priority of funding retirement liabilities and salaries, as Regentally articulated priorities. Here we invoke recent Senate communications, including UCPB's August 2009 *Principles to Guide Fiscal Decision-Making and Planning for the Future of the University of California*⁶ document as endorsed by the Academic Council.

⁵ <http://rdynes.ucsd.edu/files/dynes-power-of-10.pdf>

⁶ http://www.universityofcalifornia.edu/senate/reports/MC2Pitts_Budget%20Principles_082709.pdf

The Academic Council recently communicated its opposition to the notion of charging differential fees for business and engineering majors.⁷ A significant part of the argument against the proposal was the absence of a concrete proposal documenting that the costs were actually higher for these majors and not others; no guarantee that the increased revenues would flow to the units bearing the higher costs as replacement for state revenue; and significant implementation concerns: foremost are diversity, access to interdisciplinary course-work, and students postponing declaring a major to avoid higher fees. UC uses course materials fees, but wages and employee benefits cannot by UC policy be paid from these fees. UC might find that charging fees for specific costs incurred in the delivery of individual courses is a more transparent and a more direct means of covering higher costs associated with some courses. We do not, as a matter of principle, oppose using course materials fees for reimbursing the higher costs of delivering certain courses. Yet UCPB is not aware of a systematic study of differential cost of educational delivery at UC. We remain concerned about unanticipated consequences that could have substantial implications for academic planning. UCPB takes it for granted, *as a precondition*, that before any campus could charge differential fees by major, there would be a rebalancing of campus funding models so that beyond fixed costs, average funding for instruction per student would be the same at each campus.

It follows that UCPB opposes differential fees by campus; proposals for differential fees based on costs will (openly or inadvertently) lead to stratification. It is reasonable to expect that every UC campus will match the highest "differential" every step of the way. UCPB believes that requiring a campus to charge lower tuition than they want to, and than they could (all of the campuses are over-enrolled), would certainly amount to leaving money on the table. UCPB holds that it is highly unlikely that any UC campus would want to charge lower fees than other UC campuses to "attract more students" since every campus sees many more qualified applicants than it can accept. Given the demand for a UC education, no UC campus would willingly charge less than the maximum. Perhaps at some point (far above today's levels) some may be willing to compete on price. As long as UC has very substantial student demand and large budget issues, UCPB does not believe that we are anywhere close to that inflection point. UCPB certainly acknowledges that maintaining equal funding for comparable units across the entire system creates many difficult measurement problems.

⁷ http://www.universityofcalifornia.edu/senate/reports/hp_mgy_differentialfees.pdf

UCPB emphasizes that raising fees – whether on resident or non-resident undergraduate students, or on graduate academic or professional students – always necessitates consideration of the impact on access and affordability. Too often access and affordability policy discussions are oversimplified, as though a simple, inverse, causal effect pivots between access and affordability. What is worse, this view obscures the important question of value: Access to what, affordability of what? Access and affordability cannot be understood in the abstract, but only in relation to the value realized by those who presumably receive access and affordability. If value is reduced in order to keep prices down and provide access, one has to question whether access has been improved or eroded. The same question pertains to the concept of affordable education. Not all access and affordability policies lead to intended consequences: If enrollment (access) is reduced in order to avoid raising tuition (affordability), many UC-eligible students' families will incur considerably greater costs in the form of out-of-state and private college tuitions. In this case, has “affordability” been achieved for the aggregate group of UC-eligible students? If UC defers maintenance and facility renewal are postponed to improve “affordability,” more expensive costs will inevitably accrue to the next generation of students. Does a policy that shifts costs to the next generation truly constitute “affordability”? If enrollment cuts lead to housing vacancies – a very likely prospect on UC campuses that have been expanding housing that will open just as enrollment declines and economic pressures coincide – debt service and other fixed costs will be distributed across fewer residents and fees will have to be raised sharply. Similarly, if fixed costs in any part of the University's operations are redistributed across a smaller enrollment base, net tuition and fees required will increase on a per-FTE basis. Thus, “affordability” and “access” are neither opposites nor synonyms. UCPB warns against treating access and affordability as directly articulated in any way that neglects the pivotal consideration of UC’s core academic quality.

Charging students more if demand is higher and in ways unrelated to costs substantially undercuts UC’s case for public funding, and indeed threatens its very character as a public institution. Given that some campuses are more successful than others at enrolling a diverse student body, spending less per student at the more diverse campuses would be terrible for UC’s public reputation. What is the difference between UC and Stanford that justifies public support for UC, if UC is to charge differential fees according to future income or demand for particular campus/major combinations? (This is the “private good” model that Robert Reich described in his remarks to the Gould Commission.) Moreover, how is the revenue to be spent? Any proposal

to charge higher fees at some campuses, simply because the market will bear it, is a fundamental threat to UC's existence as a single university, with a single standard for excellence, if the revenues are retained by the campus that happens to face greater demand. It will presumably use the differential fee revenues to increase quality, *relative to what other campuses can achieve*.

Any recommendation to adopt differential tuition by campus implies a recommendation that they should not be the same, not simply that campuses have the option of charging less. This would fundamentally change the nature of UC: we would need separate Academic Personnel Manuals for each of the tiers, and different salary scales as well. Students who attend the most diverse campuses would have the least spent on their education. UCPB also notes that differential fees will tend to reinforce certain public perceptions of tiering within UC. If some campuses were to be tagged as "discount" campuses, differential fees would cause their reputations to suffer, making it more difficult for them to recruit excellent faculty and students so as to rise in status and excellence. Potential students would inevitably infer that less is spent on instruction per student at these campuses, and potential faculty members would assume that faculty at these campuses receive lower pay. Such perception might become reality. Any such move would alienate alumni, pit legislative districts against each other, and play students against each other. For all of these reasons, it is questionable whether any campus would ever want to charge less than the others; each campus is already over-enrolled.

A recent experience in English higher education is relevant: after a period in which each university had been required to charge the same low tuition rate, universities were allowed to charge differential fees up to a maximum level. Although this was called a "variable" fee, virtually every university chose to charge the maximum, and plans to continue to charge the maximum even as this level is increased.⁸ UCPB holds that we should continue to see ourselves as one UC, and that it remains our goal for every campus to achieve and maintain academic excellence. It is worth pointing out that the expensive private colleges and universities in the US are indeed not differentiated very much by price, but rather by their yield; institutions that are somewhat less selective will not compete on price, but make a greater effort to recruit and fill their incoming classes.

⁸ "Changing landscapes: future scenarios for variable tuition fees,"
<http://www.universitiesuk.ac.uk/Publications/Pages/ChangingLandscapes.aspx>

A majority of UCPB members sees a worrisome parallel between differential fees and unbridled proposals to rapidly increase the number of non-resident undergraduate students. Significant potential revenues may result from successfully recruiting more international and domestic non-resident students, which would also have the benefit of further enhancing UC's diversity. However, the rate of increase needs to be gauged carefully. Non-residents currently account for only about 4.5% of UC's enrollment. According to the OECD, over 40% of the around 100,000 international students enrolled at American universities in 2007-08 came from just three countries: China (23%), India, and South Korea (both just under 10%). The European presence on US campuses has grown more slowly, but students from Germany, France, and Italy together were still more numerous than students from either India or South Korea. Japanese students in the US are also numerous (6%) but showing much slower average annual growth between 1997 and 2008. UCPB is confident that UC can attract more students from out of state and abroad. However, for historical reasons, some older campuses are better known outside California, and perhaps more likely to attract non-resident students. Given declining state funding, as well as unfunded enrollment of resident students in the system, UCPB supports the 2008-09 Academic Council statement on increasing the number of non-residents.⁹ Until the state funds more resident students, UCPB supports reducing system-wide unfunded enrollments, allowing UC to maintain student numbers at capacity by increasing non-resident enrollments.

One may argue that increasing the number of non-resident students greatly *without* increasing the capacity of UC would displace eligible in-state students. Although the state has not been funding 15,000 students who are currently enrolled, these are eligible and admitted UC students. Raising the number of non-resident undergraduate students also comes with a number of costs, including but not limited to the kinds of services net payers have come to expect at the full sticker price at institutions of higher learning: additional investments in the ESL, freshman composition, and other academic preparedness programs to accommodate a greater number of international students. The allocation of new non-resident tuition revenue may certainly affect campuses' willingness to recruit out-of-state students vigorously. In view of grave system-wide funding needs, UCPB suggests that incremental gains over and above the clearly documented marginal cost of instruction could be pooled to meet UC's looming fiscal obligations. Put

⁹ http://www.universityofcalifornia.edu/senate/reports/MC2Yudof_BOARS%20Non-Resident%20Principles_082109.pdf

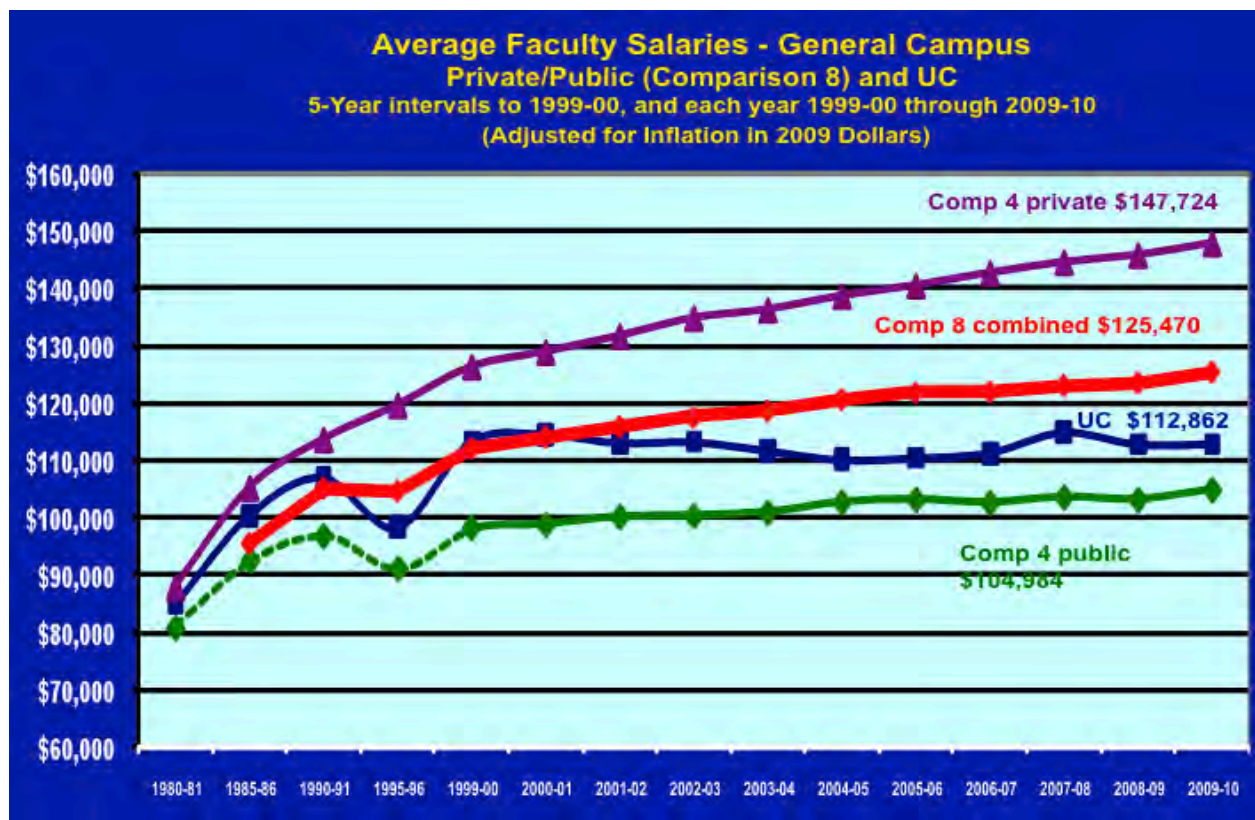
formally, let X denote the total of the state subsidy for in-state undergraduates and their fees. Let Y denote the total paid by non-residents (fees plus tuition). A campus should not admit a non-resident for less than X , but the amount $Y-X$ represents additional revenue that cannot be justified by cost. Campus A could send that non-resident to campus B, and replace him/her with a resident, and experience no change in costs. Hence, any surplus, in the form $Y-X$, represents funding to increase quality at one campus relative to another. Quality differences might thus follow as a direct consequence of different campus percentages of non-residents.

UCPB believes the greatest budgetary challenges to UC are of a system-wide nature, but recognizes that the case for sharing new fee revenues is not always easy to make, although historically all fees have first gone to OP before being disbursed to campuses. It contrasts with the various campus efforts in development, where gifts from donors that result from efforts by that campus, nearly all would agree, should remain on that campus. Providing incentives to campuses, and letting them compete on a level playing field, is the path to excellence. However, our view is that demand by non-residents may not in fact be primarily due to current effort, but to long histories that include differential funding patterns. Yet, every campus has the same Academic Personnel Manual, the same standard for excellence, and the same mission. We remain skeptical about differential fees, by major or campus, but recognize that the issue is more or less before us already, with non-resident tuition.

The pressure to increase revenues will not await the resolution of such issues and the return of fiscal health to the state. Although we warn against differentials, we suggest that UC consider pooling revenues from any differential fees the Regents may nonetheless decide to implement, and redistributing them to support systemwide priorities, including perhaps that share of non-resident tuition which is demonstrably above the marginal cost of instruction (the $Y-X$ portion). A common pool can increase the quality of the whole UC system. Currently, the top two budget priorities of the Academic Senate are funding Year 2 of the Faculty Salaries Plan (or equivalent) and substantially increasing contributions to UCRP. The first item would cost roughly \$100M, and our structural deficit for the coming year for UCRP is on the order of \$2B. The need for increased revenues is vast, relative to even the most optimistic scenarios for revenues from differential fees or non-resident tuition. UCPB recommends that any new revenues proposed for consideration by the Regents be viewed in light of *system-wide* priorities.

TOTAL REMUNERATION

The degree to which UC faculty salaries lag the market varies by rank, discipline, and campus, but uncompetitive salaries are a system-wide issue. As the 2009 UC Total Remuneration Study¹⁰ reveals, UC's benefits do not close the gap. With an anticipated 5% employee contribution to UCRP, UC's pension is not competitive with average retirement benefits at the Comparison 8. Increases in the cost to employees and retirees for UC's health plans exacerbate the situation. It would set up a false choice to frame the issue of total remuneration as one of benefits versus salaries. Maintaining UC's quality is the top priority: the way to preserve excellence is to recruit and retain an excellent faculty, which requires competitive salaries and benefits. Salaries for faculty hired in the past cannot be considered less important than starting salaries for new hires, or retention packages for faculty who currently hold outside offers. It would do a lot for morale if UC could reduce the incentive to repeatedly obtain outside offers. Economic recovery may occur faster elsewhere; UC's quality is at risk already, without any further decline in competitive total remuneration. Action must be taken to improve the competitiveness of faculty salaries on all campuses, restoring the integrity of UC's common salary scales, while preserving benefits.



¹⁰ http://www.universityofcalifornia.edu/news/compensation/total_rem_report_nov2009.pdf

3a. Salaries

The release of the 2009 UC Total Remuneration Study reinforces with empirical detail what is already evident to faculty: UC is not competitive for hires, and retentions increasingly require off-scale packages to even approach salaries at other universities. Moreover, as the Study also makes clear, UC's benefits do not make up the difference, as used to be believed, especially with the onset of UCRP contributions and rising health-care costs.

The four-year Faculty Salaries Plan¹¹ was created to address UC's uncompetitive salaries and salary scales. The number of faculty with off-scale salaries makes these two distinct issues. Even with off-scale increments, average salaries lag the Comparison 8 substantially, but the base salaries corresponding to each step on the salary scales are far more out of step with market salaries. For instance, UC's base salary for Professor IX, a very senior step many faculty do not achieve, is now below the *average* salary for the Professor rank among the Comparison 8. The salary scales provide the foundation for UC's system of peer-review, and are therefore a cornerstone of UC's excellence. By allowing the scales to become obsolete, UC has put at risk the very character of the University. The receipt of a competitive salary must never devolve to a mere political concept, rather than one based on scholarship and merit. In the 25th David Dodds Henry Lecture¹² at UIC Chicago, UC President Emeritus David Gardner explicitly emphasized the "steady and diligent commitment to the concept of UC as a single university operating on ten campuses" including "a single set of personnel policies, salary schedules and policies". Surely we can agree that this is a crucial contributing factor of UC's rise to eminence, and the demise of such scales is undermining that eminence. Deterioration of the scales adversely impacts overall competitiveness of UC faculty salaries, and foments differentials in salary across the campuses.

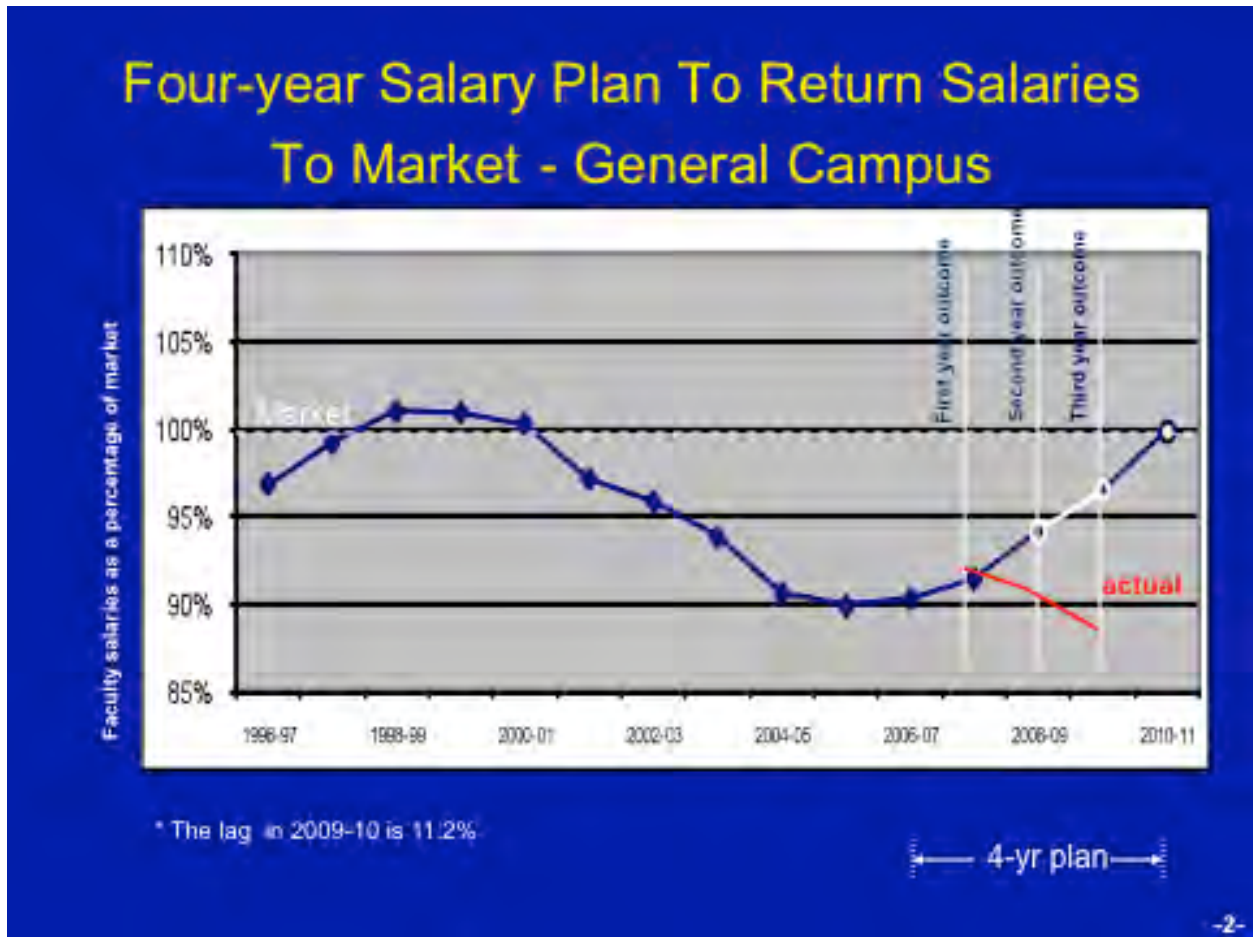
Budget problems halted implementation¹³ after only one year of the Plan, but the Academic Senate continues to believe that the salary issue cannot wait for California's budget problems to disappear. UC competitiveness already declined and continues to do so; UC may be at or past a "tipping point" where it is no longer the employer of first choice, where it fails to recruit top candidates or they do not even apply for UC faculty positions, and where UC begins to lose faculty in greater numbers, especially as conditions improve elsewhere. As a result of

¹¹ <http://www.universityofcalifornia.edu/regents/regmeet/sept07/j1.pdf>

¹² http://www.uic.edu/depts/oa/ddh/25th_DDH.pdf

¹³ http://www.universityofcalifornia.edu/senate/reports/mtb2Yudof_Year%202%20Salary%20Scale%20Funding%20Priorities_Final_070908.pdf

budget problems, faculty find they must do more with less – a hidden but equally devastating consequence of inadequate funding for UC’s excellence. Once this decline becomes evident and once our reputation for excellence is lost, it will take decades to restore.



To receive a competitive salary, faculty must plan on periodically using outside offers to improve compensation. This problem cannot be solved by paying off-scale salaries to new recruits or to anyone with an outside offer – which in turn further undermines loyalty and focus by encouraging recidivist outside offers. Along with the counterproductive incentives that follow, funds for off-scale salaries are largely unfilled FTEs, which erodes UC quality as positions go unfilled in order to address budget shortfalls. Some campuses are better able to draw on unfilled FTEs or other resources than are other campuses, meaning that there is an implicit stratification of UC campuses based on off-scale pay; both the frequency of use and the magnitude of off-scale salaries continue to differ substantially by campus.

Restoration of competitive total remuneration remains the top budgetary priority of the Academic Senate. Resumption of the Faculty Salaries Plan is absolutely critical for preventing further decline in UC's excellence; UC budget proposals should include specific provisions not only for merit increases, which should be explicitly funded, but also provision for resumption of the Faculty Salaries Plan. UCPB explicitly rejects swapping regular UC salary scales for suggestions of increasing dependence on grant-funded compensation for main campus ladder-rank FTE. UC's growing dependence on soft money is worrisome because grants will not always flow, and backstopping grants to vouchsafe salaries is an incalculable potential risk to UC's budget. We thus consider a leveraged approach to FTEs inherently unstable. (See section 4b.) Failed recruitments and increased use of off-scale increments threaten to lead to ad hoc salary plans, as each campus, to the extent it can, tries to circumvent the complete failure of the scales. This is needlessly duplicative and routes money into off-scale salaries that could have been used to hire new faculty. It is imperative for UC's budget to include adequate funding for faculty salaries, and that this funding be provided on a system-wide basis. To do otherwise risks invalidating the notion that we are one UC with ten campuses, a common mission, a common standard for excellence, and a common set of remuneration standards and policies. Every UC campus should be part of the same salary strategy, and salaries should be funded on a common basis throughout the system; it is a system-wide problem that requires system-wide leadership.

3b. Benefits

Implicit in the recent Total Remuneration Study is that all aspects of compensation – salaries, health and welfare benefits, and post-retirement benefits – as well as non-pecuniary job characteristics jointly determine acceptance of an offer from UC. The same applies in retention cases: an outside offer of a higher salary would not be accepted unless other characteristics of work elsewhere dominated those tied to UC, or fell short but by less than the salary difference. A retirement decision also involves a comparison: another year of labor and salary plus benefits for active employees, weighed against pensions, retiree benefits, and the next best use of one's time. This framework is the basis for assuming, when considering only salaries, that anyone recently hired or recently retained has a total salary (base salary plus off-scale) "close to market"; the entire set of attributes was such that they chose UC over the competing option. It also demonstrates an important caveat – a faculty member's salary may not be sufficient to beat an

offer elsewhere on pay alone. All job attributes determine that choice, yet neither salaries nor other attributes associated with holding a faculty position at UC are moving in the right direction.

Non-pecuniary characteristics for faculty – what former Governor Jerry Brown used to call “psychic income” – are real and important, but they also are highly individualized and hard to measure. Does a faculty member’s department provide a stimulating environment? Is support for teaching, service, and research increasing or decreasing? It is safe to say that non-pecuniary characteristics at UC are currently not improving. Departmental environments vary, but declining funding for academic units across UC led to reduced staff support, fewer investments in infrastructure, and more time spent plugging holes in the budget. Moreover, the next-best job for a faculty member is usually not a non-university position in the same location, but a faculty position in another state. While California remains a highly desirable location in many ways, the decline of public spending also suggests that the value associated with working in California is not increasing. Few faculty would say that UC jobs are becoming more attractive. We will not presume to quantify declines in non-pecuniary characteristics.

Given this background, it is necessary to look more closely at benefits. Valuing benefits accurately is tricky; the health benefit is the most straightforward, because it consists mainly of a subsidy from UC to cover most of the cost of either individual or family membership in a health plan. Without this benefit, faculty who want health insurance would have to buy a private plan. They would lose the tax subsidy that comes from purchasing insurance with pre-tax income, they would lose access to group rates, and they would of course lose UC’s contribution. Calculating those differences is straightforward, but the most relevant comparison is not between a UC health plan and a private individual plan (or no insurance), it is with a competitor university. The characteristics of UC’s plans are easy to compare. In general, plans are roughly comparable, and the degree to which UC’s benefit is competitive is driven largely by the employer subsidy. The Total Remuneration Study places UC’s competitiveness at 6% better than comparison employers, across all employees. This is driven by competitive plan characteristics, a higher than average employer subsidy for health plans, and no employee contribution for dental plans. For faculty only, and in comparison with the eight institutions in the *Comparison 8*, the figure is also 6%. To put this in perspective, the market valuation is \$18,777 and the valuation of UC’s benefit is \$19,940, a difference of \$1,163. These are averages across the entire UC faculty population. Age, health status, income, and family situation all play a role in individual valuation of the

health/welfare benefits. However, if all faculty had the average valuation, one interpretation might be that raising salaries by \$1,163 and reducing these benefits to being exactly competitive would leave employees equally well off. There are many problems with that interpretation, notably that the valuation is not necessarily what UC is spending; it isn't necessarily money that can be diverted from benefits to salaries. But this is a useful way to characterize the relative importance of health/welfare benefits, and differences between UC and comparison universities.

What would happen if UC were to cut this benefit? Some ways to cut it lead to decreased use (increasing co-payments, for instance). Decreased use has costs associated with employee health and productivity. If UC simply cut the contribution it makes, that is a pay cut: the same plan then requires increasing employee contribution, decreasing discretionary income as employees pay more without additional benefit. Thus the question whether UC should consider ways to reduce the Retirement Benefit needs to be rephrased as: what would happen if UC offered a less competitive benefit for new hires? Whatever the individual valuation, UC would have to pay higher cash salaries. Over time, the larger the share of cash compensation in total remuneration, the more willing is the faculty member to leave for an outside offer. UC's defined-benefit plan gives employees an incentive to remain at UC to capture most of the benefit, given the formula for pensions that is based on service credit, and age factors that rise from age 50 to 60. It may not create much value for retention of a 35-year-old employee, but the closer to the years in which the pension benefit rises substantially, the more one gives up when leaving.

Apart from employee retention, the pension benefit plays another important role for UC. At or not long after age 60, the present value of the pension accrual begins to decline for most employees. Even with salary increases, the effect of reducing the expected number of years in retirement eventually dominates the combined effects of additional service and salary growth. As a result, both UC faculty and staff retire at earlier ages than elsewhere. The effect is clearer for staff than faculty: they retire at around 60, while faculty tend to work beyond the point where they have maximized their pension benefit, to an average age of around 66. Such a calculation ignores differences among individual faculty; perhaps those who retire earlier have poorer health, and expect fewer years in retirement, or lower productivity, so those who remain in the workforce have higher than average salary increases. Still, the effect is large enough that the "normal cost" of UCRP for faculty is more like 14% than 17%. Working later reduces the pension benefit, and hence, the cost of providing it.

This incentive to retire under a defined-benefit plan helps replenish the faculty on a largely predictable basis. On the other hand, faculty in a defined-contribution plan, perhaps earning a 10% employer contribution along with their own 5% contribution, continue to build retirement wealth as long as they remain in the workforce. There is no decline in their benefit from working too long. This is an option that represents real value to the employee. Evidence of this comes from the fact that comparison universities such as Stanford often must provide incentives to faculty to retire. Stanford has a formal buy-out program and might offer a year's salary to induce retirement. Effectively, the university is compensating the faculty member for the value of an option. At UC, it is not necessary to offer such compensation, since plan design alone does that. Those who contemplate ending or modifying UCRP over concerns that it is too expensive, must keep such "management benefits" in mind. If UC pensions were based on a DC plan, UC would spend more on retention offers throughout faculty careers, or it would lose more faculty to outside offers; and UC would see later retirements, delaying replacement hires.

We recommend that all parts of the university make contributions sufficient to fund normal cost and amortize the unfunded liability. Academic Council endorsed a proposal from the UCFW Task Force on Investment and Retirement (TFIR) to use IOUs or pension-obligation bonds (POBs) to help cover the structural deficit in the retirement plan. UCPB requests that a detailed plan for long-term restoration be provided for review by campus and system-wide Academic Senate committees. This plan should include, but not be limited to, the total dollar value of any POBs to be issued, date of issuance, length of the term, approximate interest rate, taxable or tax exempt status, restart of UC employee contributions, and a more accurate estimate of the dollar value of contributions to be realized from federal contracts and grants relative to the date POBs are to be issued. This detailed plan should be completed and shared as quickly as possible, since further delay exacerbates the problem and could render POBs a less effective remedy. UCPB prefers, if at all possible, for the State to issue the POBs to fund UCRP.

UCPB urges that every campus, and every divisional senate, face the stark fact that these are unprecedented budgetary challenges. UC cannot afford being in denial about the amount of effort and funding it will require just to maintain our current staff and faculty. Just as we identify a false choice between salaries and benefits, it is clearly also a false choice to allow UC to risk losing a lot of our most valuable faculty by cutting benefits without raising salaries.

WORKLOAD ISSUES

Complaints about overflowing lecture halls, uncertain job markets for young researchers, a growing divide between professors and undergraduate students, a faculty teaching overload on the one hand and a knowledge deficit on the students' side are not new. One can find exactly the same complaints voiced a century ago, as they led to higher education reform around 1900. But then as now, research universities had a tripartite mission: preparing future researchers and teaching undergraduates, furthering the state of knowledge, and serving the State through a high-quality higher education system. It is once again a false choice to force UC campuses to accentuate either research or teaching. The unity of teaching and research is a cornerstone of the autonomy of universities since the Enlightenment. With the introduction of laboratories and small-group pedagogy in the undergraduate curriculum in the first half of the 19th century, seminars and small sections grew in relation to large lectures, so as to offer students a first-hand experience. It was well understood that universities could not simply be an extension of secondary school by other means. If high schools teach the facts and skills without which scientific and rational inquiry is impossible, universities prepare students for collecting, comparing, sorting, and testing of information. Only the integration of research and teaching creates the academic community and gives rise to continued research that informs the classroom and vice versa. The most talented students need the chance to participate in intensive research; inversely, the more specialized and narrow the research projects, the more important the acquisition of broad general knowledge in more than one subject area.

4a. Online Education

In contemplating new delivery models in higher education – particularly ones that are not currently proven in secondary education, nor widely accepted in higher education – the core identity of a research university must be kept in mind. One potential attraction of online instruction is that it might make instruction more “efficient”. UCPB believes the usual tradeoffs between saving money and supporting quality also apply to online and face-to-face instruction. The most direct way to save money is to increase the student-faculty ratio (or replace ladder-rank faculty with less expensive instructors). In a 1998 report, the consulting firm Coopers & Lybrand suggested that online technology could eliminate two significant cost factors: the need for bricks and mortar and full-time faculty. Would any savings or efficiencies in online instruction be due

mainly to increasing student-faculty ratios and decreasing proportions of ladder-rank faculty at UC? In 1885, William Rainey Harper (an early pioneer of distance education who went on to become president of the University of Chicago) predicted that the day would come when “work done by correspondence will be greater in amount than that done in the classroom of our academies and colleges”. By 1919, over 70 American universities offered correspondence programs, actively competing with about 300 for-profit correspondence schools. The universities initially promised high-quality courses taught by experienced professors, but spiraling administrative costs soon had them resort to inexperienced and poorly paid instructors. Correspondence programs at UC Berkeley saw dropout rates of 70 to 80 percent. More recently, in 1997 UCLA launched an “Instructional Enhancement Initiative” and started a for-profit subsidiary, the Home Education Network (THEN), headed by a former UCLA vice chancellor. The company subsequently changed its name to OnlineLearning.net, reflecting its abandonment of video-based programs. UCLA soon unwound its contract with THEN due to quality concerns.

– So as to avoid repeating our own institutional history once more, how can we learn from it?

UCPB questions how the research underpinning of our teaching will be delivered online. Would increased online instruction tilt the balance towards teaching and away from research? If the impact were to decrease ladder rank faculty numbers relative to student numbers, then surely the University’s character as a research university would be diminished. A recent meta-analysis by the US Department of Education¹⁴ found benefits in distance learning – not, however, due to any technology used, but only insofar as online learners could spend more time on task than students in the face-to-face condition. How will this redefine faculty workload? The “asynchronous” delivery model for most online courses means that students can access materials and pose questions 24x7, so it is harder for instructors to manage their time devoted to the class. We point to one of the largest and most successful universities for remote and online instruction, the Open University in the UK. Although the Open University has educated hundreds of thousands of students over the past several decades using remote instruction, it is not considered a major research university. To put the question positively, how would increased online instruction strengthen UC’s status as a system of major research universities?

¹⁴ <http://www.ed.gov/rschstat/eval/tech/evidence-based-practices/finalreport.pdf>

UCPB questions how increased use of online instruction would affect access. Are online courses appropriate for preparatory/developmental writing and math courses, high fail-rate introductory courses, and more generally for at-risk populations such as first-generation college students who may lack academic skills and particularly benefit from face-to-face interaction? Is it a given that all of the potential off-campus students will have sufficient access to high-speed Internet connections? UCPB also poses the question of how intellectual property/copyright issues will be addressed; they may prove particularly expensive or time-consuming, offsetting any potential savings as compared to face-to-face instruction while also leading to less effective instruction. The same goes for adequate IT support in online education; the usual trade-offs between saving money and supporting quality apply. California Virtual University was initiated by Governor Wilson to combine the forces of California educational institutions on the delivery of on-line courses. Over 300 colleges and universities were invited to participate, including the University of California campuses. And yet, UC soon decided that this initiative was not in the best interests of the University. This experience is not unique. In the late 1990s, NYU, Temple, and Cornell (among others) set up online subsidiaries - NYUonline, eCornell, Virtual Temple - to tap into the seemingly limitless new market in online learning. Virtual Temple closed its doors in July 2001; four months later, NYUonline shut down, after burning through \$25 million. Following in such wasteful footsteps seems ill-advised. On the other hand, if online education has a less favorable funding model than face-to-face education, UCPB expects that quality will be lower also. Finally, one wonders what it would signal to the Legislature if UC embarked on a plan to educate even more students without additional state funds.

Another assumption behind this late-blooming enthusiasm for online education in UC appears to be budget savings: yet this is arguably wrong. Good course development is costly; UC quality courses need to be updated regularly. Hedonic pricing does not apply here; a house bought a decade ago is comparable with new houses on the market, but a computer bought ten years ago cannot be considered comparable to one bought today. The same goes for courses in higher education, and curricular innovation fed by original research cannot be discounted. For at least a decade, it has been routine for people who wanted to podcast or to stream and archive video of their lectures to do so; yet this has not obviated the need for new lectures. Another implicit assumption seems to be that online environments are fully interactive in a manner equivalent to classroom interactions. Yet UCPB cautions that the modes of interaction developed

for Internet markets are not always apt analogies for higher education. Specifically, higher education is not about peer learning; it is about transformation, which technology alone cannot provide. It should be noted that students at online universities tend to be subsidized by their employers; in exchange, those institutions tailor their training to the needs of the employers whose subsidies they depend on. This kind of training as a product means teaching only what customers want. UC does not deliver higher education according to custom specifications from others. Our students are not customers, and they are not “always right”. The knowledge of students and professors is not equivalent; faculty members read and write expansively, they research, they write and interpret curriculum. They set assignments, moderate, and examine; they study and translate complex ideas into the building blocks of syllabi and lesson plans. Students can perform none of these tasks until they have absorbed scholarly commitments and responsibilities for knowledge.

Self-learning certainly has blossomed in our highly technological era; there has been a shift from presumed authority to attempts at fostering collective credibility. Yet many academic fields are incompatible with this mode of interaction, though it may have proven viable in a just-in-time corporate training mode. Most undergraduate students won't care what you know until they know why you care. How will faculty members gauge levels of preparedness, motivation, and comprehension in teaching before administering tests? It is hard to see how a procrustean pedagogy of “one size fits all” online learning can truly inspire students into a full commitment to knowledge and learning, when we already see backlash against the well-known vicissitudes of PowerPoint and podcasts. Moreover, proposals to deliver a UC education online seem to acknowledge Moore's Law, but not Murphy's Law: anyone who uses computers understands that they will inevitably fail. We need to challenge students to make education a lifelong experience, and to experience a lifelong education. This is neither a one-time acquisition of testing skills, nor is it an efficient mode of retaining just-in-time information. Higher education does not merely engage people digitally – it transforms learners.

4b. Alternative Salary Plans

Related to concerns regarding the implications of shifting UC's hybrid educational delivery towards greater reliance on asynchronous computer networks, UCPB also has concerns about proposals to allow or encourage faculty to buy out teaching obligations with grants, or to charge their core salary to grants, in extending compensation plans similar to medical schools for core campus faculty. Charging salaries to grants in areas where there are substantial teaching commitments that are an integral part of state funding for a faculty line raises the concern that there would be inequities within units that allow this; some faculty may choose to pay for research and graduate student funding over augmenting their own salaries. It is not known what federal agencies would make of the systematic use of grant funds to pay off-scale faculty salaries. Not all disciplines can access contract and grant money for such alternative faculty compensation plans. Teaching loads are already far lower in disciplines that have more grant funding opportunities. Some have suggested that concerns about sustained course buy-outs of faculty time with contract and grant funds could be allayed by assigning all faculty across academic disciplines an equal 5-course (quarter system) or 4-course (semester system) teaching load, and then allowing faculty (in particular in science and engineering) to buy out 1-2 courses per year on contract and grant funds. However, this not only raises additional concerns about equity among faculty, but also concerns about workload overall. A pivotal claim of our research university – namely that UC offers an undergraduate education by world-class researchers – is undermined when those researchers are buying out their classes. It is also undermined by large teaching loads that leave insufficient time for research, or by absorbing research time when shifting support functions to faculty. Moreover, contracts and grants will have to pay substantial contributions to UCRP – indeed both employer and employee contributions for employees whose salaries are funded from grants. Paying additional costs to cover the PI's FTE will add to the crowding out of productive research expenditures, as more and more of the grant is used to backfill UC's retreat from being a top research institution. In addition, grants need to pay higher and higher NRT or in-state fees for graduate students supported. What will be left to purchase equipment, travel, collect data, and actually generate results that keep future grants coming? Academic merit must remain the primary criterion for advancement at UC, and for being paid a competitive salary.

THE TRUE COST OF RESEARCH

According to the 1960 California Master Plan for Education, UC is designated “the State's primary academic research institution”. Research is one of UC’s hallmarks, and one of its greatest benefits to the state. But conducting research costs the University a considerable amount of money. In addition to direct costs of each project, these include real and necessary expenses not attributable to any one project. They include laboratory space and utilities (heating, lighting, water, ventilation), hazardous waste disposal, campus security and fire protection, libraries, radiation safety, occupational safety, disaster preparedness, liability insurance, compliance with rules and laws, and administrative services. Thus Indirect Cost Recovery (ICR) is a topic at the heart of our university: it touches on the general ledger, payroll, space planning, plant assets, debt management, equipment management, research support, environmental health and safety, janitorial services, books, etc. Research comprises about 25% of the UC budget. Each year, UC spends \$5.2 billion on research and recovers about \$700 million in ICR. Though ICR is a considerable source of funding, long-term reductions in state support had deleterious effects on UC's research mission, forcing it to cover from operating funds a growing share of its facilities and administrative costs related to research. In its periodic observation of ICR, the Academic Senate has grown uneasy with the gap between funds available to support research facilities and administration, and actual indirect costs of research. UCPB also notes a simultaneous increase in reliance on ICR funds to support activities that are associated less with research. Thus it is crucial to establish a better understanding of a) how reimbursements for overhead are generated and allocated, and b) the true cost of research at UC.

The impetus for this update and summary of earlier Senate reports on ICR comes from a continuing dissatisfaction among faculty with respect to the opacity of the process by which ICR is generated and distributed, coupled with a sense that research infrastructure is not being supported effectively. The net recovery of indirect costs is well below the actual overall cost of supporting research at UC (see appendix). The lack of transparency in the allocation processes on the campuses is partly due to the fact that every grant is different and places different demands on institutional resources. During 2007-08, the University Committee on Research Policy (UCORP) initiated an ICR investigation recommended by the previous UCORP and approved by the 2006-07 Academic Council. To this end, UCORP agreed with the University Committee on Planning and Budget (UCPB) to create a joint subcommittee.

The 2007-08 joint subcommittee of UCORP and UCPB was unable to complete its report; although ICR funds are categorized according to formula, the data provided were neither comprehensive nor conclusive. After the work of that prior joint subcommittee stalled, annual reports for both committees recommended that ICR be taken up again. The present overview is the result of collaboration between UCORP and UCPB during 2009-10.

5a. Indirect Cost Recovery

UC Core Funds come mainly from the state legislature (State General Fund), educational fees, and the general fund component of indirect cost recovery; the last category comprises reimbursements by research sponsors for expenses known as indirect cost, overhead, or facilities and administrative cost (F&A). Federal research sponsorship obeys rules laid out in the Office of Management and Budget Circular OMB A-21, *Cost Principles for Educational Institutions*.¹⁵ Financial basis for ICR is a set of audited data for nine cost pools in two categories: facilities (buildings and improvements, interest, equipment, operations and maintenance, and library) and administration (general, departmental, sponsored projects, and student services). The latter category is capped: regardless of actual cost, the four administrative pools together cannot collect more than 26 cents of ICR for every dollar of direct grant costs.

After the federal government, universities themselves are the second leading sponsor of research conducted on their campuses, funding a share that equals the combined total of state, industry, foundation, and other non-federal support. Within UC, federal ICR follows a path that varies somewhat on a campus-by-campus basis. In 1990, the state approved legislation authored by Senator John Garamendi, authorizing the use of indirect cost reimbursements for the construction and maintenance of certain research facilities; “Garamendi Funds” service bonds used to build research infrastructure. The remaining funds are distributed according to a formula established by UCOP and the campuses in the 1990's. Approximately 20% of the federal ICR remaining is classified as Off-the-top Funds (OTT), to be used mainly for proposal and financial support services. Another 35% is classified as Opportunity Funds (OF) and the remaining 44% is classified as UC General Funds (referred to in some older documents as Offset to State Support). UCOP retains 6% of some of the funds classified as OTT, OF, and/or UC General Funds. ICR on state grants and contracts follows varied pathways, and in general is assessed at a lower rate than

¹⁵ <http://www.whitehouse.gov/omb/rewrite/circulars/a021/a021.html>

that for federal grants. At the Chancellor, Provost, Dean and Department Chair levels on campus, some ICR is retained for general infrastructure use and some is passed on. Uses of ICR include commonly used infrastructure, services, and equipment; recruitment and retention, especially start-up expenses; cost-sharing and operating costs for multi-disciplinary units; and supporting the research infrastructure with accounting, human and animal review, telephones, and other expenses "unallowable" on direct costs. The history of indirect costs over the past decades has been one of increasing decentralization, with control of these funds delegated from OP to the campuses, and from central campus administration to divisions or departments. How recovery is distributed is a matter not of Federal regulations or accounting, but of campus governance.

It strains other funding sources when UC is unable to recover the true costs of research. This leaves UC with a limited number of unappealing options: refusing to accept research awards that require significant institutional subsidy, deterioration of research facilities as the risk becomes too great to invest institutional funds, a substandard compliance environment if UC cannot afford to pay for mandated compliance costs, and increases in tuition rates to cover costs that have been shifted to the institution. Due to the long-term decline in state contributions, per-student support from State General Funds dropped in real dollars (corrected for inflation) during a time of considerable enrollment growth. At the same time, UC student fees rose, but not enough to close the gap. Because a significant fraction of federal ICR is placed in the UC General Fund pool, some of the increase in UC General Fund spending on a per student basis is attributable to ICR; at the same time, however, the cost for grant administration and research facilities has also continued to grow. In short, ICR funds are increasingly important to the UC budget, and they are increasingly spread thin.

Without transparent accounting throughout UC, it is difficult to evaluate how much ICR funds actually support the research enterprise, or how this number may change over time (in real dollars or as a fraction of ICR). The previous UCORP-UCPB subcommittee set out to test two hypotheses. Given that UC student population has grown considerably in recent years, in times of large reductions in per-student funding provided by the state, one possibility is that some ICR funds are being used to make up for reductions in state support of UC's non-research mission. An alternative interpretation is that ICR is actually insufficient to cover the true F&A costs of research. These hypotheses are not incompatible; the present report will try to clarify as much as is possible with the limited resources of the Academic Senate.

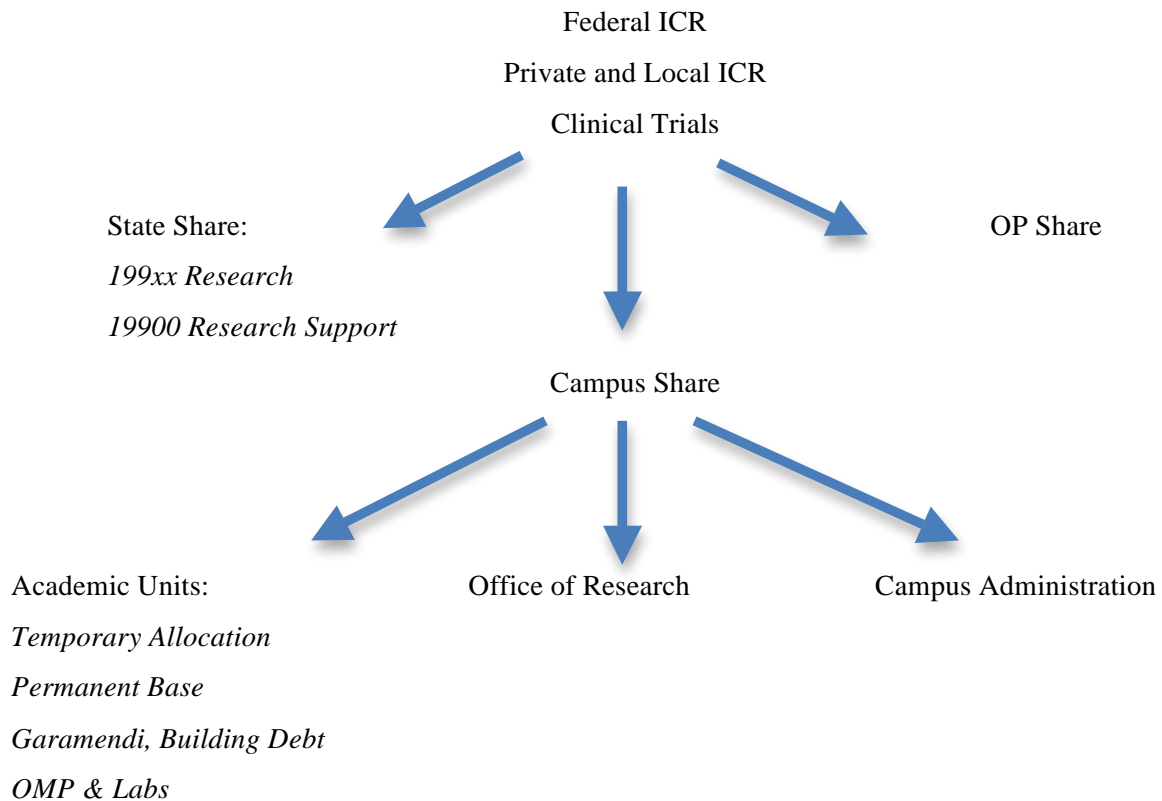
Arguably, the issue is not that ICR accounting is too complex. UC gathers information on ICR in order to enter into periodic negotiations with the federal government, so there is reliable, quantitative information available. The University must also be prepared for financial audit of its research activities at any time. Indeed, every Principal Investigator (with assistance from a team of financial analysts) tracks both direct and indirect research expenditures. Thus it is possible to do so with all of UC's ICR expenditures in the General Fund and Opportunity Fund categories.

Maintaining a high degree of flexibility in the use of ICR funds may have had some short-term benefits, but this policy may place the UC research enterprise at risk over the long term. ICR is reimbursement for costs after they are incurred. Increasing ICR income implies associated increases in costs related to conducting research rather than a net gain in revenue. The university gains flexibility by putting ICR into the General Funds and Opportunity Funds categories, without tracking their use, but using any of these funds for non-research purposes reduces the availability of ICR to support the research for which it was obtained. As prior Academic Senate reports noted, this contributes to the continued deterioration of the environment for conducting research at UC. Moreover, if UC continues to build facilities, then more of any given revenue stream, certainly including ICR, goes to cover debt, which means less ICR can go to support other facilities and administration costs, forcing academic departments to get state funds from their Deans to pay for F&A. Deans do this, for example, by not filling approved and allocated faculty lines so as to redeploy the cash equivalent.

Prior to 1982, UC negotiated and used a single system-wide overhead rate; after that year, rates have developed differently at each UC campus – e.g. in 1985, UCB charged 45.6%, UCD 39%, UCSF 32.6%, etc. – for a UC average of 42.2% (median 43%). By 2002, the average in UC was 50.1% (UCD was at 48.5%, UCB at 51.2%, UCSF at 50.5%). UC campuses currently charge between 50% and 55%. As an example, look at federal cost recovery: Once Garamendi funds are taken off the top, OP splits about 20% by returning 94% to campus and keeping 6% of the 20%. The remaining 80% are split into 55% general funds (i.e. 44% of total) and 45% opportunity funds (i.e. 36% of total). The opportunity funds are again taxed 6% by OP. Each campus gets to keep all of its clinical trial recovery dollars. But with private and local government recovery, a campus receives a base allocation plus an inflation rate; OP keeps an amount set in 1995-1996, when it initiated a policy to distribute all incremental overhead to campuses.

At the school level, take the example of a school that generates, in a given year, \$8m in indirect cost recovery. Of that, \$4.2 come back to campus, \$3.8 go to UCOP and state. UCOP takes \$1.5m, the state takes \$2.3m. The state funds come back as 199xx funds (\$1.5m) and as research-admin 19900 funds (\$800k). Garamendi debt subtracted from the campus allocation is \$45k, leaving a bit more than \$4.1m, minus debt service and leases of \$1.5m. The remaining \$2.65m are divided between school (\$1.3m) and campus (\$1.35m), and the latter share largely benefits startup funds for hires. At first glance, this may look like the school is not getting a lot: but consider that the Garamendi debt, debt service and leasing, the substantial start-up funds for faculty research, and the return of funds to the school (for its own administrative efforts in grants and in labs) in sum amount to \$10.25m, or actually more of a benefit than the school can claim a direct responsibility for in that year. In addition, it is important for all faculty members to understand that the considerable start-up costs and laboratory expenses are amortized only over many years, or even decades, due to low actual recovery rates and due to the fact that mandatory expenses such as building debt and utilities tend to consume the bulk of ICR.

Overhead Recovery Allocation and Distribution



5b. Funding Research Excellence

UC has no legal obligation to spend *indirect cost recovery* dollars on research; they are reimbursements for facilities and administrative expenses. This is one reason why ICR funds are so highly valued: once UCOP takes its share and a campus subtracts Garamendi and Off-the-Top funds, the remaining ICR funds (Opportunity Funds and General Funds) are fungible. Slightly different ICR rates are determined within UC on a per-campus basis, negotiated periodically with representatives of the federal government. Campuses routinely argue for ICR rates that are 10-20% higher than agreed upon by federal representatives. Regulatory compliance and other factors made research increasingly expensive. UC's negotiated federal ICR rate brings UC less overhead than is needed to support the associated research. Actual indirect cost recovery from all research sponsors is closer to 25% than the actual negotiated rates on each campus – a dramatic shortfall, as true costs appear to be in the 65-70% range. This gap applies not only because the net overhead recovery rate is insufficient to cover real facilities and administrative costs; UC also increased support deficits as research programs continue to grow, for even at full recovery rates the actual indirect cost of research is not covered. That remains true even if every penny of ICR were used exclusively in support of research. Long-term reductions in state support made this accumulating deficit larger.

Increasing private research sponsorship is a highly ambiguous response to the problem. UC's comparatively low ICR rate is framed by the assumption that the state provides a sizeable subsidy to its public university, though corporations do not provide that subsidy. Federal ICR rates are a ceiling for private grants and contracts; corporate sponsors negotiate lower overhead rates. Indeed, given the competition for research funding, UC may see itself forced to accept lower overhead rates to stay competitive in a race to the bottom for private sponsorship of research. This negative spiral may explain why an increasing share of UC research support is declared as gift rather than as grant or contract, subject only to flat-tax foundation fees but not to appropriate overhead assessments (5% or 10% rather than around 1/3 of total support granted). If state resources are being diverted from teaching and other campus needs to development offices in the hope of bringing private funds to campus and to manage complex projects, then accepting research sponsorship that covers little or no share of the associated effort in administration, space, equipment, and utilities, will continue to take more resources from the UC budget than it brings in.

As a result of a number of long-standing challenges for public research universities, UC fails to recover an estimated \$600 million of ICR annually. It is not just that federally negotiated overhead rates fall short of the true costs of research. By policy, UC accepts lower rates (called class waivers) from many sponsors (other than for-profits) that have uniform policies of not paying full overhead. UC accepts "Vital Interest" waivers on a case-by-case basis when, in the judgment of the campus Vice Chancellor of Research and the UCOP Office of Research, such a waiver is in the best interests of UC. UC now waives overhead on 18% of federal grants and 72% of foundation grants. Some external agencies see the fact that they do not provide full reimbursement for indirect costs as a form of cost sharing, justified by the view that they are assisting a public university in its research mission.

This report does not depart from conventional wisdom when it suggests that UC a) reconsider its policy for approving class waivers, b) review the "vital interest" waiver policy, and c) stop automatic approval of waiver requests. The same recommendations were made by the Academic Senate in 2003 (Binion to Atkinson, August 7, 2003). That memo also requested that every campus incorporate allowable direct costs of administrative or clerical support and general supplies into proposal budgets, wherever this is not explicitly prohibited or already incorporated into indirect costs billed to sponsors (e.g. the federal government). An important goal would be to achieve an ICR rate equal to or greater than the rates at similar research universities. UC needs to make the strongest case possible to the federal government to raise the cap on the administrative component of ICR; and together with other leading research universities, UC should work with major foundations to request that they provide funding that covers indirect costs, or allow overhead costs to be represented as direct costs of conducting research.

On some campuses, too little ICR money seems to return to PIs to cover their local share of overhead. While the main goal of this report is to foster better understanding of ICR, past Senate reports have recommended tracking ICR on each campus through the accounting system, though nobody has yet figured out how to do that efficiently, and some believe it could do more harm than good. It is clear, though, that administration at both campus and OP levels must continue to improve ICR transparency.

Furthermore, this report is not breaking new ground when it endorses a systematic inquiry into factors that contribute to driving up overhead costs. This is not merely a matter of proliferating environmental health and safety regulations. UC campuses must make a concerted

effort to control expenditures on grant processing and accounting, and to create clarity about space metrics and utilities, especially since it has become clear that ICR is not sufficient to cover these expenditures. If the university cannot recover its indirect costs, it will be forced to cut services and staff, reduce research space, and trim other expenses. The university subsidizes sponsored research to an increasing extent, although fungible sources for doing so are limited.

It is important to note, however, that disciplines rely on foundation grants to different degrees. Should UC require full overhead on all sponsored research and discourage accepting foundation grants that do not cover full indirect cost, it might adversely impact research in social sciences and humanities that rely to a greater extent on foundations rather than on state or federal agencies. Universities have perverse incentives to minimize research expenditures in high-enrollment departments in the humanities and social sciences: the revenue surplus generated there from enrollments can support indirect costs in science, engineering, and medicine only if little of the surplus is absorbed by research in high-enrollment departments themselves.

The difference in ICR rates between UC and its peers and competitors is not a factor of UC's particular research mix. UC's peers have policies and practices that allow them to negotiate higher ICR rates more successfully. They have more permanent staff positions devoted to proposal development and negotiation; a high level of engagement and commitment from senior administrators; an educated and committed faculty; and they conduct careful surveys of space functions used to set a facilities rate. Some competing institutions allow departments to decide whether to waive overhead, and ask departments that do to make up the difference between the actual rate of the award and the Federal overhead rate by using departmental funds. Some competitor institutions have permanent government costing staff devoted to proposal development and negotiation; others supplement their staff by outside consultants.

By way of conclusion, we assert that a good indirect cost recovery model must support the campus research enterprise; direct adequate recovery funds to research infrastructure costs such as research administration, contract & grants accounting, environmental health and safety; acknowledge overhead recovery generated by individual units; provide central funding for existing and new research opportunities and for shared facility and equipment needs; account for all debt and lease costs; and be transparent and easily understood by the campus community.

BEYOND PLAN B

The severe budget cuts on every UC campus are already highly visible to students, faculty, staff, and the public. Campuses project continued reductions in staff and faculty, after several rounds of staff layoffs. Numerous vacant positions have been eliminated, critical hiring deferred. Class sizes are increasing. Reductions in personnel and funding impact crucial support for admissions, financial aid, student health, and purchasing. Some academic minors and majors are slated for elimination, library services are sharply reduced, upkeep on buildings and grounds has been cut back even further. Many campuses are restructuring their IT support and other support services.

In fall 2009, UCPB surveyed its members about preferences among 34 suggested cuts or new revenues, assigning each a numerical weight. Members noted that most of the choices offered for cost cutting or revenue generating were bad in some way. The most acceptable revenue-generating ideas were increasing the number of domestic and international non-resident students, and taxing auxiliaries and medical centers. UCPB also believes UC can increase its fund-raising efforts. The least popular revenue ideas include taxing outside faculty consulting income and raising graduate academic fees. On the cuts side, the top two choices were reducing central campus administration and curbing construction. After the detested furlough, the least popular cost-cutting options were reducing the graduate block and suspending the merit cycle.

Members also underscored that President Yudof has gone on record a number of times about the need to end furloughs, not only for reasons of morale, retention, and UC's reputation, but also due to its rather messy implementation, especially on the faculty side. Apart from a concerted effort on Indirect Cost Recovery (see separate section, above), UCPB requests a comprehensive program of administrative efficiencies on the campuses, a substantial reduction in capital construction, and fewer subsidies from student fees to the most expensive areas of research, where grants and contracts do not come close to covering the true cost. The following sections detail some of the crucial aspects of selected issues.

6a. Summer and Extension

Summer Session and Extension courses have been successful at most UC campuses, and their offerings could be expanded if they bring additional revenues into the system without hollowing out graduate student support. Such initiatives need to be judged against taking away resources from campus instruction, particularly if it is a question of graduate student instructors on campus

(who receive a modest stipend, but also tuition remission and health insurance, if they work as TAs) versus lecturers or temporary instructional staff in extension and summer. In particular, UCPB warns against setting up a structure in Summer or Extension that competes against the core campus instruction, where UC maintains a delicate balance of graduate student support and instructional requirements. It would be a shame to redirect the meager funds away from graduate students and towards expensive administrative overhead, only to replicate with casual labor what a research university integrates successfully into its tripartite mission.

6b. Curb construction, revise metrics

UC decided that it cannot sustain current levels of unfunded enrollments. It follows that capital planning must also switch from auspices of growth to no-growth, though UC Merced is an exception to this general observation. Campuses' overall percentages of CPEC space standards are frequently used as a yardstick of space sufficiency. Yet many types of "non-standard" space, such as ORU space, are not tallied in this metric. There are large disparities among the campuses in the relative quantities of non-standard space, which has effects that are difficult to measure and compare. For example, campuses with generous amounts of ORU space can augment the space available to academic personnel and programs in ways that are not apparent in the numbers. There is no alternative metric to reflect absolute or relative space sufficiency. The point is that both the CPEC "standard" space and the "non-standard" space need to be viewed campus-by-campus, and considered together with a large dose of good judgment. Space sufficiency is hard to gauge without knowing in detail just how each campus manages its assets and leases.

Another problem with using the CPEC space standard is that it includes marginal space such as trailers, modulars (trailers), and inexpensive wood-frame buildings that some campuses constructed to meet immediate needs, though they are inappropriate for long-term needs. These inclusions are counted as "sufficient," although they are actually measures of permanent space insufficiencies. Moreover, there are no ready measures of how much space campuses are leasing off-campus. This would constitute yet another measure of space insufficiency. In addition, space metrics do not reflect the adequacy or inadequacy of campus infrastructure such as roads, utilities, communications, and energy distribution. These have been marginally funded on all growth campuses, since they compete with new capital projects for which the unrelenting priority is to house new programs and new enrollment.

This means turning to long neglected maintenance, and distinguishing the necessary from the desirable. Most "seismic" capital projects are complete building renovations. It is logical to improve many building systems when improving a structure's seismic condition. Yet renovation costs that extend well beyond life safety and building systems renewal might warrant a campus contribution, especially when markedly upgraded finishes are installed in the course of a building renovation. Such a policy might create a cost-control for the seismic renewal program.

UCPB once again points out that the autonomy of campus planning is bounded by the system-wide nature of CPEC and state standards, Regental authority, and Senate authority. In terms of funding capital construction and deferred maintenance, the ability to pay of each campus has several essential components:

- Some campuses are incurring debt-service payments because they addressed unfunded deferred maintenance and/or unfunded space needed for enrollment growth at their own expense. Several UC campuses are incurring annual debt-service expense on investments of \$50-100 million to address these problems. Such investments must be recognized when comparing State funding allocations across the campuses.
- Most campuses are paying for off-campus rentals and on-campus modular (trailer) space. Space sufficiency metrics used by UC must not interpret this as a "satisfied" space need when leased space and modulars represent an unmet space need that should be included in future capital programs.
- Finally, campuses experience substantial disparities in the amount of State funding they receive per enrollment, even after adjusting for health sciences allocations and enrollments, funded on a different basis than other programs.

Any campus, when impacted by many of the factors outlined above, could suffer a remarkable setback in capital planning. A number of disparities in State funding among the campuses have accumulated invisibly and inadvertently, as temporary shortfalls were absorbed into the budget and then became more disparate over time as they compounded over many years. There is currently no metric that reveals these accumulated disparities. Some metrics may mislead; for instance, campus comparisons of endowment should be adjusted to reflect "endowment per student normalized by campus age" (e.g., divided by number of years since campus inception).

Suffice it to say that any performance metric is about stewardship of resources, and thus such metrics are meaningless without reference to the resources available to be managed. Performance metrics only reveal half the picture; the other half requires an objective metric (or set of metrics) that displays the ability to fund the mission. Therefore, UCPB has been recommending that OP adopt as a key proposed metric *net State funds per enrollment* (i.e. net of health sciences, MRUs, and agricultural field stations). Such a metric, "Net State Funding per Budgeted Enrollment," normalized to remove from the numerator State fund allocations to health sciences (different basis, applicable to four general campuses), MRU/MRPIs (which serve a system-wide mission), and Agricultural field stations (historically line-item funded), would also remove health sciences enrollments from the denominator. (For more, see section 2a, above.)

Finally, UCPB recommends the following capital funding concepts that recognize unmet space needs in the UC system. Due to operating budget problems of staggering proportions, UC must shift capital budget priorities in ways that provide ongoing budget relief. UC should assign a capital funding priority in the pursuit of State funds to construct permanent space for all State-funded activities that have been housed in leased space for over three years. UC should assign a similar priority to State-funded activity housed in modular/trailer space for over 5 years. Both of these campus actions are bona fide evidence of unmet need; such temporary solutions by campuses are last resorts that need to be remedied. Failure to address these problems constitutes denial of a space problem that will become an increasing liability. Despite its imperfections, the CPEC system of space standards and sufficiency evaluation provides the basis of some parity and consistency across the State-supported capital program. However, no such framework exists for health sciences space, and it is therefore no surprise that much wider discrepancies exist across the five health sciences campuses. As a matter of policy, new sources of State capital funding targeted at health sciences education and/or health sciences research facilities should initially be prioritized to ensure that facilities meeting minimum standards of quality and sufficiency exist before the funding priority shifts to new facilities on campuses that have no health sciences facilities, or that have existing facilities above the minimum standard.

Some campuses have funded, via gifts, debt, or campus funds, shell space that remains unfinished within otherwise completed buildings. UC should assign a capital priority for State Capital Outlay Program funding to complete shell space that can serve State-supported functions. This would reward campuses that have taken on the investment in shell space; it would relieve

campuses of the cost to complete shell space, thus providing operating budget relief. Again, campus actions in funding shell space are a bona fide indicator of unmet need. Completing shell-space is a very cost-effective way to obtain completed space for State-supported functions.

6c. Growth in Administration outpaced enrollment growth and faculty FTE growth

Given that almost 70% of UC core funds (which constitute 19% of the overall UC budget) go towards salaries and benefits, it is important to consider the size and shape of UC's workforce. As a snapshot of spending priorities, it shows how patterns of spending changed, and potentially allows one to identify opportunities for reducing or rebalancing spending. This issue is not merely for internal purposes – as UC finds itself in a financial crisis where it asks the State to restore funding, legislators and the media will ask how UC is currently spending its money, and whether there is any bloat or unneeded spending. By promoting a clear understanding of this issue, and by rebalancing its spending, UC can make a stronger case for public support.

Using information from the University's Statistical Summary of Students and Staff, we have compared two benchmark years, 1997-1998 and 2008-2009. During this period, student FTEs increased by 33%, from 169,862 to 226,040. The number of ladder-rank faculty FTEs increased by only 25%, from 7,500 to 9,400. In comparison, the number of senior administrators (senior management group, managers and senior professionals) increased by 125%, from 3,651 to 8,230. Put another way, in 1997-1998, there was one senior manager per 47 students and 2.1 faculty, and in 2008-2009, there was one senior manager per 27 students and 1.1 faculty. For comparison, we note that during this period, the number of lecturer FTE increased by 54%, and the number other non-ladder rank faculty FTE increased by 59%.

Clearly, ladder rank faculty numbers have not kept up with student growth, while lecturers and administrative categories far outpaced student growth. Given that ladder rank faculty directly carry all three parts of UC's mission – teaching, research, and public service – their declining proportion raises questions about how well UC is focusing on its core mission. Meanwhile, the rapid rate of growth for senior managers provides ammunition to the University's critics.

The UC Office of Institutional Research (IR) has provided UCPB with more detailed information on these changes. From these data, UCPB has drawn the following conclusions. The growth in senior managers is mainly due to managers and senior professionals (MSPs)—the

number of employees in the senior management group itself (SMG) stayed roughly constant at around 300. Just focusing on non-medical center employees paid from General Funds, the number of MSPs increased by 125%, from 1,200 to 2,700. In constant dollars, expenditures for this group's total earnings increased by 192%. It is unclear what factors have driven the growth in managers and senior professionals. It has been argued that advances in technology require a more technically qualified workforce, but the bulk of the increase was in job titles such as managers (or directors) rather than computer programmers, engineers, or scientists. Another possibility is that professional and support staff (PSS) are continuously reclassified as, or promoted to, MSPs. There is no doubt that this has happened in many cases, but the total number of PSS FTE during this period also increased, by 36%, from 76,400 to 103,800, so there is no evidence for a reduction in PSS, which kept pace with student numbers. Indeed, the only major group of employees that did not keep up with student numbers was ladder rank faculty. It has also been argued that the increase in senior administrators is due to an increased level of research at the University. Indeed, research expenditures increased by 74%, in constant dollars during this period. Although the number of MSPs in the research functional area increased by 286%, from 220 to 850, the bulk of administrative growth was in the institutional support functional area, a 106% increase from 1,160 to 2,390. Furthermore, one might note that even as OP has shrunk, UC has not yet seen a reduction in headcount or budgeting in central campus administration that is commensurate with the budget cuts or the OP re-organization. UCPB is not alone in observing these alarming trends in employment proportions. The unarmored eye can see, from publicly available documents, that significant administrative growth in UC outpaced both student enrollment growth and faculty headcount over the past decade.

The Office of Institutional Research (IR) prepared its own analysis of these data, distributed systemwide in March 2010. It presented different conclusions, highlighting the role of hospitals, auxiliaries, and research as main drivers of employee growth at UC. We do not dispute this point, but reiterate that the number of non-medical center employees in the MSP category, paid from General Funds, increased by 125%, from 1,200 to 2,700, with earnings increased, in constant dollars, by 192%. Far more MSPs were added in the institutional support functional area than in the research area. IR attributes this increase in MSPs to "increased professionalization of the workplace" – but that is simply a redescription of the phenomenon that there are more than twice as many senior managers as there used to be. MSP numbers are not just "up slightly" as

stated in the IR report. Finally, after aggregating ladder rank faculty with lecturers and instructors, the IR report states that “Growth in all faculty FTE has kept pace with growth in student enrollments.” However, we note again that student numbers increased by 33% while ladder rank faculty increased by 25%. Essentially, UC added 56,178 students but only 1,900 ladder-rank faculty members – a marginal student-faculty ratio of 30:1. In sum, UCPB’s concern about the IR report is not about the data, but about what was omitted from the conclusions.

UC has measures for administrative performance in place; however, it also has created incentives for bureaucratic proliferation (above all, the fact that people are promoted based on how many people report to them, a corollary of Parkinson’s Law). UC should centralize specialists, and decentralize generalists. Position descriptions should be limited to one page. Administrative efficiencies can be gained if UC develops more risk tolerance; more accountability does not equal greater control. An example is the approval process required for transactions: requiring more than two approvals reduce control. UC must recognize excessive staff training as symptomatic of overly complex systems. Efficiencies cannot simply be mandated (this may in fact create very inefficient and mismatched responses in the system), but ought to be steered directly by the budget. “Best practices” are not always what is desirable, as long as “good enough” practices save time and money without incurring undue exposure to risk or lag-times. Several campuses have successfully implemented methodical approaches to administrative efficiency long before the Monitor Group recommended the same to the Regents and Berkeley hired Bain Consulting. UC has existing know-how that can be shared. The list of continuous quality improvements at UC is extensive, including a number of streamlined processes that have been cited nationally. Many of these projects are shared endeavors between two or more campuses; to undervalue such initiatives would be a costly mistake.

Therefore, UC must not fall for a false choice between decentralization and centralization. Some may believe there are redundancies or unexploited economies of scale; others might argue that campuses need a range of locally specific practices. But neither centralized nor decentralized service delivery is inherently more efficient. Central and shared services are plausible where there are few variations in what is required at the point of service, and if they can self-fund by recovering any required up front investments through project savings. But large-scale systems can also quickly become costly, complex, and even unstable if there are too many rules (and exceptions) that interrupt and vary the work flow. Certain

standardized corporate administrative processes might diminish the quality of support, while others might improve it. UC decisions are based on principles of shared governance, and the culture of decentralized autonomy is woven into the administrative fabric of each campus. Differences add and compound over time. What is needed system-wide is an efficient, economical, simple, non-bureaucratic, and predictable level of services that does not divert UC from the core functions of teaching and research.

6d. UC Merced

We hasten to add that the Senate continues to endorse Merced as the 10th campus, and no recommendations regarding construction, hiring, or admissions in this report should be construed as harmful to UC Merced. Clearly, UC Merced needs more buildings, faculty, and students. It faces underfunding at levels that may seriously compromise its ability to develop UC-quality research and academic programs. UCPB and the Academic Council described these challenges in previous memos (e.g. July 2008 letter to the President). UC Merced was created to allow UC to keep up with California population growth, and to extend the benefits of a UC campus to the most economically underserved and most rapidly growing region in the state. Housing is a substantial cost for low-income students obtaining a UC education; Merced offers a location with a low cost-of-living, accessible to several of the largest Central Valley cities. The success of this strategy is evident in the rapid growth in student applications and enrollment at UC Merced, along with its very large fraction of underrepresented and first-generation college students. But UC Merced is the only campus with a funded student population well below the size needed to be self-sustainable (estimated to be about 8,000-10,000 students).

There are three near-term budget issues that threaten the establishment of UC-quality programs at UC Merced. First, the number of permanently state-funded student lines needs to be increased to match student growth. Enrollment will be over 4,000 in Fall 2010, with only 2,000 permanently funded. This discrepancy hampers the ability to make meaningful strategic plans, and campus leadership devotes a lot of time every year arguing for a campus budget. For a while, UC Merced had a line item in the state budget to offset the lack of state-funded enrollment, but that line item has shrunk to \$5M, well below the cost of the unfunded enrollment. A related issue is the rapidly deteriorating ratio of students to ladder-rank faculty. Although this is a system-wide problem, UC Merced is on track to have not only the worst student/ladder-rank faculty ratio

in the system, but the worst in UC history. Under a currently proposed 3-year plan, UC Merced would admit more than 2,000 new students, but hire only 50 faculty members, pushing the student-faculty ratio towards 40-to-1. On a small campus, such a high student-faculty ratio has a particularly deleterious impact, since it means that few specialized classes can be offered, and the overall student experience becomes incommensurate with UC-quality academic programs. Third, although funding for buildings and infrastructure is needed on all campuses, Merced simply does not have the classroom, office, and laboratory space to accommodate the growth needed to reach the current 3-year target at anything like the level needed for UC-quality programs. Merced is presently slated to receive only 5% of the system's state-funded capital budget for the next several years, which is both inadequate to support the proposed growth, and an inappropriate level of capital investment for a new campus.

Along with the workload, remuneration, research, enrollment, and capital planning issues discussed in this report, there are a number of other budget-related issues that may have more extreme effects at UC Merced than other campuses. Above all, any changes to post-employment benefits that diminish benefits to newer employees will particularly affect UC Merced, which has a disproportionate fraction of junior faculty (about 60%), and senior faculty who are mostly new to the UC system.

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