
**ISSUE 1: COMPARISON OF F&A RATES
ACROSS SECTORS**

In the course of the policy debates on this subject, some have expressed concern about how the cost structure of universities compares with other enterprises that do business with the federal government. This chapter summarizes available information on that question.

Universities, commercial enterprises, government laboratories, hospitals, and other organizations differ in important ways. Each of these types of enterprises is governed by a different set of federal regulations for grants and contracts. Because of these different federal regulations and other business factors, different accounting conventions are used in these sectors. In addition, institutions in these sectors have different functions, scope, and scale. These differences influence how F&A rates are computed, making for potential misunderstandings when comparing rates from one sector with another. For example, the base used to distribute F&A costs in universities is modified total direct costs (MTDC), whereas different bases are used in the other sectors. As a result, a given rate number has different meanings in the different sectors. In this chapter, we look at data that attempt to place several sectors on the most similar base possible for purposes of comparison.

In Chapter Two, we analyzed federal reimbursements for F&A costs. In this chapter, we consider true total project costs rather than reimbursements. True costs are computed based on the total costs of operations as reported in organizational accounting systems, regardless of whether the federal government would reimburse those costs. For example, all administration is included, even though universities can recover only 26 percent of MTDC for administration on federal agreements. The available evidence indicates that the fraction of true costs in universities that are F&A costs is generally comparable with or somewhat smaller than indirect costs for other performers of research. In all the sectors studied, F&A costs accounted for about one-third of true total costs. For the universities, F&A costs are about 31 percent of total project costs. In Chapter Two, our analysis concluded that average federal agency payments include

between 24 and 28 percent of funding for F&A costs. Cost-sharing by universities accounts for the difference between these lower figures (24 to 28 percent) for payments and the 31 percent figure for total costs.

COMPARING RESEARCH COSTS IN UNIVERSITIES, FEDERAL LABORATORIES, AND INDUSTRIAL LABORATORIES

Although data are maintained on F&A rates for universities, no comparable government or private data exist for commercial enterprises. Corporate indirect cost rates are considered proprietary information that companies are sensitive about disclosing, because these rates have important effects on competitiveness. To our knowledge, government agencies do not maintain a centralized registry of corporate indirect cost rates.

One recent attempt was made to compare F&A costs on a similar basis across sectors. In 1996, on behalf of the Government-University-Industry Research Roundtable, Arthur Andersen, LLP, conducted a study examining whether direct and indirect costs varied across research organizations in three sectors: universities, federal laboratories, and private companies. Arthur Andersen solicited the participation of seven universities, 13 federal laboratories, and 13 industrial (for-profit) laboratories. The selection of participants was based on availability and willingness to cooperate. Because only a few institutions for each type were examined and they were not selected to represent all institutions of that type, we cannot say how these results would differ for a larger, more comprehensive group of institutions. The data used by organizations in the study were from an available recent fiscal year between 1991 and 1994.

The study assessed total costs of performing and supporting research, without regard to the amounts actually recoverable from the federal government for research. The study concluded that the division of costs is similar for all three sectors. In each sector, Table 3.1 shows that about one-third of costs were classified as indirect and about two-thirds as direct. As a fraction of total costs, universities had the lowest percentage classified as indirect (31 percent). Federal laboratories were somewhat higher at 33 percent and industrial laboratories were higher still at 36 percent.

One reason nonprofit research institutes and industrial laboratories may have slightly higher indirect costs is that these institutions must allocate certain central organization costs (such as the cost of facilities and senior management) purely to research, because this is their only function. Universities, on the other hand, can distribute these central organization costs to instruction, research, and other functions. Research, then, may bear a somewhat smaller central organization cost in a university.

Table 3.1
Fraction of Total Costs Classified as Direct and Indirect in Three Sectors
(Arthur Andersen, 1996)

| | Universities (n = 7) | Federal Labs (n = 13) | Industrial Labs (n = 13) |
|------------------------------|-------------------------|--------------------------|-----------------------------|
| Costs classified as direct | 69% | 67% | 64% |
| Costs classified as indirect | 31% | 33% | 36% |

SOURCE: Arthur Andersen, 1996.

Considerable university data preceded the imposition of the administrative cap (discussed in Chapter Five) that took effect after 1993. Universities likely made some changes in their administrative operations after the cap was imposed, reducing spending on administration. As a result, university indirect costs may be even lower now than in the older data used for this study. In any case, as described in Chapter Two, the administrative cap means that fewer administrative costs are *reimbursed* today. Because nonprofit and commercial research institutes are not subject to this sort of cap, universities may well have fewer costs for administration. Even if their costs for administration were the same as for the other sectors, they would receive less federal reimbursement for them.

COMPARING BIOMEDICAL RESEARCH COSTS IN UNIVERSITIES, HOSPITALS, AND RESEARCH INSTITUTES

As noted in Chapter One, NIH accounts for more than half of all federally sponsored research in higher education. NIH has compiled statistics on F&A reimbursements in response to congressional requests. These reports provide us with another way to compare cost structures across sectors.

The Department of Health and Human Services (1991) found that F&A rates vary by region, possibly stemming from differences in climate (and hence utility costs) or labor costs. To compare projects across sectors more accurately, NIH compiles reports for Congress using geographical region to group statistics on F&A rates. The latest report was issued in February 1999 and covered NIH-funded research projects by performers in four sectors. It showed that F&A costs were proportionately highest in the Northeast and lowest in the South and Midwest. Table 3.2 summarizes the information from the 1999 report. Overall, universities were awarded 31 percent of their total awards for F&A costs on NIH projects. (This is distinct from the governmentwide average of 24 to 28 percent computed in Chapter Two.)

This study included only grant programs for which full negotiated F&A rates are allowed (with the administrative cap and salary cap in effect). Training grants

Table 3.2
Indirect Cost as a Percentage of Total Cost Awarded
(NIH, 1999)

| Region | Higher Education | Hospitals | Research Institutes | For-Profit Small Business | All Sectors |
|-----------|------------------|-----------|---------------------|---------------------------|-------------|
| Midwest | 30.0 | 26.4 | 26.7 | 19.1 | 29.5 |
| Northeast | 33.3 | 31.2 | 34.5 | 20.3 | 32.9 |
| South | 29.4 | 23.6 | 36.6 | 28.8 | 29.3 |
| West | 29.0 | 29.6 | 36.8 | 25.1 | 30.8 |

SOURCE: Office of Extramural Research, NIH, Department of Health and Human Services, February, 1999

received by many universities strictly limit F&A reimbursement and are excluded from these calculations. As a result of these limitations, F&A costs calculated over all NIH awards would show a lower percentage than the figures in Table 3.2. The table indicates that for the NIH awards covered, higher education institutions received between 29 and 33 percent of awards for F&A costs, depending on the region of the country. Awards to hospitals in two regions (Northeast and West) were similar in composition to those for higher education. In the other two regions, hospital awards were somewhat lower for F&A costs. Research institutes received higher fractions of awards as indirect in three of the four regions compared with higher education.

Although Table 3.2 indicates that F&A percentages for for-profit small businesses were smaller than for higher education, these awards represent only a limited portion of the relationship between federal agencies and for-profit organizations. The awards summarized in this analysis are those made under two small business set-aside programs, the Small Business Innovation Research (SBIR) Program and the Small Business Technology Transfer (STTR) Program. Projects under the SBIR and STTR are funded for direct costs, indirect costs, and a fee of up to 7 percent of total costs. Fees are not included in the amounts used to calculate the indirect cost percentages in the table.

Although the guidelines for these grants call for indirect cost reimbursement, some grantees may not propose full indirect costs, or any at all. These programs provide assistance to small businesses; therefore, the businesses themselves may share in the costs of research as part of their overall research and development efforts. Guidelines for Phase 1 grants under both SBIR and STTR suggest a maximum budget of \$100,000 (although this is not a firm limit at NIH). A number of grantees propose projects that would exceed \$100,000 and can justify funding of \$100,000 with direct costs alone, so they do not include indirect costs in their proposals. Therefore, the actual level of indirect costs for these projects is higher than reported in Table 3.2. Guidelines for Phase 2

grants suggest a \$750,000 maximum budget, and budgets generally include indirect costs.

In contrast to these programs, most federal payments to for-profit organizations are in the form of contracts. An examination of indirect costs on contract payments to for-profit firms was not possible, but observers agree that their indirect costs on federal contracts for similar research functions are generally higher than in universities. The Arthur Andersen study of the costs of research corroborates this view because for-profit laboratories had a 36 percent share of total costs as indirect, compared with 31 percent in the universities studied.

Overall, these comparisons are only broadly indicative of cost structures, because they are premised on comparing quite different organizations with different accounting regulations and reimbursement structures. What evidence is available indicates that the fraction of awards to universities that pays for F&A costs is generally comparable with or somewhat smaller than indirect costs for other performers of research. The true share of costs for facilities and administration appears to be about 31 percent of total costs. The analysis in Chapter Two indicates that federal payments to universities are about 24 to 28 percent for facilities and administration; hence the federal government is not reimbursing the true costs attributed to federal projects.