



November 11, 2013

Survey on Sequestration Effects Selected Results from Private and Public Research Universities

Survey Background

As part of a survey sponsored by the Association of American Universities (AAU), the Association of Public and Land-grant Universities (APLU) and The Science Coalition (TSC), leaders from 171 public and private research universities were asked to describe the early effects of the automatic, across-the-board spending cuts in the federal budget (“sequestration”) that began in March. The survey was administered and responses were collected during October 2013. Seventy-four completed responses were gathered for a response rate of 43 percent. The margin of error is +/- 10%.

Overall Findings

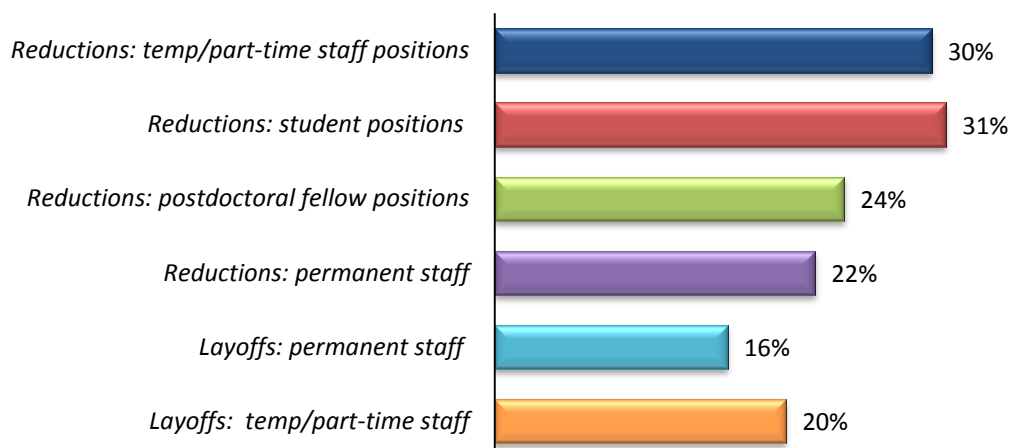
In the first seven months of sequestration, 70% of responding universities cited delays in research projects and 70% experienced reductions in the number of new research grants. The widespread delays and reductions in research activities reported by the survey respondents have immediate, real costs for researchers and students as well as long-term financial and opportunity costs for the nation’s research enterprise. As stated in the survey comments by one public university leader:

... it is important to note the very negative effects of uncertainty related to not only lower levels of funding, but [less] confidence ... around predictions about the future. It leads to an avoidance of risk, which is detrimental for the country's research program. [University of North Carolina, Chapel Hill]

People Costs: Sequestration’s Immediate Effects on Researchers and Students

58% of respondents reported that sequestration had a negative effect on research-related personnel – researchers, staff and students. Figure 1 below details the most common impacts, from reductions in positions to layoffs.

Figure 1: People Costs - Percent of Respondents Reporting Sequestration Effects



Two public university leaders elaborated on how students, faculty and staff have been affected by sequestration:

The most severe effect has been unannounced delays of grants, where the delays have been several months without warning, which has caused difficulties in a number of academic departments and institutes, which have made upfront commitments to students, staff and faculty, especially in terms of summer pay. So this has resulted in significant institutional unscheduled costs. [University of Colorado Boulder]

Delays of research panels to evaluate NIH and NSF grants have impacted continuation of ongoing research projects. This phenomenon has been particularly harmful to those awaiting funding notification to be included in their tenure and promotion materials. [Washington State University]

A private university official remarked on the loss of productivity caused by researchers attempting to figure out how to sustain current projects with reduced funding:

Not only are we experiencing diminished funding overall and reduced budget periods for existing and new awards, but we are also observing a general loss in productivity as principal investigators, researchers, and research administrative staff scramble to interpret new agency limitations and figure out how to reallocate resources with a reduced budget without significantly changing scope.

As noted by one private university leader, the impact on future academic scientists is already occurring.

These factors [diminished funding] contribute to low morale for our research community, particularly among graduate students and junior faculty who are questioning career choices. Some graduate students have dropped out of programs this year or are considering leaving in favor of consulting, startups, and other non-academic careers.

Opportunity and Financial Costs: Sequestration's Impact on Research Activities and Outcomes

81% of universities responding to the survey reported that sequestration cuts had immediate, detrimental effects on research activities and output on their campuses. As one public university leader stated:

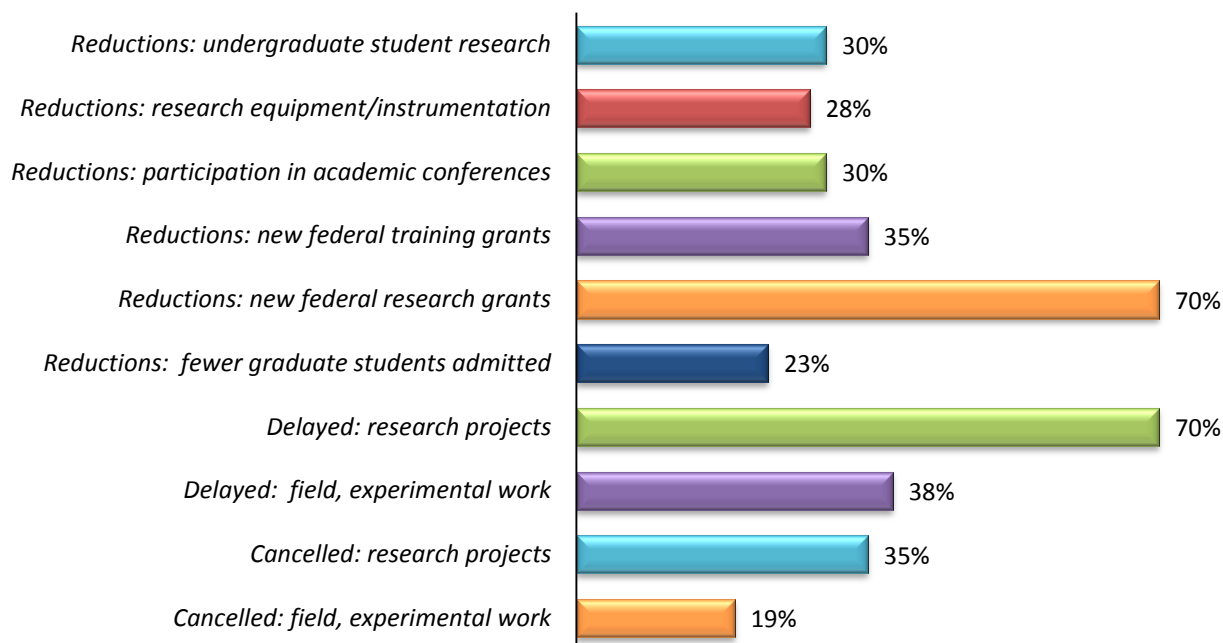
We have already experienced significant reductions in expenditures in two categories: temporary staff and equipment purchases. As our research enterprise adjusts to the decline in federal support we expect to see other categories of employees and expenses affected in a similar way.

The costs of sequestration can also be calculated in terms of lost opportunities - with delays in projects and field work, reduced chances for dissemination of research findings by faculty, lower numbers of graduate students admitted to programs, and fewer opportunities for undergraduates to participate in research. A private university official noted:

... we are seeing awards coming in with reduced periods of performance (many have been cut from five years to three years); reduced summer salary support (NSF awards); the number of graduate students supported on awards are being reduced or removed; and reduced (or eliminated) funds for travel.

The most widely reported reductions, delays and cancellations for research-related activities from the survey are summarized in Figure 2.

Figure 2: Opportunity & Financial Costs - Percent of Respondents Reporting Negative Sequestration Effects



A public university leader explained how the cancellation of a NSF dissertation research competition had a direct effect on the graduation of doctoral students at the university.

The NSF Doctoral Dissertation Research Improvement for Geography and Spatial Sciences competition for the fall 2013 competition was cancelled due to a lapse in appropriations ... This impacts our graduate student population, specifically graduate students trying to finish dissertations. Start dates for these projects were originally targeted for the first quarter of 2014. The next competition is February 2014 and they were asked to resubmit at that time. This will push their project start dates back by probably six months, which could in turn have an impact on dissertation completion and graduation dates.

Two university leaders offered specific examples regarding Air Force grants that had been rescinded or substantially scaled back.

A principal investigator in the School of Physical Sciences recently learned that years two and three of his Air Force Office of Scientific Research grant will not be funded. This was a three-year project. [Stony Brook University, SUNY]

A large Air Force grant that was announced as funded was pulled back and cancelled. This resulted in the loss of two graduate assistant positions, summer salary for a faculty member, and the purchase of a major piece of equipment. The research has been delayed for at least a year. This will prevent the research from occurring in a timely manner because it has to do with a specific astronomic event that will not occur for another decade or more. [Rensselaer Polytechnic Institute]

Another leader from a land-grant university highlighted areas of globally vital research already impacted by sequestration cuts.

Furlough of USDA faculty has adversely impacted critical work in areas such as wheat genetics, plant pathology biofuels and animal health.

Summary

The results from the sequestration survey are an early indicator of the devastating impact that sustained cuts to research and higher education will have on the economy and the United States' role as a global innovation leader. Research university leaders from both public and private universities express deep concerns about both the short-term impacts on current research and the long-term effects on future research and the scientific enterprise.

University leaders noted that although sequestration was clearly harmful during its first year, it was not as damaging as it could have been. Some universities and federal science agencies were able to ameliorate the impacts via short-term tactics such as exhausting reserve funds, temporarily realigning activities, and provisionally reassigning staff, faculty and students. However, these devices will not be available to cushion the impact of sequestration in 2014 and beyond.

Sequestration is also part of larger budget constraints and uncertainties at both the federal and state levels – all of which have cumulative, negative effects on new and current research and innovation as well as on the dissemination and application of the results to benefit the society and spur economic development. Sequestration will only widen the current innovation deficit, rather than restore funding for research and higher education to help close the gap between needed and actual investments in those areas.

A public university leader summarized the circumstances as follows.

The challenging and negative grant environment and uncertainty in general with the budget crisis has negatively impacted the creative environment ...faculty feel less encouraged to submit [grant applications]. The significantly competitive funding levels or the elimination of funding opportunities has either delayed grant awards or reduced them entirely. The reduction in funding has in turn reduced some of our ability to incentivize grant activity and/or jump start new initiatives. Renovations of labs and purchase or repair of instrumentation has been put on hold. These federal challenges come at a time of decreasing financial support from the state making it a perfect storm for disrupting research.