A Flexible, Incentivized Budgeting System for Academic Departments

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Abstract

This session will involve a discussion of the budgeting models of the attendees and a discussion of their overall needs for budgeting guidance. An overview of Responsibility Centered Management (RCM) will be provided along with the model used to set budgets for departments in a School of Science.

Preliminary Discussion

The preliminary discussion with attendees indicated that a large majority received a budget that was based on the last year's budget. In some cases small percentage increases were seen while in others small decreases were noted. A few reported some incentives for enrollment increases. Due to the surprisingly robust turnout (~60 for a session that was to be capped at 6-8), there was insufficient time to explore that type of budgeting information desired but, based on attendance at this session and a second one on budgeting, there is a strong interest among attendees in the subject.

Introduction

The budgeting system described in this session was developed under **Responsibility Centered Management (RCM)**. RCM is a decentralized budgeting and management system that closely links academic authority and financial responsibility. Under RCM revenue producing units or RCs (Schools, housing, auxiliaries, etc.) are credited with all the income they generate. Central administration then taxes the RCs according to a formula to generate revenue to pay university costs (registrar, building & grounds, police, upper administration, etc.). Considering academic RCs only, this means each gets credit for income from tuition and fees, indirect cost recovery (ICR), and state appropriation (for publics; replaced with endowment income for privates) and each is also responsible for paying its bills including all of its salaries. To be successful with RCM, RC leadership must be entrepreneurial, see the big picture, and be attentive to environmental factors that might change the fiscal landscape.

Positive descriptors of RCM include **flexible**, **transparent** and **incentivized**. **Flexibility** is manifested in all dollars coming to the RC being the same color in the sense that they can be spent in any legitimate budget category although local, institutional rules can be applied.

For example, in the School of Science at IUPUI, the central fund supporting graduate students can be used only for graduate student support. This is because there is a goal in the campus and School strategic plans to increase the graduate presence on campus. Flexibility is also demonstrated by the fact that RCs may carry forward excess cash from year to year as long as they have plan for the dollars and that they are placed in an appropriately labeled (e.g. building renovation or research instrumentation fund) account. It is interesting to note that RC debt also carries forward; there are no bailouts. Those RCs that fall deeply in debt or are chronically in debt are sometimes sanctioned by campus through restrictions on faculty and staff hiring, travel bans, no salary increments, reduced part-time funding and increased faculty teaching loads, until their budgets are back in the black.

Transparency is a critical element of RCM because it allows those in RCs to plan based on real values. At IUPUI this means we know how much it costs in taxes to have one more student FTE or faculty member on staff, how much each sq. ft. of space costs, how much of the state appropriation each RC receives, etc. Data like these are important elements in calculating the true costs of any venture that a RC undertakes. One cost that most individuals fail to take into account is the cost of space. Rather, they see it as there (this is about existing space) at no cost. Another transparent item of importance that all have access to at IUPUI is the amount of money that flows from each RC through taxes (assessments) to the service units.

The **incentivized** idea is obvious. Growing enrollments through accommodating student demand, focused recruitment, solid retention programs, and attractive degree programs increase tuition and fee income, increases in grant success generate additional ICR, and increased graduation rates translate into increased state appropriation through performance-based funding. Thus, there are regular conversations in the School about recruitment of new students (marketing efforts are critical here), retention (multiple efforts employing best practices and innovative programs), and on-time graduation (if the first two work good advising should address this element). ICR growth is incentivized by programs that return, to departments and PIs, in general fund dollars, amounts equivalent to percentages of what is recovered. In addition, ICR generation is incentivized by rising expectations for external funding for tenure and promotion. The bonus is that each of these outcomes is in line with institutional goals and the expectations of our publics.

The IUPUI School of Science Budgeting Model

The **department budgeting model** was started several years ago at a time when budgets were historically based. That is, last year you received X dollars and this year you will get X + 2%. The dean at the time desired to base budgets on real costs while incentivizing behavior to increase income without creating windfalls or crises for departments or the School. Thus, many of the incentivizing features of RCM were used in the construction of the department budget model. The values assigned to incentivized budget components

were shaped largely by the desire to not radically change department allocations. No doubt, several iterations were tried until one that came close to the *status quo* in terms of all final department allocations was found. It should also be noted that the source of dollars is not always related to their ultimate expenditure (flexibility) category.

Real costs from the previous year of the old budget model were transferred intact for graduate student support, academic year (AY) part-time instruction and summer teaching. These were adopted as is because they reflect direct services to students in providing opportunities to work toward their degrees while also enhancing School income or as support subsidies for graduate work. Over a 5-year period the graduate support lines have been increased by at least 10%, summer instructional budget components have been increased by 10% and AY part-time instruction lines have been increased by 20% plus a smaller amount for enrollment growth. Increments to the latter two budget components have been used to increase course offerings or to increase instructor pay. Some departments have been able to reduce their part-time costs (section consolidation, enforcing minimum enrollments, using less costly instructors) and are free to spend the remaining dollars how they see fit. However, they are expected to meet student course work needs as a first priority for those dollars.

Another real cost recognized by the Dean was one associated with simply having faculty and staff. In Science, all full-time faculty and staff salaries are held at the School level. However there are other costs associated with having people in place. Phones, internet access, development, copying, office supplies and others are all routine expense categories that must be addressed. To that end each member of the tenure track faculty, non-tenure track faculty and staff have $2,000, $1,000 and $500, respectively, allocated to their department budgets for these purposes.

Like most public institutions student tuition is the major source of school income. Taxes to the School exceed the state appropriation by 3-fold and the amount of ICR kept by the School amounts to less than $1.5M. This makes tuition the source of essentially every dollar of the departments' base budgets. An **incentivized element** of department budgets includes **student support** for undergraduate majors ($100), MS ($200) students, and PhD ($500) students. This supports the mantra mentioned earlier of "recruit, retain and graduate." While some Science departments (e.g. Physics) are challenged to recruit majors other do quite well at this. Biology has grown by 176 undergraduate majors in the last two years and Neuroscience, a new undergraduate degree developed collaboratively by Biology and Psychology, has grown from 3 to 183 students in its five years of existence. While some programs are inherently more attractive than others, it is also interesting to note that high performing departments on this metric also have faculty willing to open their labs to tours and to meet with prospective students.

A second incentivized element is **gross credit hours** paid out at $3 per. While this may seem to be a miniscule amount, one must remember that credit hour income must pay two-

thirds of the School's tax bill, all salaries and benefits, all elements of department budgets, and a variety of other lesser cost but significant (scholarships, computer replacements, recruitment costs, etc.) items. In addition, paying out more would have benefited the big credit hour generators to the point where their budgets would be significantly larger than under the old model.

The School realized that the $3 per credit hour was not an incentive when a new section had to be launched to meet student demand. While most enrollment increases could be handled on the margin through filling empty seats or moving to larger classrooms, in Science there are lab courses or sections that have a maximum enrollment of 30 or less. To help with this the $3 per credit hour has been supplemented with a **credit hour bonus plan** that pays $10 per for every credit hour that exceeds the average credit hours taught over the previous 4 years. This has generated an additional $326,000 for departments in 4 years. Wise and patient chairs also realize that enrollment growth can lead to another type of reward in the form of new faculty lines. Deans are far more likely to invest in productive commodities than in those that are languishing.

Fee income (lab fees, program fees, distance education fees and other course fees), because it is subject to enrollment growth, increases along with the costs associated with the services provided. They, however, do not generate large amounts of excess cash that might be spent elsewhere but they are at least incentivized to cover the cost of increased enrollments. With the exception of lab fees, the remaining course fees support special undergraduate programs in the School and are reserved for those intended purposes on an exclusive basis. For example, they support the Chemistry Resource Center and Peer-Led Team Learning (PLTL) in early chemistry courses and the MAC (Math Assistance Center) in mathematics that provides student-to-student help with math problem solving for many courses in mathematics and statistics. The program fee adds a fixed amount to every credit hour taken by Science and pre-Science majors. The dollars collected go to an account that funds the School's career office. It pays for salaries for full time employees who provide advising services for undergraduates and alumni, sponsor employment fairs, arrange internships, conduct mock job interviews, etc.

Laboratory courses are critical elements in the education of undergraduates in Science and can be a major drain on department budgets because of the costs associated with them. Several years ago, while in the midst of a budget deficit, Science was given permission to seek full recovery of lab costs. While this goal was not reached in all cases (Chemistry and Forensics were the exceptions) it was in Physics, Computer Science, Psychology and Biology. This venture led to a near tripling of the lab fees over a two-year period. Remarkably, no complaints came from upper administration and very few came from students. This is because the increase could be justified based on real costs that the School and its departments incurred in offering laboratory courses.

There are 4 distinct components in building a lab fee.

1. Consumables, computers and hourly help. Consumables costs are compiled from an earlier year by the departments. This process is done every 5 years to make certain that costs used are accurate. Computers (laptops) used in instruction are assumed to last 3 years so one-third of their cost is entered. Finally, some departments use student help to set up labs, to prepare materials, and to clean up after sessions; their annual wage total is included here.
2. Equipment and other "permanent" items (e. g. models, slide sets, collections). This includes items used just for the labs and core equipment that may also be used in research. For the latter the percentage of use devoted to teaching is used. In each case a life span is estimated and the cost, or fraction thereof, is amortized over that time frame.
3. Full-time personnel are required to oversee student workers and to do the complex preparatory work for the laboratories. In addition, other staff may spend some of their time doing lab related work. For example, a clerical person might order materials and supplies. The salaries and fringe benefits, in the appropriate percentages, of these individuals are charged to the fee. There is also a university tax on staff and the same proportion of that is also entered. (Taxes to RCs are set based on 3 drivers; student FTE, full-time employee (faculty ad staff) FTE, and space occupied.)
4. Space used in the teaching of the labs is the final piece. This includes not only the places where student gather to do their experimental work but also preparatory space and parts of core spaces where facilities used in instruction are located. In some disciplines (Biology, Chemistry, Earth Sciences, Forensics) this means space with full utilities with special air handling the cost of which can be discerned from the RCM model. Teaching lab space for other units in the School is less expensive.

The four components are summed and divided by the number of lab credit hours (the basis on which the lab fee is levied) taught the previous year to calculate the true (full cost recovery) lab fee. This represents an "average" lab fee for the department. From this we can easily calculate the percentage of the lab fee for each of the components. These percentages are used to distribute the lab fee dollars to their ultimate destinations each term. Component 1 goes to department budgets. Component 2 goes to a School escrow account that departments can access to purchase new equipment. Components 3 and 4 go to the School since it pays for space through taxes and covers all full-time staff salaries. Because we say that lab fees are set to fully recover costs we are careful to spend the fee dollars on the labs so this money is not fungible. The system is set-up, however, to automatically provide additional funds during a year when lab enrollments (and costs) surge. Campus generally allows a small annual increase in the fee as long as the final fee is at or below full cost recovery. This is typically the case because the costs of materials and new equipment rise faster than the allowed fee increases.

Establishing department budgets with the parameters discussed so far requires some planning in setting the timing for collecting basic data. The budget year is July 1 – June 30 with budgets due in late spring. Faculty counts are made April 1. Majors' counts are based on those from the previous fall after final census. Credit hour counts and lab fee (consumables and equipment components) are set based on the previous year's numbers. In cases where the data for summer session I (the final term of the budget year) are not yet available, the counts from the year before are used as a substitute. In early May, when all data for the current academic year are in, the final adjustments are made to the credit hour, the credit hour bonus and lab fee payouts. There are occasions when credit hours fall where a department may have to return some of its credit hour and lab fee allocation.

Although not a component of department base budgets, **ICR** (actually general fund dollars that are freed when ICR is received) is an important incentivized element of the overall resources available to departments. Twenty percent of ICR is kept by campus for competitive graduate fellowships and block grant allocations to Schools. Of the remaining 80% coming to Science, 20% goes to the department of origin and 10% to the PI. Except for portions (another 10%) going to Centers in the School the rest (56% maximum) stays with the School for new faculty start-up and debt retirement on new research space. Departments can use these dollars in any way although they are encouraged to reinvest them in the overall research enterprise from which they were generated. ICR that returns to the PI is to be used primarily for professional development defined broadly.

A second, non-base budget item that is highly incentivized and provides significant income for some departments is **research release** that is earned through course buy-outs. Buy-outs are fiscally complex in the School because teaching loads vary from 1 + 1 to 2 + 2. Research release is returned to the department of origin at 80% of salary with the other 20% invested in the School fund to support graduate students (see below). The fringe benefits portion of the release is retained by the School.

In order to provide a complete picture of department support for departments there are two non-incentivized items that are quite substantial. The **ICR block grant** to the School for graduate support that was alluded to earlier must be matched by the School. Over a several year period the match has grown, largely through School contributions, to the point where the total amount of funding is five times the campus contribution. Recall the departments have remnants of the old budget including a line for graduate student support. Most departments us the School block grant for stipends and their department accounts for tuition and insurance. Resources in the block grant account can be spent only on graduate stipends and end-of-year excess does not carry over (exceptions to flexibility).

RCM allows us to easily **waive graduate tuition** (sort of) by paying the tuition ourselves because we know that the money will be credited back to the School. The only real cost is the tax on graduate FTE which we know to be (RCM transparency) $94/credit hour; this is what departments pay for general fund supported graduate student tuition.

Summary and Conclusion

RCM is, on the one hand, an empowering budgeting system, while on the other hand, places great responsibility on those who head Responsibility Centers. It encourages entrepreneurial instructional and research endeavors that address student access, that cerate new programs and that enhance the institutional research profile. The negatives include its tendency to promote isolated thinking among RCs. Thus, they are reminded that the entrepreneur often must partner with others and it is worth the effort to work out the income and ownership challenges of RCM to make their ideas work. Another issue that arises with RCM, and one that each RC must be constantly aware of, is course poaching. That is, because there is such a premium on credit hour income, other schools may launch duplicate courses stating that they are "different", are designed to meet the needs of "our students" or necessary to "put our faculty to work." Institutions planning to adopt RCM should develop unambiguous policies to prevent this sort of thing in order to avoid chaos/confusion in course offerings, wasted resources, and the resulting difficult relations among campus units. Finally, leaders of RCs must carefully negotiate the fiscal elements (tuition splits, ICR, fee waivers, etc.) of cross-RC collaborations.

The department budgeting models follow the principles of RCM in that it incentivizes many of the same elements. Departments are rewarded for activities (recruiting and retaining students, innovative programs) that enhance credit hour income growth or stimulate growth in other income areas (grant writing and ICR, on-time graduation and performance-based funding) As far as the experience of the School with using the budget formula described here is concerned, the departments have adapted well with the vast majority staying on budget and even generating significant carryover. There are occasional deficits due to the inability of some chairs to say "no" or to the lack of attention paid to fiscal matters. Overall, over the last five years the department cumulative base (excluding block grant, ICR research release, credit hour bonus, and lab fee components 2, 3, and 4) budgets have increased by 31.5% (23.4-44.8% individually) through targeted additions to real cost elements and rewards from incentivized elements.