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(Hidden) Cost of Doing Business

Expanding research may be a worthy goal in higher education, but doing so comes with significant costs that aren't recovered by grants alone, according to a study published in *Academic Medicine* this month.

Researchers at the University of Rochester School of Medicine & Dentistry found that the cost of supporting newly recruited scientists costs an additional 40 cents over every dollar these new faculty generate from grants. While colleges may grow in prestige by expanding their research base, they're likely to dole out more money in start-up packages and other benefits for new faculty than they bring in through grants, the study asserts.

Dr. David Guzick, dean of medicine and dentistry at Rochester, said the study gives an important illustration of the true costs of research, at a time when many colleges and universities, at various strata of higher education, are expanding or thinking about expanding their scientific enterprises. That said, Guzick isn't encouraging colleges to curtail research activities.

"We're not saying this means we shouldn't do this anymore or other institutions shouldn't do this," said Guzick, who co-wrote the report. "You do know [about research expenses] going in; it's just that nobody, I think, really understood quite how expensive this is."

"This has a community benefit," he added. "There may be technologies produced that benefit all of us as a result of this [research] that are not part of the arithmetic of the costs and the revenues of any given individual scientist."

The paper, entitled *The Economics of New Faculty Hires in Basic Science*, is available for purchase on the Web site [http://journals.lww.com/academicmedicine/Abstract/2009/01000/The_Economics_of_New_Faculty_Hires_in_Basic.16.aspx] of *Academic Medicine,* the journal of the Association of American Medical Colleges.

The authors of the paper used the growth of Rochester's biomedical science research enterprise as a case study. Led by Ray Dorsey, an assistant professor of neurology, the researchers tracked the work of 25 faculty engaged in basic science who were hired between 1999 and 2006. Over the course of that period, the faculty generated $99.7 million in extramural research grants, measured in 2006 dollars. Even so, Rochester had to tap into the university's endowment and raise money to address a $39.9 million gap between the group's expenses and funding provided by granting agencies, according to the paper.

The resources Rochester used to cover its costs — endowment dollars and fund raising — also happen to be considered the most vulnerable in the current economic climate, Guzick said.

“It’s another reason to be cautious,” he said.

Variables May Differ at Other Colleges

While potentially instructive, Rochester’s experience won’t necessarily be mirrored across higher education. Researchers at Rochester, which is a private medical school, tracked only faculty members engaged in basic research, as opposed to clinical work. The cohort of faculty that were followed also tended to be at the junior level, and were therefore less likely to secure grants in their first year or bring in grants upon being hired. Of the 25 faculty members that were followed, 16 (64 percent) held the title of assistant professor, and nine (36 percent) were full professors. There were no associate professors included in the cohort.

The study acknowledges that senior-level faculty generated more grant support per dollar invested in them than did their junior counterparts. Furthermore, institutions are more likely to recover a greater share of costs after new hires are in place for two years or more, the authors noted. As a research enterprise grows, and garners prestige, it’s also easier to attract strong young faculty or more senior-level investigators that may generate more dollars more quickly, Guzick said.

“It is a phenomenon of the rich get richer,” he said. “Not only in a financial sense, but in a talent sense.”

The landscape of federal funding for research has also changed since Rochester began its study in 1999, which marked the start of a now-dwindling effort by Congress to double the budget for the National Institutes of Health. With those dollars drying up, it’s possible that colleges will see even larger shortfalls as they expand research operations, Guzick said. As might be expected, however, Guzick thinks the current economic climate makes a strong case for increasing the NIH budget again.

“If there was increased funding at NIH, and [the National Science Foundation] and [the Centers for Disease Control] and other similar institutions, this would be an excellent basis for [economic] stimulus,” he said. “And communities like ours would be able to co-invest with these agencies.”

— Jack Stripling