EFFECT OF STATE R&D TAX CREDITS IN STIMULATING STATE INDUSTRIAL R&D ACTIVITY*

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INTRODUCTION

STATE AND LOCAL GOVERNMENTS HAVE AN array of tools that can be used to encourage economic development, some of which are specifically geared toward high-tech economic development. A proliferation of tax incentives via tax holidays, tax credits, and exemptions has developed over the last 20 or so years. These various incentives have often been focused on attracting jobs to specific locations. However, there is relatively little research that has analyzed the impact of these incentives. The focus of this paper is on one of the most common state tax credits offered in the name of economic development—the state research and development tax credit.

There have been a number of studies considering the effect of the Federal Research and Experimentation (R&E) Tax Credit on the levels of industrial research and development (R&D) in the United States. However, a lack of data on state R&D tax credits has limited the research exploring the effect of the state tax credit on industrial R&D activity in states. We utilize data from a variety of sources to estimate whether state R&D credits have had an impact on the level of research and development by corporations in U.S. states. Our main hypothesis is straightforward—if the credit reduces the cost of research so that the net present value of returns from the R&D are greater than zero, the state credit should induce higher levels of R&D than without the credit (holding other factors constant). A related question is whether the credit and R&D have increased economic development (proxied by job growth). We leave this question for future research.

We focus on the impact of state R&D tax credits in stimulating the amount of *privately funded* industrial R&D activity in a state. The credit rate directly affects the cost of R&D. Higher credit rates allow firms to recoup a larger percentage of their R&D expenditures. The purpose of this research is to determine the size and relevance of the price effect on the levels of R&D activity within a state, particularly in comparison to other factors that may influence the amount of industrial R&D activity conducted in a state.

This paper proceeds as follows. In the next section, we provide an overview of R&D activity over the last 50 years in the United States. The third and fourth sections provide a summary of how the R&D credits work—including those at the federal level. In the fifth section, we present a review of the literature on the effectiveness of the credit at the national, state, and international level. Next we discuss the model and econometric techniques used in the estimation. This is followed by a section that describes the variables used in the estimation model and their sources. Lastly, we report our results and end our work with a brief conclusion based on our findings.

U.S. RESEARCH AND DEVELOPMENT ACTIVITY

Research and development activities are performed by several different groups. As a whole, the real value of R&D activity has risen significantly over the past 50 years as shown in Figure 1. The growth is due almost solely to increases in industry performed R&D which grew 969 percent over the past 50 years in real terms. Research activities performed at educational institutions have actually grown by a greater amount but still account for a significantly smaller portion of all R&D activities in the United States. Federally performed R&D activities grew 282 percent over the same time period.

The level of industry funded R&D activities has increased significantly over time as well. Figure 2 illustrates the growth in constant dollars over the 1953-2003 period by source of funding for industrial R&D activity. Driving the growth has been increased funding of R&D activities by the companies themselves as federal funds for this activity have remained flat over the time period.

Figure 3 illustrates the high degree of concentration of industrial R&D activities in the United

*This research is sponsored in part by a grant from the "Roadmap for an Entrepreneurial Economy Initiative" funded by the Ewing Marion Kauffman Foundation and the Georgia Research Alliance.

Figure 1: **U.S. R&D Expenditures by Performing Sector, 1953-2006**

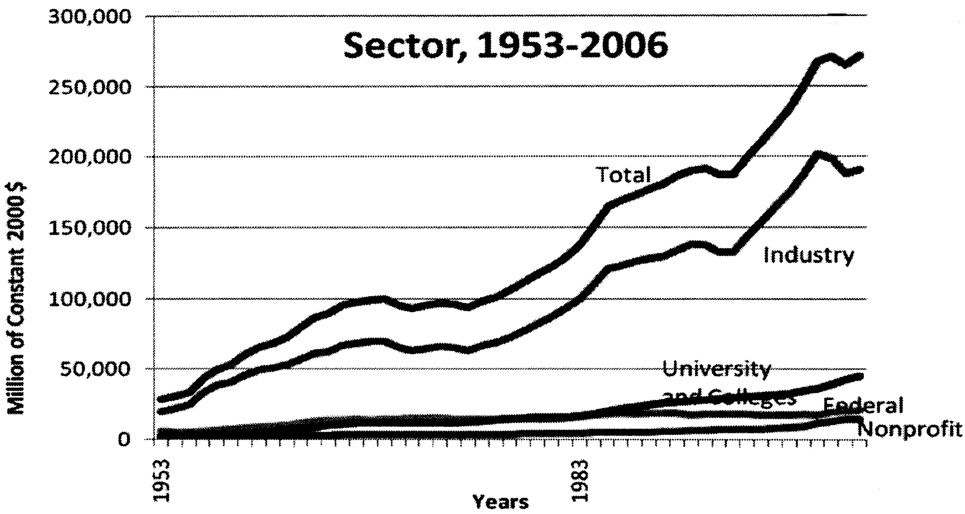
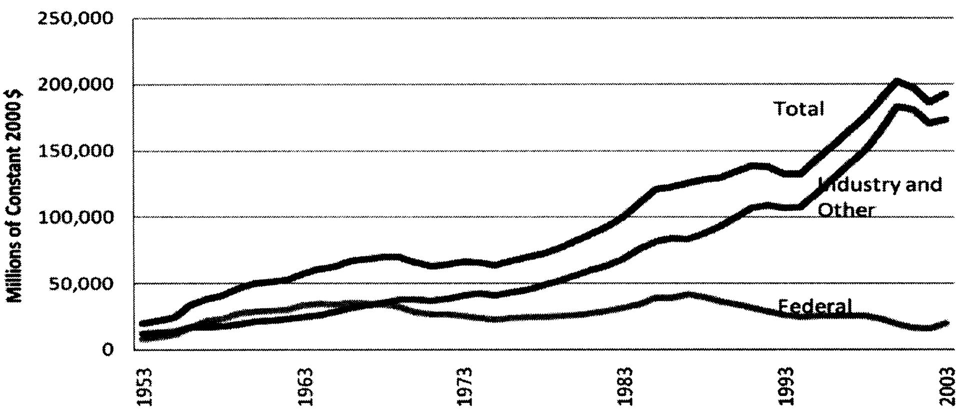


Figure 2: **Industrial R&D by Source of Funds, 1953-2003**



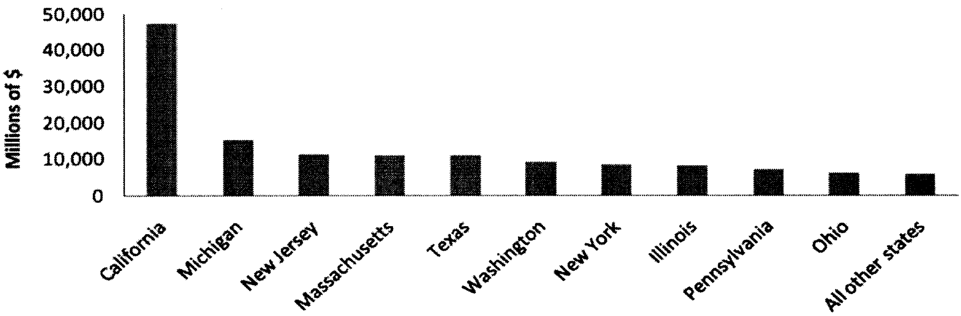
States. Based on NSF 2003 data from the Survey of Industrial Research and Development, the top 10 states ordered by value of industrial R&D activity accounted for 59 percent of all U.S. firms with industrial R&D activity and 66 percent of all U.S. expenditures on industrial R&D activity. California leads the way in R&D expenditures. In the next section, we highlight the federal R&E credit. It is important to understand that credit as many states couple closely to the federal credit.

FEDERAL R&E TAX CREDIT

The federal R&E credit has been in existence since the Economic Tax Recovery Act of 1981. The credit periodically expires and is renewed and as a result has undergone some changes since its inception. In addition, research and development expenses that are not covered by the R&E credit are fully deductible under I.R.C section 174.

In general, the credit provides a reduction in tax liability for qualified research expenses,

Figure 3: **Geographic Distribution of Industrial R&D Expenditures, 2003**



where qualified expenses are defined to include such items as wages of employees, supplies (other than land, improvements to land, or depreciable property), 65 percent of any amount paid for qualified research done on a contract basis or 75 percent of any amount paid for qualified research done by a research consortium.[1] Federal legislation defines qualified research as that "which is undertaken for the purpose of discovering information which is technical in nature, the application of which is intended to be useful in the development of a new or improved business component of the taxpayer."[2] The legislation specifically prohibits application of the credit to expenses associated with research conducted after commercial production, adapting existing technology for a specific need or customer, duplication of any existing business component, surveys, studies, marketing research, routine data collection or testing for quality control, computer software, internal use computer software, research conducted outside the United States, Social Science research, and funded research.[3]

For a specific firm, the credit is equal to 20 percent of the qualified research expenses for the year in excess of the base amount of research expenditures. The credits can be used when earned only if a positive tax liability exists. Unused credits can be carried back 3 years and forward 15. The base amount of research expenditures is defined as the product of the fixed-base percentage and the average annual gross receipts of the taxpayer for the 4 years prior to the tax year for which the credit is being determined. By law the base amount cannot be less that 50 percent of the qualified research expenses for that year. The fixed-base percentage is defined as the ratio between the taxpayer's qualified research expenditures and gross receipts during 1984-1988.

The basic calculation is structured so that firms are only rewarded for expenditures in excess of a base amount. Thus, the provision is designed to stimulate new or incremental research expenditures. Second, the amount of the tax credit is dependent on the base level of expenditures taken during the 1984-1988 time period. Originally, the time period was a moving one consisting of the prior four years to the tax year in question. Under that rule, companies complained that the system created an ever increasing standard for the base level of expenditures. For instance, substantially increasing research expenditures one year would raise the base of research expenditures for future years. Only research expenditures in excess of the new, higher base would be subject to the credit. Because of this design, firms with high expenditures one year would end up reducing the value of the tax credit in future years because not all future expenditures would be in excess of the new base. By tying the base of expenditures to those taken in the past, a one-time standard was set for each company. Special rules apply for firms which were not in existence during the 1984-1998 period.[4]

As an alternative to the standard tax credit, firms may elect to take the Alternative Incremental Credit. Under this option, the value of the credit is based on a progressive scale of expenditures. For example, a firm can receive 2.65 percent of qualified expenses in excess of 1 percent of the average annual gross receipts for the past 4 years but not to exceed 1.5 percent of receipts. The value of the credit increases to 3.2 percent for qualified expenses between 1.5 and 2 percent of average gross receipts. For expenditures in excess of 2 percent of the average annual gross receipts, firms can receive a credit worth 3.75 percent of expenditures.

A report by Ernst & Young (Koch, 2004), employing data from Statistics of Income (SOI) states that the total value of the federal tax credit in 2000 was $7.2 billion. This amount was claimed by more than 15,000 firms. Approximately 80 percent of the credits were taken by firms with assets in excess of $250,000. The majority of the credits were taken by the manufacturing, information, and service sectors. Together this group accounted for about 95 percent or $6.8 billion of the $7.2 billion claimed in 2000.[5] While manufacturing firms only accounted for about 11 percent of all firms claiming the credit, these firms claimed 69 percent of the total credit value in 2000. By state, California had the largest number of firms taking the federal credit. Georgia was ranked 19th with 855 firms taking the federal tax credit. SOI data for 2003 indicates that 9,697 corporate firms claimed the regular federal credit for a total of $4.8 billion. Another 455 corporate firms claimed the Alternative Incremental Credit for $0.6 billion.

STATE R&D CREDITS

As of 2003, 37 states offered some type of tax credit for research activities.[6] This is up from 1985 when only 7 states offered such a credit. Originally, almost all state credits were modeled after the federal credit but with lower credit rates. In general, the state credits rely on the federal definition of qualified R&D activities and operate in a similar manner to the federal credit.

There are several characteristics of the state credit that can be used to distinguish one state credit from another. The most prominent feature of the credit is the rate. State credit rates for qualified R&D activities vary from zero to 20 percent in Hawaii and 33 percent in Arkansas.[7] For instance, while some states have retained the use of the 1984-1988 base of expenditures, many states define the base of qualified expenditures for the current year as a function of the expenditures over the previous three or four years. In addition, some states offer a non-incremental credit as opposed to the incremental credit offered at the federal level. Under a nonincremental credit, all R&D expenditures are eligible for the credit, not just those exceeding some base amount. Another potentially generous feature of some state credits is the ability to transfer unused credits to another party. Several states offer such a credit including Pennsylvania, New Jersey, and Hawaii. Many firms with R&D activities may not have positive tax liabilities. Since the credit is of no value to a firm with little or no tax liability, selling the credits allows the R&D firm to generate much needed cash. On the limiting side, several states impose an overall cap on the value of credits awarded annually and many impose limits on the amount of the tax liability that can be eliminated with the credit, such as Georgia which allows firms to used the credit against a maximum 50 percent of their tax liability with the remaining credits being carried forward.

While there is no single source of information on the value of R&D credits awarded at the state level, several states report the use of the credit. For example, in 2003 California awarded R&D credits of $551 million for 5,086 filers.[8] Pennsylvania awarded the total amount allowed by state law, $15 million, but had total claims of $70.2 million by 242 filers.[9]

EFFECTS OF R&E AND R&D CREDITS: LITERATURE REVIEW

The traditional justification for the federal tax credit for research and development has been that this type of activity produces positive spillovers (externalities) for society. From the viewpoint of society, the firm will produce too little R&D activity because it is not possible for the firm to capture all of the benefits. The federal subsidy lowers costs and encourages firms to increase their consumption of R&D activities. The state credit seems to be offered with a different goal in mind. At the state level, this credit is viewed as a mechanism by which states can compete with each other in attracting R&D activities to their state and by which they can perhaps foster a high-tech industry in their state. Thus, at the state level, the justification is not a desire to improve national social welfare, but to increase economic development and job creation at the state level.

Due largely to difficulty in gathering data, only a few studies have considered the efficacy of state R&D tax credits. The first, by Paff (2005), is the only study to employ firm-level data. The author constructed a dataset of biopharmaceuticals and software firms located in Massachusetts and California between 1994 and 1999. The firms are drawn from the Compustat database and additional information is gathered from SEC reports for each of the firms in the database. The author takes advantage of a natural experiment in which the California R&D credit rate was increased over the 1997-1999 time period but no credit rate adjustment occurred in Massachusetts. To estimate the impact of increases in the credit rate of the California R&D tax credit, the author utilizes a difference-in-difference model comparing levels of R&D activity between California and Massachusetts over the 1994-1999 period. The analysis finds some evidence that the tax price of R&D expenditures inclusive of both federal and state incentives is a significant determinant in the amount of R&D undertaken by a firm. Exploring further the author finds conflicting and possibly unrealistic estimates of the elasticity of the amount of firm R&D with respect to the tax price. The results indicate that the tax price may have an influence on certain types of R&D expenditures in particular industries but not an across-the-board effect.

The second study by Wu (2005) employs cross-sectional data for 13 states with large amounts of R&D activity over a 17-year period. This approach focuses on several other factors that affect the level of R&D activity in a state in addition to the R&D tax credit. Regressing the value of the state's level of R&D expenditure against a dummy variable for a state R&D tax credit, the study finds limited support for a relationship between a state R&D tax credit and the level of R&D expenditures. Furthermore, the author finds no effect of the value of the credit on the level of industrial R&D activity in a state.[10] The results do indicate that increases in Gross State Product lead to increases in the level of state R&D expenditures as do the percent of the population with a doctoral degree and the unanticipated result that the share of the state workforce employed in the service sector also leads to increases in state R&D spending.

A third study is by Wilson (2005) and considers the combined effect of the value of state R&D credits offered by the firm's own state and those offered in other states on the level of state R&D. The author argues that R&D activity is mobile and is influenced not only by the credits offered in its home state but also by credits available in other states. This study employs state level data to construct a user cost of R&D capital for each state over the 1981-2002 period. While this approach has been used in several studies of the national R&E credit, it had not been applied to studies of the state credit. The user cost formula employed by Wilson incorporates the effect of both the federal and state tax credits for research and development expenditures, the real interest rate and the value of economic depreciation. Based on the author's calculations, the user cost varies fairly substantially between the states. This variation is driven by the differences between state tax rates and credit rates and structures. The author estimates the standard model in which the price of R&D is a determinant of the level of R&D expenditure in the state. The results indicate that a 1 percentage point increase in the state's effective R&D tax credit rate leads to a 2.4 percent increase in R&D expenditures. On the other hand, the effect of the surrounding states' tax credit rate is found to have an almost equal negative effect on the level of R&D expenditures in a state. That is, this work finds that states compete with each other for R&D resources and that overall the presence of state R&D tax credits do not increase the amount of R&D activity undertaken in the country.

At the federal level, CBO (2007) summarizes some of the empirical literature on the federal R&E credit. The CBO report suggests that although there is not a strict consensus on the impact of the federal credit on R&D expenditures, there is some clustering around a 1-to-1 result—that one dollar of credit increases own firm spending by one dollar. Since the federal government has less competition (as opposed to the states), the net R&D nationwide is thought to be positive as a result of the federal credit. A similar long-run result was obtained by Bloom et al. (2002). Their study was based on a 19-year panel of 9 OECD countries and develops a user cost of R&D for each country. Their analysis yields an estimated short-run elasticity of around -0.14 and a long-run elasticity of around -1.

MODEL AND ESTIMATION

In our paper, we use an empirical model that is similar to that used in the literature to estimate the impact of state R&D credits on investment. Here, the main variable of interest in the model is the state R&D tax credit. The tax credit affects the cost of R&D activities through its effect on the price of conducting R&D within a state. The credit rate specifies the amount of R&D expenditures that can be used against a firm's tax liability. For instance, a credit rate of 10 percent means that 10 percent of allowable expenses can be used as a dollar-for-dollar reduction in the firm's state tax liability. Higher credit rates allow firms to recoup a larger percentage of their R&D expenditures and reduce the cost of R&D activities in the state. In addition to any available state credits, firms are also be eligible for the federal R&E credit. Since this credit is applied uniformly to all U.S. firms, it should have no effect on the variation in R&D expenditures between states. We therefore do not include the federal credit in our estimation at this point, although in the future we plan to test the impact of a combined federal-state credit.

In addition to the credit rate, the estimation equation also contains other factors believed to affect state R&D activity—similar to other studies. This model is comprised of a set of explanatory variables capturing the effect of factors such as the education level of the state population, the level of federal spending on R&D in the state, the level of manufacturing employment, gross state product, the full-time equivalent state university enrollment, and the level of Small Business Administration (SBA) grants (SBIR-STTR) awarded in the state. It is hypothesized that the level of SBIR-STTR grants awarded in a state will have a positive influence on the level of industrial R&D activity in a state. The effect works through two avenues. The first is by reducing the cost of the R&D activity through the value of the grant. The second is through a complimentary effect in which the SBIR-STTR funds generate R&D activity which in turn stimulates additional privately funded R&D activity (i.e., a spillover effect). In addition to the value of SBA grants, the data set includes information on the value of institutional venture investments by state. These are funds invested by institutions such as pension funds in startup and expansion operations.[11] This variable is tested in some of the regression equations.

The final version of the estimating equation is

$$\textbf{(1)} \quad RDexp_{i,t} = \alpha + \beta(X_{i,t}) + \delta_1(cr_{i,t}) + v_{i,t},$$

where $X_{i,t}$ is a vector of state characteristics, $cr_{i,t}$ is the statutory value of the state R&D tax credit, and $v_{i,t}$ is the error term. Various forms of equation (1) are explored using fixed-effects and random-effects models.

DESCRIPTION OF VARIABLES AND DATA SOURCES

We construct a time series cross-sectional data set similar to that in the Wilson study. The proposed data set covers all states over the 1985-2003 period. The variable construction and sources are listed in Table 1. The dependant variable in the model captures the level of company-funded industrial R&D activity occurring in a state during the calendar year. It is important to distinguish between company-funded industrial R&D activities and total industrial R&D activities since only company-funded activities are eligible for the state or federal tax credit.

Data for this variable are available from the annual NSF publication, *Research and Development in Industry* and are collected from the Survey of Industrial Research & Development conducted by the National Science Foundation in conjunction with the Census Bureau. The data are available by state for every year since 1997 and every other year between 1965 and 1997. This survey is based on a sample of firms designed to represent all for-profit firms with R&D activity. Prior to 1994 the sample size was approximately 14,000 firms. From 1992 onward, the sample size was increased to approximately 25,000 firms. Since 1996 firms with R&D expenditures of $5 million or more are surveyed annually. The data are aggregated to the state level but due to issues involving confidentiality of survey respondents, many state observations are missing or not disclosed. This is especially problematic in the pre-1996 data. In 1985, data on company-funded industrial R&D expenditures was non-missing for 27 states. In 2003 this variable was non-missing for 46 states.

Our main variable of interest is the value of the R&D tax credit for each state. This variable is collected from several sources. Several papers such as Wilson (2007) and Paff (2005), include the tax credit rates for some years in their text.[12] This information was used as a first pass. This information was also corroborated with Rashkin (2007). This is a compendium of the federal and state treatment of R&D activities generally for 2003 to the present. While this source offers data for only one point in time, it contains a very detailed discussion of all

Table 1
Variables and Data Sources

Variable Name	*Source of Data*
Dependant variable – 1. Private industry expenditures on industrial R&D activity by state (company_rd)	Company expenditures on industrial R&D; data available for every other year 1985-1996 and every year between 1997-2003 from the NSF Survey of Industrial Research and Development; expressed in millions of dollars.
Total Federal Science and Engineering obligations by state (ttlfedob)	Total federal obligations in the areas of science and engineering to colleges and universities; data from NSF via National Center for Education Statistics; expressed in thousands of dollars; available for 1993-2003.
Size of Universities in state (ttlenrollpop)	Total public and private full-time equivalent enrollment in colleges and universities by state per state population; data available from National Center for Education Statistics, Digest of Education Statistics; Available for 1985-2003; expressed as FTE enrollment/ population.
Value of SBIR/STTR Awards (sba_ttlvalue)	Combined value of awards from the Small Business Innovation Research (SBIR) Program and the Small Business Technology Transfer (STTR) Program; data available from the Small Business Administration; award data available from 1985 to 2003 (awards are only granted to American-owned for-profit firms with 500 or fewer employees).
Value of research and development tax credits offered for each state (credit_rate)	Value of the statutory credit rate offered by each state for research and development activities; gathered by the authors from information available from state Web sites and state statutes available through Lexis/Nexis; expressed as a percent.
Manufacturing employment (lncode500)	Bureau of Economic Analysis (BEA) data on manufacturing employment (series SA25N); available for 1990-2003; expressed in number of manufacturing jobs per state.
Gross State Product (gsp)	Total gross state product per state; data available from BEA for 1985-2003; expressed in millions of dollars.

the tax incentives for R&D activities in each state. Because the state tax treatment does not change too often, this source proved very useful. As a final and more authoritative source, we relied on the state statutes available from LexisNexis. For each state with a business tax, we downloaded the state statute relating to the current credit rate and any past legislation relating to earlier rates dating back to 1985.[13]

Coding the R&D tax credit information required some degree of judgment. For example, a few states such as New York and Alabama offer capital expenditure credits for which capital expenditures on R&D are specifically eligible. This credit is not applicable to research operation expenses such as wages and rent. For these states, the rate of the investment tax credit was used. Another case arose where states may offer a graduated rate. In these cases, the maximum credit rate was used. Some states, such as Maryland, offer both an incremental and a non-incremental credit. In this case, the incremental rate is the one used. Lastly, many states offered special provisions or only offered credits if the activity was located in an enterprise zone or if a jobs' target was met. In these cases, it was judged that the main purpose of the credit was to create jobs and economic activity of any sort more than to stimulate R&D activities. The rate in these states was set to zero. We were able to collect all rates for each state over the time period, 950 observations. The mean credit rate for the population over the 1985-2003 period is

Table 2
Dependent variable = Company funded industrial R&D activity, Fixed-Effects Model (State and Year)

	Model 1		Model 2		Model 3	
Independent Variables	*Coefficient*	*Standard error*	*Coefficient*	*Standard error*	*Coefficient*	*Standard error*
Intercept	-8072.9	1045.1*	-7103.0	1207.0*	-8300.0	1572.1*
Total Federal Obligations in Math and Science	-0.0015	0.0003*			-0.0017	0.0003*
Total Federal Obligations$_{t-1}$			-0.0013	0.0003*		
Manufacturing Employment	0.013	.002*	0.012	0.002*	0.013	0.0018*
State GDP	0.022	0.002*	0.027	0.003*	0.025	0.001*
Credit Rate	14.75	19.31			11.14	19.56
Credit Rate$_{t-1}$			24.60	19.73		
Total Value of SBA Grants	5.79e-06	1.4e-06*	4.8e-06	1.3e-06*	6.37e-06	1.4e-06*
FTE Enrollment in Universities	0.008	0.003*	6.23e-06	.003		
FTE Enrollment in Universities per Capita					60.19	28.04*
Number of Observations	322		291		322	
F Statistic	70.2		71.3		61.8	
R Squared	0.76		.71		.76	

*Significant at the 95 percent level.

3.3 percent but the median rate is 0, indicating a high concentration of state observations with no credit rate (565 observations), occurring more in the early years of the period. Over time more states have adopted the credit. In 1985 the average credit rate was 1.3 but by 2003 the mean had increased to 6.5.

RESULTS

Given the very heavy concentration of R&D activity among a small number of states (Figure 3), we thought it useful to look at the simple correlations among R&D, state credits, and other economic factors that might be correlated with entrepreneurial and forward-thinking behavior (those likely to engage in R&D "anyway"). We correlated company R&D as a share of gross state product with the following variables (all normalized by gross state product): value of venture investments, federal awards for small business, federal obligations, patents, and enrollment in higher education. We find that there is a high level of collinearity among variables that we believe describe a vibrant investment/entrepreneurial environment. For example, patents and value of venture investments, R&D and value of venture investments, federal obligations, and small business awards. The average value of these variables is also larger for states with an R&D credit than for states without the credit. We do not attempt to determine causality here, rather, we just want to get a sense of the interactions among the variables.

We estimated many versions of equation (1), and present the results in Table 2. We performed several sensitivity tests (lag values, patents as the dependent variable, separating the states into quartiles by their annual industrial R&D expenditures) but the main results regarding the state tax credit remain. A Hausman test reveals a preference for the fixed-effects model (time and state fixed effects) and those are the results reported in the tables. As seen in Table 2 (model 1 & 3), the state credit variable is not significant, nor is the lag in the state credit (model 2). This suggests that the credit is not influential in determining the level of R&D in states.

Small business grants and the level of manufacturing output are both positively correlated with R&D in states, as expected. The level of federal obligations is negative and significant—a surprise to us. We would like to investigate whether this represents a form of competition—federal grant versus state credit. We found mixed results for our other explanatory variables.

CONCLUSIONS

Federal and state governments have used R&D credits for a long period of time without significant cost-benefit analysis regarding their effectiveness. The economics of the federal versus state credits may be very different and as a result, have different impacts on R&D. In this paper, we take a look at the impact of state R&D credits on the level of private R&D in the state.

Our results are preliminary, but we find that overall, the R&D credit does not seem to play an important role in stimulating R&D activity across all states. We plan to extend this work in a number of ways including developing a more comprehensive estimate of the value of the credit and testing whether the form of the state credit is an influential determinant of state R&D activity.

Notes

[1] For purposes of this legislation a research consortium is defined to include an organization which is either a 501(c)(3) or 501(c)(6) and tax exempt, is organized and operated primarily to do scientific research and is not a private foundation.

[2] Internal Revenue Code section 41(d)(1)(B).

[3] Internal Revenue Code section 41(d)(4).

[4] In this case, the fixed-base percentage is 3 percent for each of the taxpayer's first five years after 1993 for which the taxpayer has qualified research expenses. Additional rules apply for expenses incurred in later years.

[5] Tax expenditure estimates from the Joint Committee on Taxation estimate the annual value of the R&E tax credit at about $3 billion. This estimate includes the credit taken by corporations but not the value taken by S corps and partnerships that are included in the E&Y figure of $7.2 billion.

[6] This figure is based on the broader definition of an R&D tax credit, including investment tax credits targeted specifically to R&D expenditures.

[7] The 33 percent tax credit in Arkansas is available only for R&D activities conducted at educational institutions but paid for by for-profit firms.

[8] This information is from the California Income Tax Expenditures, Compendium of Individual Provisions for 2006.

[9] For more information, see the Pennsylvania R&D Tax Credit Annual Report for 2006.

[10] The variable measuring the effect of the value of the credit is constructed as the deviation from the average.

[11] This data represents only the institutional venture investments but does not contain information on angel investments or state funds. Approximately 80 percent of venture funds are for expansion of existing business operations.

[12] See also Sigalla and Viard (1999) and Hall and Wosinska (1999).

[13] In many cases the legislative history was only available back to 1990 but other sources were able to provide information for the 1985-1990 period.

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