

Understanding the Costs of Federally Sponsored Research at Universities

The Internet, GPS technology, and treatments for cancer and heart disease are just a few examples of the countless technologies, innovations, and medical breakthroughs that have resulted from research performed at U.S. universities and transformed our daily lives. Federal investments in university-based research benefit all Americans not only by producing the discoveries that serve as the foundation for technological and medical progress but also by training the next generation of scientists and innovators.

For the most part, universities are awarded research funds through a competitive grant process that helps ensure the best research ideas receive federal support. Federal research grants awarded to a university comprise two essential parts: Direct Costs and Facilities and Administrative (F&A) Costs, often referred to as Indirect Costs.

- **Direct Costs** – Direct research costs are what people generally think of when it comes to federal support of research projects. These costs solely support research that is about to take place and often include laboratory supplies, specific research equipment, salary support for researchers and lab personnel, and travel for conducting research or disseminating research results. This is the core of university research, and it's also where the bulk of the federal investment is spent.
- **Facilities and Administrative (F&A) Costs** – In order to perform research on behalf of federal agencies, universities incur a variety of other significant costs both leading up to and during a specific research project that they would otherwise not incur. F&A costs cover the portion of these infrastructure and operational costs related to federally-funded research. As described in more detail below, such shared costs include the maintenance of sophisticated, high-tech labs specifically designed for cutting-edge, federally-sponsored research; utilities such as light and heat; telecommunications; hazardous waste disposal; and the infrastructure necessary to comply with various federal, state, and local rules and regulations. The federal government reimburses universities for the share of these university costs that are attributable specifically to federal research.

What sorts of expenses are considered F&A Costs?

Universities and the federal government both contribute to the cost of supporting the environment and infrastructure necessary to keep labs running and research advances coming. Such shared costs include the portion of construction and upkeep of labs that are devoted to federally-sponsored research projects. These costs also include expenses such as utilities, telecommunications, radiation safety, hazardous waste disposal, security and fire protection, and liability insurance. F&A costs also cover the personnel, paperwork, and other costs involved in complying with various federal, state, and local rules and regulations. This includes, for example, compliance with human or animal subjects protection rules, biosecurity regulations, chemical safety rules, and regulations to manage conflicts of interest related to medical research. All of the costs are necessary in order to conduct the actual research. All are considered F&A costs only to the extent they are attributable to federally sponsored research.

How are F&A costs calculated?

In theory, the federal government could seek to determine the exact share of F&A costs required for each individual research grant. However, federal agencies issue tens of thousands of grants annually, so such a system would be a costly bureaucratic nightmare. Instead, the government has developed a system that, while certainly not simple, provides predictable reimbursement rates and eliminates the need for repeated complex calculations leading to significantly increased government expense and inefficiency.

Whether it is the cost of building or maintaining a lab, fees for hazardous waste disposal, or operating a temperature-controlled room, what a university pays a vendor for items that fall under the F&A category will tend to cover a variety of projects, not solely for a specific federal research grant and not even solely for federal research. For example, a university may pay a \$5,000 quarterly fee for hazardous waste

*"There is ample support for the proposition that appropriately defined indirect costs of research incurred by universities should be fully recoverable. Indirect costs are **real** costs of research."*

- "Research Universities and the Future of America", National Research Council, 2012

disposal from its labs. Since only a portion of that hazardous waste may be the byproduct of federal research, guided by very strict rules established by the Office of Management and Budget (OMB) and overseen by the university's federal rate setting agency (either the Department of Defense's Office of Naval Research or the Department of Health and Human Services Division of Cost Allocation), the government pays only for the share of the waste produced during the course of federally sponsored research. It would be more costly, time consuming, and generally inefficient to have two separate hazardous waste disposal contracts – one for federal research and another for everything else.

In order to determine the level of reimbursement, a university and the federal government periodically assess all of these shared costs and work together to figure out the appropriate federal share. The overall figure is ultimately calculated *as a percentage of the amount the federal government awards for direct research costs* (not a percentage of the overall funds, which is a common misperception). For example, after reviewing all of the expected costs and looking at past research projects, a university and the federal government may determine that an amount equal to 50 percent of direct research costs is appropriate for the federal government to contribute toward F&A costs. In that case, if the federal government awards a university \$300,000 for the direct research portion of a grant, then it also awards \$150,000 for F&A costs, for a total of \$450,000 (therefore, the F&A costs make up 33 percent of the total federal grant). These overall institutional indirect cost rates are then applied uniformly to each grant to avoid the tedious and expensive process of computing the additional costs for individual awards. *(Note: In practice, the total F&A reimbursement would likely be slightly less since certain elements of direct costs are excluded from the F&A calculation.)*

How is accountability built into the F&A reimbursement system?

Universities are always mindful of the imperative to use federal resources appropriately and contain costs while getting the most out of their research projects. In fact, it is worth noting that the total F&A costs for research performed by universities are, on average, comparable to, if not slightly less, than other research performers, such as federal laboratories and private contractors. Moreover, since 1991, OMB has maintained a cap on the percentage of government funds that can be provided to universities to cover administrative expenses (including costs incurred by the university to comply with federally mandated regulations).

The percentage resulting from the F&A calculation varies from university to university because actual costs vary based on a variety of factors that include geographic location, the condition of facilities and buildings, and the amount of renovation and construction needed to house certain types of research projects. A university's specific percentage rate is applied to all federal grants moving forward for a three- or four-year period. During that time, the federal government requires a rigorous review and audit of a university's facilities and administration expenses to ensure that the school is using the funds appropriately. The rate is reexamined at the end of that period, and upward or downward adjustments are made as warranted.

Universities and the federal government share the total cost of research

The historic partnership between the federal government and research universities has produced tremendous returns on investment in the form of improvements in human health, transformative technologies, and the development of the world's best research workforce. All of these have benefitted our nation's security and prosperity. Performing research to benefit humankind is a fundamental mission of U.S. universities. Without the federal government's support of F&A costs, universities would not be able to carry out the research projects that may help develop the next vaccine or cure, or the next technological innovation. After all, the groundbreaking science that takes place in university labs could not happen if there were no labs.

Universities share a commitment to transparency, to careful stewardship of taxpayer dollars, and to conducting quality research and training. While the current system of F&A rates is complex, it is integral to the successful university-government partnership. Thus, universities continue to work with the federal government to identify ways to make this process even clearer and more effective.