SCIENCE ●http://www.sciencemag.org

EDITORIAL

The Reality of Science Funding

When John F. Kennedy was president, over two-thirds of the federal budget was available for discretionary spending, the category of federal spending that supports vital national missions such as the space program and national defense. Today, only one-third of the annual budget is devoted to discretionary programs. The dramatic growth of entitlement (or mandatory) spending, coupled with interest payments on the national debt, consumes the rest of the budget pie. Indeed, some projections show entitlements consuming all federal revenues by 2012. The result is an explosion of debt that, according to the Congressional Budget Office, spirals out of control beginning in 2030. Entitlement programs encompass some of the most popular and expensive initiatives the government has undertaken. But they are growing too fast. The recent bruising battle in Congress over whether to slow the annual growth rate of Medicare and Medicaid to 6 or 7% indicates how difficult it will be to enact meaningful reform of those programs. The arithmetic reality is that discretionary spending will shrink. Consequently, scientists will be in increasingly fierce fights over funding every year as the supply of discretionary dollars shrinks in real terms.

In 1995, the federal budget totaled $1.5 trillion. A staggering 65% is spent automatically every year unless Congress acts. This spending is roughly apportioned as follows: Interest on the national debt consumes 15% of the total budget and entitlement programs consume 50%, or an amazing $786 billion. The remaining 35% of the total is discretionary spending, which is subject to the annual appropriations process. Just over half of discretionary spending, or 18% of the total federal budget, is devoted to national defense. That leaves $272 billion, a mere 17% of the total, for all other federal programs, including nondefense R&D.

Despite disagreement on how to slow the growth of entitlement spending, the recent budget impasse produced an important result: Congress forced the Administration to agree on the need to balance the budget. This is good for the country, but without substantial changes in our entitlement spending habits, balancing the budget will put severe downward pressure on the discretionary slice of the budget pie. One popular way to help solve the problem is to reduce defense spending. This is not a new idea: Defense spending has declined in real terms over the past 5 years. Yet 51% of all federal R&D money comes out of the Department of Defense (DOD). In fact, DOD contributed over $1.5 billion to R&D funding at universities in 1993. It is unrealistic to think that further cuts in the DOD budget will spare R&D funding.

Both Congress and the Clinton Administration submitted plans to balance the budget over 7 years. The Administration has boasted of R&D increases in their 1997 budget proposal, but after 1998 its projected discretionary spending dives steeply. In the year 2000, coincident with the end of the next presidential term, the Administration plan requires annual spending on R&D to be cut by 18% compared with today's level. The plan also requires an unprecedented $67-billion cut in discretionary spending in 2001 and 2002. This scenario is either a huge hoax perpetuated on the American people or will require extreme reductions in discretionary spending—including funding for science programs.

Congress is strongly committed to supporting basic science, as shown by the annual appropriations bills we pass. From 1995 to 1996, Congress increased spending on basic research by 2.3% (from $13.8 to $14.1 billion) and on nondefense basic research by 2.9% (from $12.6 to $13.1 billion). Total federal R&D spending increased by 1% (from $71.0 to $71.7 billion). Scientists take note: Congress wrote these increases into law while decreasing overall discretionary spending by 2.4%. Contrary to claims that Congress is threatening to turn the clock backward with the largest cuts in 15 years, Congress sets a high priority on science and backs it up with research dollars.

The Clinton Administration's budget takes a "spend now, save later" approach. In contrast, Congress provides a more prudent, gradual reduction in discretionary spending. Congress has demonstrated, and I believe will continue to demonstrate, its commitment to technology-driven and knowledge-based economic growth. With a realistic budget plan, we can generate the economic growth and provide the discretionary spending that will allow us to continue to fund vitally important scientific research.

Pete V. Domenici

The author is a Republican Senator from New Mexico.