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Innovation and the Competitiveness Initiative in the State of the Union Address

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Last night the President announced an “American Competitiveness Initiative,” to help keep America competitive in a dynamic global economy. The core of the initiative is a series of proposals aimed at strengthening America’s ability to innovate. The U.S. once had an unchallenged lead in innovation. Now, other countries are catching up. The ability of a nation to innovate is important for competitiveness, economic health, and security. An innovative, high tech economy can better meet the challenges of globalization and new economic competitors like China and India. The president’s initiative focuses on the right problems for strengthening innovation and competitiveness, but turning these ideas into programs will be hard during an election year when the U.S. faces a ballooning budget deficit.

R&D Funding. The U.S. spends more than any other country on R&D, but most goes to the life sciences, space and defense. In other key areas – physics, engineering, and math – budgets have been flat. Increased federal funding for basic research in the physical sciences is crucial to maintaining America’s technological leadership.*

Immigration. U.S. immigration rules damage competitiveness and work against technological leadership. New rules that make it easier for talented individuals to come and stay will help the US regain ground in what has become a global competition for scientists and engineers.

R&D Tax Credits. Making the R&D tax credit permanent helps competitiveness as long as we don’t decide to pretend it is a substitute for increased Federal funding for research. Most business R&D focuses on “D” – the development of new products – rather than ‘R’ because, in an increasingly competitive global market, few companies can afford to spend risky, long-term research where there may be no payoff for years. This is a good proposal, since it increases short-term competitiveness, but this is not an answer to long-term challenges.

K-12 Science and Math Education. Proposals for better schools are always welcome, but there is a limit to what can be done without broad educational reforms. Students choose not to go into science or math because job prospects are better in other fields. More money for teachers or scholarships won’t change this.

Workforce Training. The White House says that the American Competitiveness Initiative will also include proposals to increase training. Workforce training is something the U.S. needs – high wage/low skills manufacturing jobs are not coming back. A recent Education Department survey found that only 13 percent of adult Americans have the literacy skills necessary to perform "complex and challenging activities." Upgrading workforce skills and increasing the number of "career advancement accounts" for retraining will help with dislocations brought on by globalization and the move away from manufacturing.

Energy. The U.S may lag behind other countries in developing key energy technologies, such as ethanol production and civil nuclear power, so the president's call for new research in these areas is timely. But some of the other proposals aren't risk free: previous government energy alternatives programs have been expensive and unproductive; the private sector seems to be doing fine on hybrid engines without federal help; and the market has resisted a move to hydrogen-powered vehicles.

Congress. The State of the Union speech set the goals. Now the action moves to Congress, which has to authorize and fund many of the new ideas. Congress had already picked up the innovation theme – several good bills have been introduced and we can expect to see many more. But moving these bills won't be easy. No single committee has jurisdiction over innovation or competitiveness. Any bill will have to go through several committees, and this always reduces the chances of passage. Congress will face the temptation to earmark new funds, to make sure they go to pet projects or institutions. Finally, Congress will need to decide whether to pay for new initiatives with new funding or, as some scientists fear, by taking away funding from existing programs at NIH or NASA.

*An October 2005 CSIS report lays out the case for increased basic research funding:
http://www.csis.org/media/csis/pubs/051028_waiting_for_sputnik.pdf