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Managing the Cost of Federally Sponsored Research at Educational Institutions

In an era of weak economic growth, budget deficits and government spending reductions, limited government resources must be utilized in a manner that maximizes the public welfare. One major use of such resources in recent years has been to fund research and other activities at universities. To shed light on this important area, this article examines current practice in government contracting with educational institutions, reviews recent governmental efforts to control contract costs and investigates ramifications for the affected educational institutions.

The United States government began providing support for agricultural research primarily at land-grant universities in the late 1800s. That was the beginning of a long-term, beneficial partnership between the federal government and educational institutions that today amounts to payments of over $9 billion annually to 276 schools.[1]

The government supports research in a number of ways including grants, cost reimbursement and cost sharing. For cost reimbursement contracts, payments are based on costs incurred by educational institutions in performing contracted research. As might be expected, these costs have risen substantially over the years. Recently, it was discovered that some institutions of higher education were improperly allocating costs to federal programs. When it became apparent that in some cases the system was indeed being abused, the federal government began proposing new measures to rectify the situation.

Current Practice in Government Contracting with Educational Institutions

The federal government established principles for determining costs applicable to sponsored agreements in Federal Management Circular 73-8 (December 19, 1973) which was superseded by the Office of Management and Budget (OMB) Circular No. A-21, published in 1979.[2] Still in effect in 1993 after nine updates, Circular A-21, now named "Cost Principles for Educational Institutions," "provide(s) that the federal government bear its fair share of total costs, determined in accordance with generally accepted accounting principles, except where restricted or prohibited by law."[3] All educational institutions with federally sponsored agreements as well as the corresponding federal agencies are required to apply the provisions of this Circular.

Specifically, A-21: defines terms, lists basic considerations, identifies and assigns indirect costs to categories, addresses determination and application of indirect cost rates and provides for the treatment of approximately 50 selected items of cost. Some of the provisions of A-21 are only applicable to certain educational institutions that have a high dollar value of federally sponsored funding, currently 99 institutions. The federal agency responsible for dealings with a particular institution is called the "cognizant" agency. Three federal agencies oversee the enforcement of A-21: the Department of Health and Human Services (HHS) through the Office of Inspector General, the Defense Contract Audit Agency (DCAA) and the General Accounting Office (GAO). Representatives from the cognizant agency periodically review the financial records of their educational institutions. During one such review in 1990, Office of Naval Research (ONR) administrative contracting officer Paul Biddle uncovered overstated and unallowable costs charged to the government by Stanford University. Other probes followed including hearings by the House Subcommittee on Oversight and Investigations, and a criminal investigation by the Naval Investigative Service Command. As a result of these probes and the consequent embarrassment to the University, Stanford's president, Donald Kennedy, announced his resignation effective August, 1992.

Other cognizant agencies and congressional committees began audits of other educational institutions; in addition, many educational institutions performed their own reviews. It soon became apparent that "abuses [existed] in reimbursements claimed by universities for indirect costs supporting government-funded research."[4] The allegations and subsequent admissions of wrongdoings were embarrassing to the universities involved and the cognizant agencies responsible for government oversight.

The White House through the OMB was quick to respond. Proposed initial revisions of A-21 were announced and interested parties were given the opportunity to comment on the proposed changes. Although some government officials viewed them as insufficient, the revisions to Circular A-21 became effective October 1, 1991. Also, in June, 1992, the Cost Accounting Standards Board issued an advance notice of proposed rulemaking that would require qualifying institutions to comply with certain Cost Accounting Standards.

Provisions of A-21

Circular A-21 divides the total cost of any research project into two categories: direct and indirect costs. Direct costs can be identified specifically with the project: employee compensation, materials, travel, etc. Modified total direct costs (MTDC), a subcategory of direct costs, by definition includes all direct costs except equipment and the portion of subcontract costs in excess of $25,000. MTDC are used as an allocation base for the assignment of indirect costs to the sponsored agreement. Indirect costs are costs incurred for common or joint objectives. In an educational institution, these costs may include the costs to run a library used for both research and educational purposes, the costs incurred in the administration of the institution, or the utilities and depreciation for a building which houses both research and teaching facilities.

As in any cost accounting system, the indirect costs are the most difficult to allocate appropriately. A-21 provides for the grouping of indirect costs into the seven pools listed in Table 1. Typical expenses charged to these various pools are also identified in that Table.

An indirect cost rate is determined for each of the pools through negotiation with the cognizant agency. This determination is a tedious and time consuming process. Financial personnel of the educational institution analyze the actual expenses from audited figures for the entire institution, categorizing the indirect expenses into the various pools, and determining which expenses are allocable to research based on regulations in A-21. For example, business entertainment expenditures must not be charged to indirect cost pools allocable to research. Each pool allocable to research is then divided by the modified total direct cost (MTDC) expenditures for all research contracts in order to determine the rate for the pool.

The total of the rates is commonly referred to as the research indirect cost rate. In the example provided in Table 2, the rate is 47.3%. This means that for each dollar of modified total direct costs, this particular university would receive $.473 in indirect cost reimbursement. These rates vary considerably among universities. For example, for fiscal year 1990, Harvard Medical School's indirect cost rate was 77%, the highest of all educational institutions, while Utah State University had the lowest at 37%. The average rate was 53%.[5] Table 3 shows a sample contract cost calculation including typical cost categories and a detailed breakdown.

Recent Government Efforts to Control Contract Costs

The revision to A-21 attempts to limit the recovery of indirect costs by placing a cap of 26% of MTDC on the reimbursement of administrative costs (pools 1-4 in Table 1), effective beginning on or after the start of the institution's first fiscal year which begins on or after October 1, 1991. This change alone is expected to reduce payments to universities by more than $100 million.

Given the Administrative Pool of 30% in Table 2, a reduction of 4% would be required in calculating the research indirect cost rate. As a consequence, the rate would be adjusted backward from 47.3% to 43.3% which leads to a reduction of $3,308 (4% of $82,692) in the payment to the educational institution in the sample contract cost calculation in Table 3.

Anticipating that some universities may try to find a way around the cap, the revision states that no changes or shifting of costs from indirect to direct or from administrative to other indirect pools are allowed. The revision also lists costs which are considered "unallowable" as direct costs, such as costs related to housing of the institution's officers, travel by trustees, or membership in civic organizations or country clubs.

Universities with a high dollar volume of federally sponsored funding (the 99 institutions listed in A-21) are required to state that they have expended or reserved for expenditure within the next five years amounts equal to the indirect cost payments made for the depreciation and use allowance to acquire or improve research facilities or equipment. In essence, this requirement forces educational institutions to actually spend the government payments for depreciation on improved facilities and equipment in the coming years.[6]

The recent notice by the Cost Accounting Standards Board (CASB) proposes that educational institutions comply with various Cost Accounting Standards (CAS) based on their level of contract funding. For the 99 universities which are the recipients of the majority of the federal research dollars, full CAS coverage, as outlined in Table 4, will be required in addition to the filing of a disclosure statement concerning cost accounting practices (Proposed Disclosure Statement for Educational Institutions--Form CASB DS-2). The federal government "believes that application of these CAS provisions . . . [would] improve the cost accounting practices followed by educational institutions when estimating, accumulating and reporting costs deemed allocable to federal contracts."[7]

Ramifications for Educational Institutions

It is obvious that the biggest impact on educational institutions will be financial. As a result of the capping of administrative costs, some universities stand to lose millions of dollars. Many universities feel that an additional financial burden will be placed on them since they will be unable to recover their total costs. Moreover, large state supported institutions will have an advantage over small, private institutions since large institutions have more opportunities to shift the unrecovered costs to other programs. But the most significant danger is that universities capable of providing valuable services to the government may take themselves out of the contracting business if they perceive the returns to that work are inadequate. However, from the point of view of the government and the taxpayer, more funds will be available for direct research due to the indirect cost cap.

The revisions to A-21 will certainly result in additional recordkeeping for educational institutions. Stricter regulations, more audits and increased internal controls will be costly. Some of the unallowable costs are almost impossible to monitor. For example, the costs of alcoholic beverages are unallowable, but often a conference fee includes a dinner at which wine is served. Removing the cost of alcohol from the indirect cost pools can create a measurement and recordkeeping nightmare which is costly to a university and provides almost no benefit to the government.

Educational institutions are also expressing concern over the proposed rulemaking by CASB. The CASB required disclosure statement may be costly to prepare and complex to administer. Moreover, CASB standards in some cases overlap and duplicate the provisions of A-21. As a consequence, there is strong sentiment among many educational institutions for further revision of A-21 to include incorporation of CASB standards.

There are many reasons for the difference in indirect cost rates among educational institutions. Depreciation rates vary because of the age, number and condition of research facilities and equipment. The cost of living in the geographic area of the university is a factor as is the use of different accounting methods. Universities which perform a large portion of their research in medical schools have higher costs. The efficiency of administrative operations is also an important factor and universities certainly need to increase their efforts in this regard. New productivity measures are needed in the educational environment similar to those that have recently been recognized as essential in the manufacturing environment.

Last but not least are legal and ethical considerations. The accountants at universities across the country have a responsibility to perform their duties in accordance with laws, regulations and technical standards. If laws are violated, the responsible parties may face criminal prosecution. Even if laws are not violated, university accountants involved in mischarging and overcharging the government are in violation of ethical standards incorporated in various codes of conduct.

The volume and cost of government research at educational institutions will certainly continue to rise, but with increased competition for budget dollars, there will also be increased pressure to find ways to reduce costs. There are reports that the Clinton administration is considering changes to A-21 that would further restrict the ability of educational institutions to recover indirect costs associated with sponsored agreements. Educational institutions can also count on increased oversight from the federal government as a result of recent scandals. By utilizing appropriate methods, educational institutions can provide better means to serve the government and in the process help themselves. In this way, the partnership between the federal government and educational institutions can continue to be beneficial.

Endnotes

1. Kusserow, Richard P., Inspector General of the Department of Health and Human Services. "Testimony before the Subcommittee on Health and Environment, Committee on Energy and Commerce, on Indirect Costs," April 16, 1991.

2. OMB Circular No. A-21. Principles for Determining Costs Applicable to Grants, Contracts and Other Agreements with Educational Institutions," February 26, 1979, 1-45.

3. McIntyre, James T., Director, OMB, "Cost Principles for Educational Institutions," February 26, 1979.

4. Cordes, Colleen, "Budget Office Seeks New Restriction on Research Costs." *The Chronicle of Higher Education*, (May 1, 1991) A1, A20.

5. Fact File: Indirect-Cost Rates at 100 Institutions." *The Chronicle of Higher Education*, (April 24, 1991) A26.

6. *Federal Register*, Vol., 56, No. 192 (October 3, 1991) 50224-50233.

7. *Federal Register*, Vol., 57, No. 106 (June 2, 1992) 23189-23199.

TABLE 1
Typical Expenses Charged To Indirect Cost Pools

1) GENERAL ADMINISTRATION
Executive offices
Administrative offices
2) DEPARTMENTAL ADMINISTRATION
Academic deans' offices
Academic departments
3) SPONSORED PROJECTS ADMINISTRATION
Grants/contracts administration
Purchasing costs
Security
4) STUDENT ADMINISTRATION
Administration of student affairs
Admissions
Registrar
5) DEPRECIATION/USE ALLOWANCES
Depreciation
Rental of buildings
6) OPERATION AND MAINTENANCE
Janitorial services
Groundskeeping
7) LIBRARY EXPENSES
Books
Periodicals

TABLE 2
Determination of Indirect Cost Rates Per Pool

POOL	ACTUAL INDIRECT COSTS ALLOCABLE TO ALL PROJECTS	RATE†
1) General Administration	$3,000,000	10.0%
2) Dept. Administration	$1,650,000	5.5%
3) Sponsored Projects Admin.	$4,200,000	14.0%
4) Student Administration	$150,000	0.5%
ADMINISTRATIVE POOL SUBTOTAL		**30.0%**
5) Depreciation	$1,260,000	4.2%
6) Operation & Maintenance	$3,300,000	11.0%
7) Library Expenses	$630,000	2.1%
RESEARCH INDIRECT COST RATE		**47.3%**

†Calculation of rates = Actual Cost for Pool/MTDC for all contracts = $30,000,000.

TABLE 3
Sample Contract Cost Calculation
Based on Indirect Cost Rate Calculation in Table 2

COMPUTATION OF MODIFIED TOTAL DIRECT COSTS			
Salaries/Wages			
Professional Effort--800 hrs at $35/hour†	$28,000		
Technical Effort--400 hrs at $15/hour†	6,000		
Clerical Effort--30 hours at $8/hour†	240		
Graduate Student Effort--200 hours at $7/hour†	1,400		
Subtotal	$35,640		
Employee Benefits--26.8% of Subtotal††	9,552		
Total Salaries/Wages		$45,192	
Materials and Services		35,000	
Equipment Rental			
Computer usage--5 hours at $200/hour††		1,000	
Communications			
Telephone, FAX, shipping, mailing		250	
Travel			
Air Fare	$500		
Per Diem--10 days at $50/day††	500		
Ground Transportation--5 days at $50/day††	250		
Total Travel		1,250	
Subcontracts (Amounts under $25,000)		0	
MODIFIED TOTAL DIRECT COSTS (MTDC)			$82,692

COMPUTATION OF TOTAL REIMBURSEMENT REQUESTED		
MODIFIED TOTAL DIRECT COSTS (MTDC)		$82,692
Indirect Costs—47.3% of MTDC	$39,113	
Equipment	15,000	
Subcontracts (Amounts over $25,000)	0	54,113
TOTAL REIMBURSEMENT REQUESTED BY INSTITUTION		$136,805

† Rate based on actual employee salary costs.

†† Rate negotiated between the institution and the federal government.

TABLE 4
PROPOSED COST ACCOUNTING STANDARDS TO BE APPLIED TO EDUCATIONAL INSTITUTIONS

CAS 501	Consistency in Estimating, Accumulating and Reporting Costs
CAS 502	Consistency in Allocating Costs Incurred for the Same Purpose
CAS 505	Accounting for Unallowable Costs
CAS 506	Cost Accounting Period