

# Flagging economy needs science investments

Craig Barrett

Sunday, January 20, 2008

San Francisco Chronicle

Two years ago, the National Academies published the seminal study on U.S. competitiveness entitled "Rising Above the Gathering Storm." The study identified major shortcomings in U.S. investments in basic scientific research as well as in math and science education for our youngsters. The suggestions contained in this study were immediately picked up by the Democratic House Leadership as their competitiveness strategy and later by President Bush in his State of the Union message under his American Competitiveness Initiative. Legislation in the form of the America Competes Act was passed in the House and Senate in 2007, and it appeared the United States was finally going to move forward after years of neglect to increase investment in math, science and basic research. All parties agreed that our competitiveness in the 21st century was at stake and we needed to act.

So much for political will.

The recent budget deal between Republicans and Democrats effectively flat-funds or cuts funding for key science agencies. Excluding "earmarks," the Department of Energy funding for fiscal year 2008 is up only 2.6 percent, thus losing ground to inflation. The National Science Foundation is up 2.5 percent, with the same result. The National Institute of Standards and Technology is up 11 percent, however the labs where research happens only get 2.3 percent, again losing ground to inflation. Key national laboratories, such as the Fermilab, which focuses on high-energy particle physics research, face the likelihood of hundreds of jobs being lost and the closing of some facilities, helping to shortchange defense research. Predicting the impact of such funding cuts in basic research on future job creation is difficult. Who could have predicted a \$300 billion semiconductor industry from the invention of a transistor? But our kids who are heading to college are very smart. They will make their career decisions based on where they see the priorities of our government and economy.

The funding decisions on the America Competes Act took place a few days after Congress passed a \$250 billion farm bill. In the eyes of our political leaders, apparently, corn subsidies to Iowa farmers are more important for our competitiveness in the next century than investing a few billion in our major research universities. The president expressed his happiness with the budget and Sen. Harry Reid, the Senate Majority Leader, said, "The president didn't get his priorities, we got ours."

At a time when the rest of the world is increasing its emphasis on math and science education (the most recent international tests - NAEP and PISA - show U.S. kids to be below average) and increasing their budgets for basic engineering and physical science research, Congress is telling the world these areas are not important to our future. At a time when we are failing our next generation of students, politically charged topics such as steroids in Major League Baseball and the destruction of CIA interrogation tapes command instantaneous congressional hearings while the seed corn (no pun intended) of our future is ignored and placed lower in priority than billions of dollars of earmarks.

Perhaps this would all be a moot discussion if we could continue to import the best and brightest minds from around the world to start and staff our next generation of high tech startups. But Washington can't even get that strategy straight, as legal immigration - the process by which bright, highly educated workers immigrate to the United States - is being choked by our inability to control illegal immigration. While the EU has proposed a simplified and expanded program for importing highly educated talent from the rest of the world, we continue to make it more difficult for the same talent to work in the United States, even when some of these knowledge workers have received their education in the United States at partial taxpayer expense.

Where are the voices in Washington to bring reasoned debate and action to these topics? Where are the voices among the presidential candidates to propose solutions to these challenges? What do we elect our political leaders for if not to protect our long-term future?

The United States stands at a pivotal point in our history. Competition is heating up around the world with millions of industrious, highly educated workers who are willing to compete at salaries far below those paid here. The only way we can hope to compete is with brains and ideas that set us above the competition - and that only comes from investments in education and R&D. Practically everyone who has traveled outside the United States in the last decade has seen this dynamic at work. The only place where it is apparently still a deep, dark secret is in Washington, D.C.

What are they thinking? When will they wake up? It may already be too late; but I genuinely think the citizenry of this country wants the United States to compete. If only our elected leaders weren't holding us back.

*Craig Barrett is the chairman of Intel.*

This article appeared on page **G - 5** of the San Francisco Chronicle