Will Deficits Put a Damper on R & D?

Ninth AAAS Colloquium on R & D worries about looming budgetary gaps, asks if some new initiatives are too much of a good thing

In its annual look at the new federal budget, the AAAS Colloquium on R & D this year found the prospect of outsize federal deficits to be a threat to a currently prosperous R & D regime. And there were also misgivings that initiatives in the new R & D budget would cause trouble in coming years.

As has become the colloquium custom, the President's science adviser was the de facto keynote speaker, providing an interpretation of the R & D budget to which later speakers frequently referred, although not necessarily deferred. Incumbent science adviser George A. Keyworth, II provided a bullish review of the Administration's R & D policy and its implementation, but, at the outset, took issue with what he described as the "generally gloomy view of federal R & D" found in the introductory chapter of the annual budget analysis issued by AAAS to coincide with the colloquium.*

The authors early state their ambivalence with the comment that "It is a strong budget for R & D, but analysis of the totals raises questions. The big increase is almost entirely on the military side. Total non-defense R & D budget authority increases only about as much as inflation." The main concern is not directed at the makeup of the new budget. Rather, "Questions on R & D spending plans in the FY 1985 budget are overshadowed, however, by the need for drastic actions to reduce the deficit. Beneath the political posturing on both sides there is a realization that something has to be done."

The analysis predicts a continuing pattern of deficits in 1985 and after. "Thus the FY 1985 budget is not a budget in the traditional sense of the President's plan for dealing with the problems of the nation. It is instead a statement of the problem with the answers left up in the air—to be found in bipartisan negotiations with Congress, unilateral Congressional actions, or a new Presidential initiative some time after the election."

Another strain of ambivalence was expressed by National Academy of Engineering President Robert M. White who seemed to be asking, in essence, whether the R & D budget amounted to too much of a good thing. Like other speakers, White was complimentary about the Administration's actions in fashioning a budget that reflects strong confidence in R & D, noting that the real growth in total federal R & D funds under its aegis has been the largest since the 1960's. But he questioned whether the Administration's commitment to technology might amount to an overcommitment.

Noting examples like plans for a manned space station, a space-based missile defense, "a multitude and diversity of defensive and offensive strategic and tactical systems," and an ambitious strategic computing program, he said these contributed to what he termed a "technological flood tide."

Citing the "bow-wave effects" of such initiatives over time on the economy, on the availability of manpower and materials, and on the industrial competitiveness of U.S. industry, he urged that the issues be examined with caution. "My concern is that, as a community of scientists, engineers and technologists, we will be perceived as careening from worrying about insufficient investments in science, engineering and technology to meet national needs to a concern that we may be embarked on a course with unanticipated ends."

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Keyworth concentrated on an explication of the Reagan Administration's R & D policy, but along the way he did offer some general answers to the critics. He noted, for example, that they tend to lump funding increases and decreases together "with the result that we can't appreciate the impacts of either." And he observed, "That view seems to imply that changes are inherently bad."

He also took exception to the way comparisons between defense R & D and civilian R & D are made. Keyworth noted that many of those who insist on casting R & D policy "in that simple-minded mold of guns and butter" arrive "at the absolutely false conclusion—or maybe they start there—that the federal government's only R & D priority is for defense."

Keyworth said that the Administration had assuredly given a high priority to strengthening defense, but the point the critics miss is that it "also strongly stated a similar priority for university basic research." The core of Keyworth's case was contained in his remark that "Most of the increases in defense R & D come from development costs associated with the modernization of the nation's strategic forces—an action to restore strength that was eroded during the previous decade. On the other hand, the flat curve in civilian R & D reflects two countervailing trends—a steady drop in development and a steady rise in basic research. The essential point is that the Administration is targeting strong funding growth in both defense and basic research."

Keyworth dealt with the deficit issue obliquely. In his text, he said, "we all recognize that one of the most serious detriments to good science is what we might call roller coaster funding. The best protection against that phenomenon is for the science community to demonstrate, year after year, that R & D funds are being used wisely and effectively." And in his conclusion he developed the theme of shared responsibility. He acknowledged that the Administration had to articulate goals clearly and said "we have to stick to those goals in practice. I see this consistency as a major element of science policy, an element that I hope the Administration, the Congress, the science community and the public will be able to maintain in coming years."

In summarizing comments at the end of the colloquium, AAAS Executive Officer William D. Carey phrased his major point as the answer to the question, "What should science watchers watch?" Carey observed that in present circumstances they should not be preoccupied with minor trends in the R & D budget itself, but rather should consider such things as economic policy, export policy, and policies for defense. Carey noted that Reagan Administration treatment of basic research and higher education has been favorable. He suggested, however, that "consistency is not to be counted on," since future decisions will be determined by policies senior to science policy.—**JOHN WALSH**

*AAAS Report IX: Research and Development, FY 1985. AAAS. 284 pages.