

A Special Report  
**Research and  
Development Tax Credit**



## **RESEARCH AND DEVELOPMENT TAX CREDIT**

### **Executive Summary**

The aerospace and civil aviation industries account for nearly 15 percent of the U.S. Gross Domestic Product and support approximately 11 million domestic jobs. Consequently, America's economic growth and national security depend on this high technology workforce, which includes many segments of applied research including air transportation, military operations, and space-based communications. Yet these U.S. firms, which produce the world's most reliable aerospace systems and sub-systems, must compete with a foreign marketplace in which government entities underwrite a significant portion of the industry's civil aeronautics research and development (R&D).

Since 1981, the U.S. R&D tax credit has spurred innovation, thereby strengthening U.S. competitiveness and creating high-tech jobs domestically. On average, U.S. firms invest an additional \$94 in research and development for every \$6 the federal government invests through the R&D tax credit.<sup>1</sup> During this time of global recession, preserving and creating high-tech jobs in the United States is essential for our domestic economy to thrive. The R&D tax credit will help to accomplish this goal. More than 75 percent of the R&D tax credit dollars are earned on wages paid to individuals directly involved in research conducted in the United States.<sup>2</sup>

Further, if Congress were to enhance the R&D tax credit instead of simply extending it annually, we believe the result would be an immediate and positive impact on U.S. innovation and high-tech job creation. For example, one study suggests that raising the Alternative Simplified R&D tax credit rate to 20 percent would create 162,000 jobs and have a positive spillover effect on the overall economy.<sup>3</sup> However, for the ongoing benefits to have real teeth, the R&D tax credit must be made permanent.

### **Global Competition**

President Obama said it best in his *State of the Union Address*: "We need to encourage American innovation."<sup>4</sup> Innovation keeps the U.S. economy thriving, and the R&D tax credit helps spur that innovation. Since 1981, Congress has repeatedly affirmed the R&D tax credit's

importance to the United States. The President, in his latest budget, also demonstrates the value of the credit to U.S. competitiveness by recommending a permanent extension.

American industry is at an important crossroads as foreign competitors and potential competitors improve their technological capabilities. The United States must not take a step backwards, but instead, make a leap forward.

The United States was a pioneer in encouraging private sector R&D. Yet despite this early lead, U.S. R&D incentives have been surpassed by sixteen other OECD nations.<sup>5</sup> As a result, the United States must constantly compete for R&D investment dollars with Australia, Canada, France, Japan, Portugal, Spain, the United Kingdom, and others. Of particular concern are the emerging technological powers that are making enormous advances each year, such as India and China.

Innovation drives U.S. competitive advantage in the global marketplace. Currently, the United States devotes approximately 2.5 percent of GDP to research and development, ranking it seventh in the world.<sup>6</sup> To regain its position as the worldwide leader in innovation, the U.S. government must partner with the private sector in making investments that the country needs. One of the reasons the R&D tax credit was initially enacted was to assist the private sector in developing new products and performing experimental research. Such collaboration between government and industry must again become a priority of our national economic strategy.

### **High-tech US Jobs**

The U.S. government not only needs to create and maintain jobs, but it needs to create and maintain highly skilled, well-paid, *high-tech* jobs. Such high-tech jobs include scientists and engineers who perform the research and development activities that are the backbone of American innovation. The R&D tax credit enables this job creation. In several industries, more than 90 percent of the credit dollars are generated by wages.<sup>7</sup> More importantly, only research conducted in the United States qualifies for the credit, thereby guaranteeing domestic employment. Without the U.S. R&D tax credit, firms are likely to locate new R&D operations -- and the associated jobs-- where tax regimes are more favorable.

The depth and breadth of the firms that benefit from the R&D tax credit is extraordinary. Between 14,000 and 18,000 firms claim the R&D tax credit on their annual tax returns.<sup>8</sup> The

industrial sectors represented include services, retail, wholesale, construction, real estate, and manufacturing.

Several economic studies by independent academic economists have examined the effect of R&D tax incentives on private sector research. The findings vary considerably; however, all the studies show a yield in excess of \$1 for every dollar of incentive. A study conducted by Bloom, Griffith, and Van Reenen found that the credit stimulates \$1.10 of research for every dollar of tax revenue.<sup>9</sup> Another study conducted over a ten-year period found that approximately two dollars in research were generated for every one dollar in tax expenditure.<sup>10</sup> A third study performed by Klassen, Pittman, and Reed found that the R&D tax credit induces \$2.96 of additional R&D investment for every tax dollar spent.<sup>11</sup> Further, the Bureau of Labor Statistics estimates that every dollar of tax benefit spurs an additional dollar of private sector research and development.<sup>12</sup>

KPMG found that a one-dollar reduction in the after-tax price of R&D stimulates approximately one dollar of additional private R&D spending in the short run, and about two dollars of additional R&D in the long run.<sup>13</sup> That, in turn, implies long-run gains in GDP. Of course, additional spending on R&D equates to more U.S. jobs since the majority of R&D tax credit dollars are directed towards wages.

In short, a preponderance of the studies supports the conclusion that the R&D tax credit spurs additional research and development investment by the private sector, leading to more jobs created and preserved in the United States.

As described, the direct effects of the R&D tax credit on job creation are clear. The indirect economic benefits, while not as easily quantifiable, are many. Innovation is an intricate process that sparks a chain of investment in capital equipment, workers, and spillover activities in every economic sector. A strong, permanent R&D tax credit would enable companies to bring more products and services to market, increase employment, and raise the standard of living for many Americans.

Extending the current R&D tax credit is essential to the preservation of high-tech jobs in the United States. However, this only maintains the status quo as other national tax policies move their economies forward. To achieve actual job creation, the U.S. government must consider enhancing the existing R&D tax credit. The Information Technology and Innovation Foundation (ITIF) found that an expansion of the Alternative Simplified Credit rate<sup>14</sup> from 14

percent to 20 percent – the same rate as the regular credit – would result in the creation of 162,000 jobs in the short-run and an additional, but not easily quantifiable, number of jobs in the longer run. The ITIF estimates that the expansion of the credit would lead to an increase in annual GDP of \$90 billion, an increase in the number of patents issued to American inventors by 3,850, and an increase in federal tax revenues by \$17 billion, which is significantly more than the cost of expanding the credit itself. The extension and enhancement of the R&D tax credit will lead to high-tech job creation here in the United States.

### **A Permanent R&D Tax Credit and its Administration**

Although the benefits that the R&D tax credit creates are significant, they would increase many-fold if the credit was made permanent. The primary disincentive is uncertainty. A permanent R&D tax credit would enhance its incentive value because companies could count on the credit throughout the term of their multiyear research projects. A temporary credit undermines the very purpose of this critical law. R&D projects are never a stop-and-start proposition. Accordingly, the U.S. tax law that encourages research and development activities should not be stop-and-start. Congress needs to make the R&D tax credit a permanent incentive for U.S. companies.

The alternative simplified method (“ASC”) of calculating the R&D tax credit has been widely adopted by several industries, including aerospace. A primary reason for this is that under the “regular” credit method, a taxpayer is required to show detailed records going back to 1984 in calculating the base period (or threshold) that must be surpassed in the current year to receive a credit. The rolling base period under the ASC is an effective policy mechanism for rewarding increases in R&D activity without triggering the drawbacks of the base period. Congress should create parity in the credit rates regardless of which calculation the taxpayer uses (currently the ASC is at 14% while the regular credit gets 20%). As cited previously, achieving parity in the credit rates would result in the creation of 162,000 jobs in the short-run.

## Conclusion

For decades, the research and development tax credit has been essential in keeping America competitive in the global economy. The credit is also fundamentally instrumental in creating and preserving high-skill, well-paying employment opportunities in the United States. However, in recent years, the credit has lost some of its original effectiveness, particularly when compared to incentives offered by tax regimes of many competing nations.<sup>15</sup> Reinstatement of the tax credit is critical if the United States is to remain at the forefront of innovation in the international industrial arena and is to continue to provide highly skilled jobs in the United States. Further, expanding the R&D tax credit from 14 to 20 percent would yield even greater benefits for the U.S. economy. Finally, the R&D tax credit must be made permanent because companies count on the credit throughout the term of their multiyear projects. Making the R&D tax credit permanent will ensure that the full potential of the credit is achieved.

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<sup>1</sup> “America’s Future: R&D”, R&D Credit Coalition, 2004.

<sup>2</sup> “America’s Future: R&D”, R&D Credit Coalition, 2004.

<sup>3</sup> Robert D. Atkinson, “Creating Jobs by Expanding the R&D Tax Credit,” The Information Technology and Innovation Foundation, January 26, 2010.

<sup>4</sup> 2010 State of Union Speech, President Barack Obama, January 2010.

<sup>5</sup> Jacek Warda, “Tax Treatment of Investment in Intellectual Assets: An International Comparison,” OECD Science, Technology and Industry Working Papers 4 (Paris: OECD, 2006)

<sup>6</sup> Gresser, Weinstein, and Marshall, “Raising Our Game,” Progressive Policy Institute, June 2006.

<sup>7</sup> “America’s Future: R&D”, R&D Credit Coalition, 2004.

<sup>8</sup> “Supporting Innovation and Economic Growth: The Broad Impact of the R&D Tax Credit in 2005,” Ernst & Young, April 2008.

<sup>9</sup> Nick Bloom, Rachel Griffith, John van Reenen, “Do R&D Tax Credits Work? Evidence from a Panel of Countries, 1979-1997,” *Journal of Public Economics* 85 (2002): 1-31

<sup>10</sup> Bronwyn Hall, “R&D Tax Policy During the Eighties: Success or Failure?” NBER Working Paper, No. 4240, Cambridge, MA, 1992.

<sup>11</sup> Kenneth Klassen, Jeffrey Pittman, and Margaret Reed, “A Cross-national Comparison of R&D Expenditure Decisions: Tax Incentives and Financial Constraints,” *Contemporary Accounting Research*, Vol 21, no. 3 (Fall 2004): 639-80

<sup>12</sup> “Position Paper on Permanent Extension of the Research & Development Tax Credit,” Valley Industry Commerce Association, November 15, 2005

<sup>13</sup> “Extending the R&D Tax Credit: The Importance of Permanence,” KPMG November 1994

<sup>14</sup> The alternative simplified credit equals 12 percent of the excess of current-year qualified research expenses (“QREs”), as defined under section 41(b), over 50 percent of the taxpayer's average QREs for the prior three years. For start-up taxpayers, the credit would equal 6 percent of current-year QREs. QREs are the sum of (1) “in-house research expenses” and (2) “contract research expenses”. In-house research expenses are: any “wages” paid or incurred to an employee for “qualified services” performed by such employee; any amount paid or incurred for “supplies” used in the conduct of “qualified research”; or under regulations prescribed by the Secretary, any amount paid or incurred to another person for the right to use computers in the conduct of qualified research. Contract research expenses are defined as 65 percent of any amount paid or incurred by the taxpayer to any person (other than an employee of the taxpayer) for qualified research.

<sup>15</sup> For a comparison of international R & D tax incentives, see a survey conducted by Ernst and Young in 2008. <http://www.investinamericasfuture.org/PDFs/newRDchartRev04-04-08doc1.pdf>