

Disaggregating the Costs of Academic Missions at the University of California

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The primary purpose of this paper is to show how one may separate the cost to provide undergraduate education at the University of California from the cost of providing its other core missions, research and graduate education and public service. By “cost” we mean the expenditure of Core Funds, which are state appropriations and mandatory student fees and tuition. The calculation is built upon familiar Activity-Based Costing (ABC) methodology, which has not been employed in past studies of education costing at UC or at other research universities in this country.

This study is most relevant to recent reporting requirements (AB 94) that the California Legislature has placed upon this University’s administration. Results reported here are,

Disaggregated UC expenditures of Core Funds for the fiscal year 2014-15

- Undergraduate Education: \$1,512 Million; average \$ 7,560 per student
- Graduate Academic Education: \$ 454 Million; average \$12,854 per student
- Research Activity (unsponsored): \$2,224 Million

The latest official report from UC Office of the President (UCOP) gives these numbers,

Expenditures for Instruction on a Narrow Definition / on a Broad Definition

- Undergraduate Students: \$16,387 / \$24,200 per student
- Graduate Students (GC): \$27,900 / \$42,100 per student

The huge discrepancy - *UCOP’s numbers are double or triple mine* - is due to the fact that they include all of the expenditures for unsponsored Research Activity within the definition of Instruction. That trick of accounting (termed Departmental Research) is endemic throughout the higher education community; and it has major implications for public policy. When will responsible leaders acknowledge that error and fix it?

Wrote Thomas Jefferson in 1820, a year after founding the University of Virginia,
“This institution will be based on the illimitable freedom of the human mind. For here we are not afraid to follow the truth wherever it may lead, nor to tolerate any error so long as reason is left free to combat it.”

from an opinion piece in the Boston Globe, October 2, 2016

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I. Introduction to UC Finances

The University of California (UC) is engaged in many activities, with an annual operating budget of around \$27 Billion, funded by a variety of sources. Table 1, below, displays a standard breakdown of UC's Operating Expenses by Function.

Table 1. UC Operating Expenses by Function for FY 2015 (in \$Millions)

<u>Uniform Classification Category</u>	<u>Nominal Exp's</u>	<u>Actual Exp's</u>
Instruction (I)	5,918	5,902
Research (R)	4,220	4,311
Public Service (PS)	561	559
Academic Support (AS) & Libraries	1,919	2,056
Student Services (SS)	983	985
Institutional Support (IS)	2,216	1,385
Operation and Maintenance of Plant (OMP)	573	591
Student Financial Aid (SFA)	553	553
Medical Centers (MC)	7,727	8,082
Auxiliary Enterprises (AE)	1,159	1,169
Depreciation and Amortization (DA)	1,661	
Department of Energy Laboratories (DOE)	<u>1,228</u>	<u>1,228</u>
Total	28,718	26,821

Notes to Table 1. The Nominal Expenditures can be found in the UC Annual Financial Report 2014-15, page 10, under "Operating Expenses by Function." The Actual Expenditures can be found in the UC Campus Financial Schedules (CFS) 2014-15, Schedule 12-H. All of those official accounting reports are available at <http://www.ucop.edu/financial-accounting/financial-reports/index.html> The second set of data differ by not adding the "Retiree Health Benefit and Pension Accrual," which are not real expenditures but a required bookkeeping of future obligations (totaling \$888 Million), and by not subtracting the "Expense Capitalized" items (totaling \$645 Million), which cover a large portion of the Depreciation and Amortization amount seen in the first column; the SFA number here has the Scholarship Allowance subtracted.

The large discrepancy (\$831 Million) seen between the two columns for Institutional Support is mostly due to a transfer of funds from STIP as a loan to UCRP and need not concern us here.

The first question we want to address is: How well (or poorly) does the classification scheme shown in Table 1 give the expenditures in terms of familiar missions of the University - Teaching, Research, and Service - and its several clienteles? The question, "Who pays for what?" will come later; we are especially interested in getting down to details about student fees and state appropriations.

Some items seen in Table 1 really mean what they say, in a fully exclusive way (financially speaking). Thus, the DOE laboratories are fully funded by the U.S. Department of Energy to perform certain functions and all that money is spent for the laboratories. One may note that there is substantial interaction between Lawrence Berkeley National Laboratory and the UC Berkeley campus: some 200 UCB faculty members hold joint appointments at the lab and many of their graduate students also work on the lab payroll. This "synergy" is beneficial to both the lab and the campus; but there is no question about their distinctly separate financial accounts.

Another clean example is the Auxiliary Enterprises: dormitories, dining halls, parking lots, etc. on each of UC's ten campuses. These are described as "self-supporting" since they are paid for by fees charged directly to the individuals who use those facilities. (There are some debates about the finances of Intercollegiate Athletics, which comes under this category; but I will not pursue that issue here.)

The Medical Centers (sometimes called Teaching Hospitals) are also described as self-supporting business enterprises, although there is substantial flow of personnel and funds between the hospitals and clinics and the Medical Schools on the campuses. It is customary for the official UC budget to have distinct sections about Health Sciences (HS) Instruction and General Campus (GC) Instruction.

From the latest UC Budget documents, we find further data for 2014-15:

Student Enrollments (FTE) for all of UC were: GC Undergraduates =199,995; GC Graduate Students = 35,341; HS = 14,451; Total = 249,787.

Average Annual Student Charges for Resident Undergraduates: \$12,192 for Tuition and Student Services Fee; \$1,125 average Campus-Based Fees. Total = \$13,317.

Core Funds were from: State General Funds \$2,797 Million, UC General Funds \$1,072 Million, Tuition \$2,679 Million, Student Services Fees \$226 Million, Professional Degree Supplemental Tuition \$261 Million. Total = \$7,035 Million.

The category of Research expenditures, shown in Table 1, covers work sponsored by external agencies and some internal budget funds dedicated for specific research projects; 83% of those funds are Restricted, meaning that they cannot legally be used for purposes other than originally intended.

It turns out that the most complex category is Instruction; and so I start by taking this apart into several specific sub-categories. To do this, I rely on the extensive set of accounting reports called “UC Campus Financial Schedules” (CFS), which may be found at <http://www.ucop.edu/financial-accounting/financial-reports/index.html>. This shows us expenditures, campus by campus, and even department by department, where each of the categories shown in Table 1 is broken down into further details. Those tables separate the expenditures of Current Funds as coming from “General Funds”, “Designated Funds” or “Restricted Funds”; and this lets us focus on the allocation of Core Funds, i.e., state appropriations plus student tuition and fees.

II. Review of the Methodology

That expenditure category called “Instruction” contains several things that one would want to separate out if the object of your study were to find out how much the institution actually spends for undergraduate instruction. It includes all salaries and benefits paid out to all regular faculty members throughout the academic year, plus the cost of supporting staff in the academic departments. This bundle of costs used to be called the I&R (for “Instruction & Research”) budget. This accounting category called “Instruction” even includes an enormous amount of money taken in by the clinical practice of medicine and paid out to the faculty at the Medical Schools. So, our first step will be to put aside all the expenditures for all the Health Sciences (which do involve graduate student programs, but not undergraduate programs); and then we also put aside the largest of the other graduate Professional Schools – those in Law and Business/Management.

This leaves us with the wide array of academic departments that have both undergraduate programs and graduate programs. But there is still one major problem: the accounting habits of research universities obscure the fact that professors are hired to perform research as well as teaching and simply record the totality of their academic year salaries as expenditures for “Instruction.” (The phrase “Departmental Research” is used to cover that deceptive practice.)

My approach, following the classical method called Activity-Based Costing (ABC), relies on a Faculty Time-Use Survey conducted by UC a number of years ago. As described in detail in my previous papers, that analysis leads to the result that 21% of professors’ work time, on average, may be fairly allocated to the mission of undergraduate instruction; the rest is apportioned to research, graduate instruction, and some professional service activities (which are mostly tied to the research endeavor.)

In what follows, I will first dissect the expenditures for Instruction (to get the direct cost of undergraduate instruction), then dissect the category Academic Support and add in Student Services as supporting costs for undergraduate education; and then finally I add in overhead costs from IS and OMP. For more details on these calculational procedures, see my earlier papers posted at <http://ocf.berkeley.edu/~schwartz/TopicCost.html>

III. The Updated Calculation

Instruction. The total UC expenditure for Instruction, in fiscal year 2014-15, is \$5,902 Million. From this I subtract: \$336 Million for University Extension and Summer Session; \$2,536 Million for Health Sciences; \$358 Million for Schools of Law and Business/Management; and \$158 Million for other expenditures of Restricted funds. This leaves us with an Adjusted Cost for Instruction of \$2,514 Million.

To get the Undergraduate Instruction part of this we first separate out the amounts spent on Lecturers (2040 FTE @\$75,000, 81% for undergraduates) and Graduate Student Instructors (\$226 Million, 87% for undergraduates). I also want to subtract an estimated \$74 Million for new faculty start-up funds, which are counted as Departmental Research. The remainder is then multiplied by the factor 0.21 and we arrive at,

- Direct Cost of Undergraduate Instruction = \$ 754 Million.
- Residual Adjusted Cost for Instruction = \$1,760 Million.

Academic Support. Expenditures for Academic Support: Libraries (\$288 Million - \$33 Million Restricted); Other Academic Support (\$1,768 Million - \$1,105 Million for Health Sciences, \$61 Million for Law and Business, \$58 Million for Patent Royalty Payments, \$25 Million for University Press and \$34 Million Restricted = Adjusted \$485 Million). Allotting $\frac{1}{2}$ of the former and $\frac{1}{4}$ of the latter to undergraduates,

- Academic Support for Undergraduate Instruction = \$249 Million.
- Residual Adjusted Academic Support = \$491 Million.

Student Services. From the total expenditure for Student Services (\$985 Million), I subtract the \$356 Million spent for Student Health Services (paid for by other fees) and another \$39 Million of Restricted funds. I will also subtract \$200 Million in Campus-Based Fees, which are not part of the Core Funds.

- Adjusted expenditure for Student Services = \$390 Million.

Overhead. Total expenditures for Institutional Support plus Operation and Maintenance of Plant amount to \$1,385 Million + \$591 Million = \$1,976 Million. If I spread this cost evenly over all UC expenditures, with the exclusion of the DOE Laboratories and the Medical Centers (26821 - 1228 - 8082 = 17511), I get an effective overhead rate of $1976/17511 = 11.3\%$.

To this I can add the capital cost, estimated from the reported amount of Depreciation and Amortization, \$1,661 Million, less the amount already counted by keeping in Expense Capitalized, \$645 Million. I should also subtract the amount attributable to the Medical Centers, \$292 Million. If I allocate this additional cost uniformly, as done for IS, it amounts to another 4.1% overhead.

- Combining these, I get an estimated overhead cost rate of 15%.

IV. Final Numerical Cost Results for FY 2014-15

Adding the contributions from Instruction, Academic Support and Student Services (80% for undergraduates), then adding 15% of that sum for overhead, I arrive at,

- Total Annual UC Expenditure for Undergraduate Education = \$ 1,512 Million, accounting for 21.5% of Core Funds (average \$7,560 per student)

In addition, I identify the residual portions of the costs from the I&R bundle (excluding the Health Sciences and Law and Business). That represents the total UC cost for faculty research (unsponsored) plus graduate student programs that are closely tied to that research mission.

- Total Annual UC Expenditure for Faculty Research (unsponsored) plus related Graduate Programs = \$ 2,678 Million, accounting for 38% of Core Funds.

We can compare these results to those given in the latest official UC report on Expenditures for Instruction: http://www.ucop.edu/operating-budget/files/legreports/16-17/10-01-16_EFILegRpt.pdf. Their basic assumption is that the per-student expenditures for graduate students should be 1.7 times that for undergraduate students. Their results for the expenditure of Core Funds in the GC sector, for 2014-15, are:

Per-Student Expenditures calculated on a Narrow Definition / on a Broad Definition	
Undergraduate Students	\$16,387 / \$24,200
Graduate Students	\$27,900 / \$42,100

Those undergraduate costs are so much greater than mine - double or triple in size - because they include all of the expenditures for Research Activities (Departmental Research) within the expenditures for instruction. That cloaking is an old habit that is not unique to UC; it is promulgated by the National Association of College and University Business Officers and is followed by the entire higher education community.

My calculations, as discussed in Appendix A, cannot reliably provide a separate expenditure for graduate students. But, if such a number is desired, I can augment this methodology as follows. Take the undergraduate result shown above, \$7,560, multiply it by 1.7 and get:

- Per-Student Expenditure for Academic Graduate Students = \$12,852

Then, multiplying this by the total graduate (GC) enrollment, the total expenditure figure for Academic Graduate Education is \$454 Million; and subtracting this from my combined total given above, we have,

- Expenditure for (unsponsored) Faculty Research Activity = \$2,224 Million

If we combine my resulting cost components and add in the costs noted earlier for Law Schools and Business Schools (with appropriate overhead), we come to a total GC cost of \$4,762 Million, which accounts for 68% of all Core Funds for 2014-15. Another 15% of Core Funds goes to Student Financial Aid; and, according to earlier calculations of mine, 12% may be allocated to the Health Sciences and a final 5% to Research and Public Service activities.

In summary my Methodology, as augmented above, provides the most reliable results for the top line requirements of AB 94, which will be discussed next.

V. AB 94 Reporting Requirements

In a budget trailer bill (AB 94) approved July 2013, the California Legislature required the University of California to report the separated costs of “undergraduate education, graduate academic education, graduate professional education, and research activities.” UC’s Director of the Budget reported to The Regents that same month that this report would be concerned with the expenditure of “core funds”, which they define as state appropriations plus student tuition and fees.

It had been the practice of this University, along with all other research universities, to bundle all those academic mission costs together and issue a statement of the total, which they call “The Cost of Education.” For the fiscal year 2011-12 UCOP said that this cost amounts to \$17,390 per student; and they describe this as being covered to the extent of 49% by student fees and tuition.

In November 2013, the Chair of the Academic Council, who sits as the Faculty Representative at The Regents, gave a passionate speech to the Board in which he decried this new legislative requirement as excessive accountability, claiming that in his experience as a Professor, there was no way to separate work into components of Teaching, Research, and Service.

When the UC President’s Office filed their first official response to AB 94, a Preliminary Report dated November 1, 2014, they said that they were not able to separate the costs as requested, and they gave their traditional result for the whole bundle of academic expenditures from core funds (excluding the Health Sciences) as \$19,858 per student in 2012-13. They filed a Final Report on February 17, 2015, in which they managed to concoct a formula for separating the result previously given into “undergraduate education” and “graduate education” components; but that still had all of the “research activity” cost buried inside those numbers.

Although I had no official standing to respond to AB 94, I did perform my own calculation, using the methodology described in this paper, with the following results:

Table 2. UC’s Expenditure of Core Funds for 2013-14

\$1.45 Billion for Undergraduate Education (average = \$7,500 per student);
\$2.77 Billion for Research Activity and related Graduate Academic Programs;

\$1.25 Billion for Research and Graduate Programs in the Professional Schools (including the Health Sciences);
and I presented these results at a hearing by the Assembly Budget Committee.

VI. Conclusion

The sharpest issue brought forward by this calculation is the comparison of UC's actual expenditure for undergraduate education - average \$7,560 per student - with the University's mandatory tuition and fees for resident undergraduate students, excluding Campus-Based Fees - \$12,192 per student. In terms of total University revenues and expenditures of Core Funds (net of financial aid), the numbers are

\$1,624 Million (net) collected from undergraduate students
\$1,512 Million spent for undergraduate education

Undergraduate payments not only cover 100% of the cost for UC to provide undergraduate education, they are also being used to subsidize the research and graduate education programs. That is not illegal (private research universities have always done that); but the fact of this subsidy should not be hidden from public view through old bad habits in our accounting practices. That can and should be fixed.

To fix that will require some enlightened leadership, because that bad old accounting habit - counting all of Departmental Research as part of the expenditure for undergraduate Instruction - is found not just at the University of California but is entrenched throughout the entire higher education establishment.

Janet Napolitano, President of the University of California, wrote the following in an opinion piece published by the Boston Globe, October 2, 2016.

Wrote Thomas Jefferson in 1820, a year after founding the University of Virginia,
"This institution will be based on the illimitable freedom of the human mind. For here we are not afraid to follow the truth wherever it may lead, nor to tolerate any error so long as reason is left free to combat it."

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UC Vice Presidents Nathan Brostrom (Chief Financial Officer), Pamela Brown (Institutional Research) and David Alcocer (Director of the Budget) met with me on October 10 and provided a number of constructive critiques in response to earlier versions of this paper that I had sent to them. William Chinowsky, an old friend in physics, gave wise advice in finishing this paper.

Appendix A. Uncertainties and Limitations of these Calculations

The most critical factor in this calculation is the number 21%, which is the average fraction of work time that regular rank faculty at the University of California (excluding

those in the Health Sciences) spend on undergraduate instruction. This comes from data in the 1983-84 Faculty Time-Use Survey conducted by the University; and, elsewhere, I have presented further information supporting the claim that this data is accurate today. The most questionable part of the analysis leading to the 21% factor is how faculty instructional work time is divided between undergraduate and graduate courses. The original data give this division of time (1/2, 1/2) only for the "In-Class" hours, counting both regularly scheduled courses and independent study. But those instructional activities account for only 7.6 hours-per-week out of the total 26.0 hours-per-week that are spent on all instructional activities. The largest component of instructional work time, 10.1 hours-per-week, comes from Course Preparation. How is that, on average, divided between undergraduate courses and graduate courses? There is no objective data to answer that question. I can make arguments on either side of this question, which only leads me to suggest that the correct answer is probably close to the (1/2, 1/2) allocation. What I can say is that the time a professor will spend on Course Preparation depends mightily on whether they are teaching that course for the first time or as a repeat assignment; but all we need here is the average over all professors.

There is one other line of analysis that I have come across that may be used to answer this question. A few years ago there was a special commission formed by the UC administration and the Academic Senate charged to develop a New Methodology for measuring Faculty Instructional Activities. They came up with a model and some new data that leads to a different apportionment for the instructional activities of regular rank faculty: 3/8 for undergraduate courses, 5/8 for graduate courses. If one accepts this, then the 21% figure used in the calculations above should be replaced by 16% and this would lead us to the resulting Direct Cost for Undergraduate Instruction at \$651 Million (instead of \$754 Million) and the total cost for undergraduate education becomes \$6,970 per student (instead of \$7,560). This is a bit of "elasticity analysis", showing how much the final output numbers change when one varies a critical input number. [Note: the ratio of those two proportions, (5/8)/(3/8), is exactly the factor 1.7 noted earlier.]

One might think that this set of data should allow me to separate the cost of Graduate Instruction from the cost of Research Activity by the faculty. Speaking technically, I find this idea untrustworthy because of certain ambiguities that are found in the specific way that the Faculty Time-Use Survey was conducted. In fact, based upon my own life experience, I cannot imagine how one could make such a separation meaningful in the case of graduate students in the PhD programs of the University. Thus, I prefer to leave those two categories of cost lumped together; and, as discussed in a later section, this makes sense from the viewpoint of rational accountability.

Appendix B. Arguments, Against and For, this Methodology (ABC)

The claim that faculty cannot separate their work in teaching, research and service is refuted with several facts. (a) Professors are expected to fill out a form, the Annual Supplement to the Bio-Bibliography, in which they report their various academic

activities for the past year: Teaching is detailed, Research is detailed; Service (of several kinds) is detailed. (b) The formal policies for appointment and promotion of UC faculty members give detailed description of what is expected in each of the four categories of work; and it says explicitly that these are evaluated separately. (c) The Faculty Time-Use Survey, upon which my ABC methodology depends, was designed with faculty input and apparently had no trouble getting faculty members to count and report their work time in many distinct sub-categories.

Actually, some colleagues have expressed a more candid reason why they do not want these costs to be disaggregated: “If we have to admit how expensive it is to support our research work, they will not pay for it; undergraduate instruction is what they are generally in favor of supporting.”

What about that charge of excessive accountability coming from government officials? Yes, it can be overdone; that is often called “micro-management”, and it can seriously intrude on the necessary independence of the University from political meddling into academic affairs. But there are some basic ideas that should let reasonable people set a minimum for accountability, especially when it is asking about how money, entrusted to the University, is spent. I propose that each major group providing external resources to the University should get a fair accounting of how its money has been allocated. That idea is well established for the Federal Government, that provides a lot of money for sponsored research and also a lot of money for Medicare services (and each of those funds are carefully separated and tracked in the University’s financial accounting system).

What about state funding, looking at the old I&R budget? That used to be treated as one big bundle and, as mentioned above, it was UC’s habit not to try to separate those expenditures by Teaching vs Research or by undergraduate vs graduate instruction. One could say that, in those good old days, all of UC’s teaching and research endeavors were seen as “public goods” and supported by public money. But since the early 1990s there has been a major change: big decreases in state funding leading to big increases in tuition and fees charged to students. There was a nice philosophical argument made to justify this cost shifting: higher education was, at least in part, a “private good” since students would go on to higher paying careers and therefore they should bear, at least partially, the cost of that education.

One often hears the opinion that state legislators, looking to spend fewer taxpayer dollars, find it easy to cut funding for higher education saying that the cost can be pushed onto students, paying higher tuition for the “private benefits” they get. But then, it is foolish to hide the cost of core academic research under the rubric of “the cost of education”, since that will only make it easier for legislators to cut even more of that funding. It certainly seems wiser to maintain the claim of “public good” for the research (and public service) missions and ask the state to pay for it generously, recognizing the broad public benefits that come from academic research.

The present situation, where revenues from student fees and tuition at UC are about equal to (or perhaps even a bit larger than) state appropriations, leads to the very strong claim that undergraduate students - as a major class of funders - deserve a fair accounting of how their payments are used. This is what my Methodology provides.

What about graduate students? Those in the “academic sector” (mostly PhD programs throughout UC) are in quite a different financial situation. A few of them receive fellowships that pay all of their tuition and fees plus a living stipend, while the majority of them are hired to work as Teaching Assistants (GSIs) or Research Assistants (GSRs) and thus receive, as a matter of policy, full waivers of all tuition and fee charges. My Methodology gives the combined expenditure of core funds for faculty research (“Departmental Research” in the accounting lexicon) and the cost in faculty time and effort spent working with graduate students in class or in the mutually involved research endeavors. Based upon my own career experience (and, I feel sure, in agreement with most all of my faculty colleagues) I do not believe there is any rational way to separate those two activities with graduate students in the PhD programs; and I do not see any reason why anyone should ask for such a separation.

I also believe, and again claim agreement with all colleagues, that the research mission of UC is wholly a “public good” and should be fully supported by public money. I strongly assert that it is not right to pass any of that cost on to undergraduate students, just because that is the habit at private research universities.

As for graduate education in the professional schools (Medicine, Law, Business, etc.) I do not know enough about that sector to say whether one could or should separate teaching from research activities of the faculty. I can only say that I am not aware of any data that would allow such a disaggregation.

Here is an argument, given to me recently by an influential person at Berkeley.

I think that you and I have a different notion of what Berkeley produces: Your accounting methods suggest that classroom teaching hours are what Berkeley produces for undergraduates; I believe that Berkeley produces a World-Class degree for undergraduates that is a combination of the classroom teaching, the research, and everything else we do. Hence, part of the price of our degree should be the research that the faculty do. ... and so the Legislature should pay Berkeley for the entire package. I don't think that's misleading. It is just covering the cost of what we produce.

Actually, the Faculty Time-Use Survey that I use counts much more than “classroom teaching hours” as Instructional Activities; and it also asks faculty members to indicate parts of research and service time that “also contribute” to Instruction. In the good old days, when the Legislature covered the whole I&R budget, there was no reason to ask about separating those costs. But today, with undergraduate students and their families being required to pay for what the Legislature cuts out of our overall budget, there is

good reason to ask for an honest cost accounting of what UC actually spends on undergraduate education, apart from its other valuable missions.

Another line: “Students choose to come to UC, rather than CSU, because we offer a better quality of teaching; and so they should expect to pay more for that.” The California Master Plan for Higher Education set up admission requirements for UC, CSU and CCC based upon students’ accomplishments in high school. If a UC education costs more per student than CSU (and I am not sure that it does, if you look at the cost of providing undergraduate education), then our students have earned that advantage and should not be financially penalized for having done so well in high school.

A corollary is that UC undergraduate students are better prepared, in terms of knowledge and study skills, so that professors here can move more rapidly to deliver the advanced learning we provide in our curricula. This allows for more time to be dedicated to research, which is our unique mission.

Some like to dismiss the ABC methodology by arguing that professors’ research work adds value to undergraduate education that cannot be captured in a time-use study. That thing called “value” is a subjective opinion - like, Should I buy a Cadillac when all I need is a Ford? The subject of this paper is “cost analysis” - an objective study aimed at following the money.

Some have criticized that this study does not account for undergraduates being involved in faculty research projects. In the few cases where those students are paid for the work they do, that will be recorded as an expenditure for research. In the majority of cases one could claim that this represents a negative cost to the University, since those students are contributing free labor to the advancement of the research projects. Best to leave it as a no-cost exchange: the professor’s research project gets some free labor and the student gets an interesting experience, perhaps with a nice letter of recommendation as they go on to graduate school.

I said, at the outset, that Activity-Based Costing has not been employed in past studies of educational costing at UC or at other research universities. That is correct, as far as I know, regarding the macro- use of ABC that I am focused on: it is for purposes of public accountability on the overall financial practices of the university. But there is another use of ABC that some others - authors, foundations, consulting firms - have been advocating: it is for the purpose of industrial efficiency. They want to study the detailed operations of individual courses of instruction. This appears to me an extreme version of Taylorism: finding those assembly-line workers who process the greatest number of widgets per hour and then requiring all other workers to match that level of productivity.