



September 16, 2010 by Pamela Villarreal and Michael Barba

Prior to the 1970s, there were barriers to foreign investment, such as laws limiting ownership of United States corporations. As trade barriers fell in the 1970s and the economies of countries in North America, Europe and Asia became more integrated, U.S. policymakers focused on incentives to attract foreign investment.

Policymakers also created incentives for domestic companies to keep jobs and capital in America, rather than invest in foreign countries. One of these incentives is the research and development (R&D) tax credit.

The R&D tax credit would contribute more to economic recovery and job creation if it were permanent, more generous and covered a wider variety of R&D.

What is the R&D tax credit? The R&D tax credit reduces a firm's federal tax liabilities, based on the amount spent (on wages, patent attorneys' fees and so forth) to develop a new product or improve existing products. Over the years the credit has had several names, and it has been calculated in various ways.

In recent years, firms have basically had two tax credit options: the regular research credit (RRC) or the alternative simplified credit (ASC). The RRC is allowed for spending in excess of a specified base amount—a ratio of R&D to sales expenses. For firms that existed from 1984 to 1988, that is the base period, and they receive a 20% credit on R&D. (For newer firms, the credit is calculated on a sliding scale.)

For example, under the RRC, if a corporation spends \$500,000 on research and has sales expenses of \$500,000, their base ratio is 1:1. If their R&D remains the same the following four years, but their sales expenses increase to \$1 million, additional R&D spending will not be eligible for the tax credit until they re-establish a 1:1 ratio by increasing their R&D spending beyond \$1 million.

The ASC is a 14% credit for expenses in excess of 50% of R&D expenditures averaged over the firm's three preceding tax years. This allows a firm to continue receiving the credit even if research costs are level or decrease. While the RRC limits the tax credit available by measuring from a fixed historical period, the ASC eliminates this problem. This is useful to manufacturing and high-tech companies that are often limited by the RRC.

In 1981, the U.S. enacted the most generous R&D credit of any nation. However, by 2010, 16 other nations had a more generous tax break, as measured by an index (developed by economists Donald McFetridge and Jacek Warda) that accounts for differences in corporate tax rates among

countries, as well as direct and indirect subsidies. Expressing the value of the credit as a percentage of R&D spending, the index shows that in 2006:

- Spain provided a 44 cent tax credit for each dollar spent on R&D.
- Mexico provided a 37 cent tax credit per dollar of R&D spending.
- Canada provided a 17 cent tax credit per dollar of R&D.

The United States' R&D tax credit, by contrast, resulted in only a 7 cent tax credit for each dollar spent. With only modest domestic benefits to attract them, U.S. firms are voting with their feet. Economist Robert Atkinson notes that from 1998 to 2003, U.S. firms invested twice as much in R&D abroad as domestically. As a result, R&D as a share of gross domestic product (GDP) slipped from 1.84% in 2000 to 1.67% in 2003.

Nonetheless, the U.S. has a particular advantage over other countries. Because R&D credits reduce short-term tax collections from foreign companies, many nations have raised domestic taxes to compensate for the lost revenue. This implicitly assumes that the value of attracting international business is less than the short-term revenue loss from the credit. The U.S. approach, by contrast, assumes that the benefits of increased R&D investment outweigh the revenue loss.

The most immediate benefit of the R&D tax credit is the creation or retention of jobs. But there are wider social benefits produced over the long term, including increased innovation, GDP and taxable revenue.

The solution? Make the R&D tax credits permanent, expand the alternative simplified credit and apply credits to "process" R&D.

Since 1981, the tax credit has lapsed several times and has been temporarily renewed 14 times. Concerned about the budgetary impact of lost tax revenue, Congress has never made the credit permanent. In the long run, the tax credit increases GDP by as much as \$2.96 for each dollar of tax revenue lost, but a stop-and-go policy is less beneficial. Increased productivity from higher R&D investment will yield greater tax revenues than otherwise. Thus, the tax credit should be made permanent.

According to estimates by the Information Technology and Innovation Foundation, increasing the ASC from 14% to 20% would:

- Increase annual GDP by \$90 billion.
- Create \$17 billion in taxable revenues annually.
- Increase the annual number of American patents by over 3,800.
- Create 162,000 jobs within months.

In addition, research that seeks to improve production methods (process R&D) does not qualify for credits. Applying the tax credit to process R&D will provide incentives to improve production methods, resulting in increased jobs and productivity. This would also provide incentives to conduct research and manufacturing in the U.S., as opposed to splitting the process between nations.

So while it has been argued that lower overall tax rates on businesses are more valuable than the R&D tax credit, under an ideal tax system investment would be removed from the tax base and only consumption would be taxed. In the meantime, the R&D tax credit reduces the tax burden on business spending that can have the greatest positive impact on productivity, and thus have the greatest potential benefit to society.

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