"Indirect" Costs Are Real Costs at Massachusetts Institute of Technology

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MASSACHUSETTS INSTITUTE OF TECHNOLOGY (MIT) numbers among the research universities that have been mentioned in press coverage of indirect cost accounting practices. Although some of the federal procedures for calculating indirect costs can be improved, on closer examination of the books at MIT, for example, there is justification for billing the government for its share of the real cost of doing research.

In fiscal 1990, grants and contracts accounted for $292 million of MIT's $1064-million overall budget revenues. About $203 million was paid out from federal sources for direct costs incurred at the project level and $89 million for indirect costs (Table 1, A and C). That is, 30 cents out of each award dollar went to indirect costs. Although MIT also receives contract support for off-campus research, only on-campus research is used to compare universities.

The Defense Contract Auditing Agency audits indirect cost expense allocations, and the Office of Naval Research (ONR) negotiates and approves the indirect cost rate. The $89 million appropriated for indirect costs in fiscal 1990 represents the aggregate amount allocated to on-campus research out of a total $230 million charged to seven different indirect cost pools (Table 1B). The pools jointly support instruction and research, whose various allocations are made according to federal cost principles and any special negotiations (Table 1C).

For example, physical plant operations and maintenance cost $53 million. Fifty-eight percent of that amount, or $31 million, which is calculated on the basis of square footage of campus buildings used for research, was allocated to research indirect costs. Similarly, to cover the depreciation or use allowances for buildings (over a 50-year life) and MIT-owned equipment (over a 7- to 15-year life) used in sponsored research, the federal formula allocated $20 million to research from a second cost pool of $34 million.

General and administrative expenses, largely the salaries of full-time staffs involved in functions such as accounting, purchasing, personnel and medical services, safety, and environmental and radiation protection, were $79 million. Of this, $19 million was allocated to the support of research based on studies of where the services were used.

Out of a $32-million pool, an indirect cost of $10 million was charged for research support contributed from departmental administration, which includes department heads, deans, and other senior administrators.

Research administration, however, covers only those functions devoted entirely to research, such as the MIT Office of Sponsored Programs, patent activities, and those responsible for monitoring the use of human subjects, animal care, and biohazards. From a total pool of $5 million, $3 million was allocated to research conducted on-campus and the balance went to off-campus research.

Out of a sixth cost pool of $11 million for library costs, $4 million was allocated to research. This breakdown was based on a study of what percentage of the MIT library costs was incurred on behalf of research, the results of which ONR accepted in a memorandum of understanding.

The final cost pool, covering student services, totals $16 million and includes offices such as the dean of student affairs, the admissions office, the registrar, and financial aid. In 1990, $2 million of this pool was allocated to research based on the ratio of student hours devoted to research to total student hours.

To determine the on-campus indirect cost rate, the total $89 million allocated to on-campus research from the seven cost pools is expressed as a percentage of the modified total direct cost (MTDC) base. The MTDC base, mandated by the Office of Management and Budget (OMB) in its Circular A-21 or accounting guidelines for educational institutions, consists of the $203 million in direct costs of research less equipment purchases, subcontracts, and certain other items. For fiscal 1990 the MTDC base was $145 million.

To generate $89 million in indirect costs required that MIT apply an indirect cost rate of 62 percent to the $145-million MTDC base. Articles in the popular press imply that 62 cents of each research grant dollar goes to indirect costs, but that number is actually 30 cents. Suggestions that universities should "return" some of the overhead to the departments or faculty for their use can also be misleading. Because the overhead pays real costs, there is nothing to return.

A great deal of attention is now being given to improving the indirect cost system. Steps have already been taken to clarify the allowability of certain costs, and this will eliminate some of the areas most vulnerable to differing interpretations. The use of caps or fixed rates, particularly with respect to administrative costs, has received widespread consideration. Unless thresholds, ceilings, and caps on indirect cost components are imposed with great care, they may unfairly deny reimbursements to some institutions and may provide windfalls to others. For example, MIT has waived a "windfall" reimbursement of $2 million annually since 1988, to which it would

Table 1. A breakdown of MIT's fiscal year 1990 operating expenses, detailing on-campus research allocations. Figures are in millions.

A 1990 Operating expenses* $1100	B Joint expenses of instruction and research $230		C Joint expenses allocated to research $117	
Joint expenses of instruction and research $230	Instruction: Research:	$113 $117	Off-campus: On-campus:	$28 $89
Direct cost of off-campus sponsored research $203	Detail of joint expenses:*	$230	Detail of on-campus allocation to research:	$89
Direct cost of off-campus sponsored research $414	*Plant operations and maintenance* $53 *Equipment depreciation and building use* $34			$31 $20
Instruction and unsponsored research $127	*General administration and expenses fiscal, personnel, medical, and other* $79 *Department administration*			$19
Scholarships $45	$32 *Research administration*			$10
Auxiliary activities $37	$5 *Library costs* $11 *Student services* $16			$3 $4 $2

*MIT treasurer's report.

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have been entitled under the 3.6 percent ceiling imposed by OMB on faculty salaries charged to departmental administration. Institutions receiving state funds might be put in the same position.

A far more desirable approach would be to establish a threshold rate for administrative costs with the option to establish a higher rate with increased documentation requirements. This option recognizes that the government continues to make new regulations requiring increased administrative expense in connection with human research subjects, laboratory animals, drug-free workplace and work force, changing audit standards and procedures, safety in the work environment, biohazards, hazardous waste disposal, and procurement certifications and assurances, among others. For instance, the indirect costs of environmental medical services on the MIT campus have grown from $974,000 in 1985 to $1.5 million in 1990, an increase of more than 50 percent. Proliferating federal regulations not only add to the costs of central administration but increasingly divert faculty investigators from their research to satisfy the administrative and record-keeping requirements associated with a range of regulatory compliance programs.

It is also time to take a more realistic view of the useful lifetimes of buildings and equipment acquired with nonfederal funds and used in research and to reflect this in indirect costs for depreciation.

There are no magic bullets that will solve the indirect cost problem, and these are only a few starting points. Before any progress can be made, however, there must be a shared vision between Congress, the administration, and the university community as to how and why the federal government should support research and training at universities.

Along with federal support for the infrastructure of American universities, the basic relation between the universities and the federal government for the support of research has been eroding for more than a decade. The underpinnings of the system—investigator-initiated research, peer review, and full funding—have come under increasing attack.

If the view is reaffirmed that the federal funding of university research is an investment in the national interest, then the needed revision to A-21 can effectively be accomplished without changing the founding principles of A-21. If A-21 is rebuilt to reflect the view, whether by design or default, that universities are simply another type of vendor, and that research should be done in the places that have the lowest overhead, the highest level of cost sharing, or the greatest access to other funding sources, then A-21 will itself contribute to altering and curtailing federal government–university relations and the capacity of the university community to respond to national needs.

Indirect Costs at the University of Minnesota

A. R. POTAMI

THE UNIVERSITY OF MINNESOTA, A LARGE, PUBLIC, LAND-grant institution, has a total five-campus enrollment of 44,500 undergraduate and 8,500 graduate students. It payrolls 5,100 full-time and 1,054 part-time academic employees, 11,500 full-time and 2,500 part-time civil service employees, and 1,500 full-time and 5,500 part-time student employees. The research enterprise in fiscal year 1990 reported expenditures of more than $218 million for externally sponsored research, training, and public service grants and contracts. Of this total, $155.5 million came from the federal government ($122.6 million for direct costs and $32.9 million for indirect costs).

The University of Minnesota's present indirect cost rate, 44 percent, includes the following components: plant operations and maintenance, 17.92; building use, 2.26; libraries, 0.68; equipment use, 1.26; departmental administration, 13.99; general administration, 5.90; and research administration, 1.99. Recently completed negotiations with the Department of Health and Human Services decreased the rate to 40 percent (component breakdowns are not yet available), primarily due to growth in research expenditures and to cost reductions related to the overhead components.

Discussion

Plant operations and maintenance. The indirect cost amount identified for plant operations and maintenance, which includes heat, electricity, janitorial services, hazardous waste removal, and building repairs, stands at about $82 million. On the basis of a study of each campus building, 20 percent of the space at the University of Minnesota is allocable to research. Applying the 20 percent research space figure to the $82 million yields $16.4 million in indirect costs.

Building use. The total purchase price of all buildings on the five University of Minnesota campuses is $1.065 billion. The federal government allows universities to claim 2 percent of the original purchase cost as an indirect cost. Accordingly, $21.3 million is included in the indirect costs pool. On the basis of an account of the original cost of the space in each building attributable to research, $1.96 million is recovered from federal sources.

Libraries. The expenditures for the University of Minnesota Libraries in fiscal year 1990 were $36 million. In lieu of conducting a costly study of library use, the university uses the Office of Management and Budget's (OMB's) A-21 "default" method, which adds an estimate of public use to the known numbers of faculty, staff, and graduate and undergraduate students. Then, the number of full-time equivalents for faculty, graduate students, and staff engaged in research is calculated and correlated with the portion of library costs allocated to each group from the initial use estimate. This calculation allows $1.16 million to be recouped from federal sponsors for indirect research costs.

Equipment. The University of Minnesota's equipment use rate of 1.99 is derived from the identification of the total equipment value, which is $255 million. OMB A-21 allows about 6.7 percent of this amount to be charged over a 15-year period. This method identifies $17 million as total indirect costs related to equipment use. On the basis of the 20 percent calculation of space devoted to research, $3.12 million is recovered from federal sponsors.

Administration. The components of departmental, research, and general administration (totaling 21.88) are all calculated from the sum of the portions of administrative costs from the university's financial statements that are allocable to research. Included in the component for departmental administration (13.99) are a portion of the costs for collegiate deans, department heads, and faculty involved in research administration (capped at 3.6), plus clerical and secretarial salaries and related expenses allocable to research support. The research administration component (1.99) includes allowable costs incurred by the sponsored programs office. The general administration component (5.90) includes portions of costs such as accounting, purchasing, and appropriate vice presidents' offices that are allocated to research. Totaling these categories allows the recovery of $16.4 million from federal research sponsors.

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