Exogenous Changes in State Corporate Tax Rates and Firm Headquarters Location

ECON 613

Kevin Standridge and Emma Shin

24 April 2021

Abstract: In this paper we study the effect of state corporate tax rate changes on the location of public firms' headquarters. The consequences of changing a state tax rate are important to consider, but difficult to measure given that tax rate changes occur typically in response to concurrent changes in legal or economic conditions. To combat this issue, we use a unique dataset of tax rate changes that are categorized as plausibly exogenous to identify the effect of tax rate changes on firm headquarters location. We find that after controlling for economic factors and potential simultaneous treatments, an increase in the state corporate tax rate is associated with an increase in the number of firms headquartered in that state. We do not find significant results for aggregate firm assets or aggregate firm income, indicating that only certain types of firms drive the effect seen in headquarters count.

I. Introduction

In this paper we examine how changes in state corporate tax rate affect the number of firms headquartered in a state. Where a firm chooses to locate is an important decision. A firm's headquarters location can determine not only its legal and regulatory environment, but also the capital and labor available to it. It is unclear how changes in taxes will affect a firm's decision of where to locate. Firms obviously do not wish to pay more in taxes, but taxes are used to fund a variety of public goods that can impact the resources available to a firm. We therefore use state corporate tax changes to examine how these changes affect firms' decisions.

The primary contribution of this study is that it examines the effect of plausibly exogenous changes in state corporate tax rates, as identified by Giroud and Rauh (2019). While some prior literature has examined the effects of state corporate taxes on headquarter location (Chow et al. 2021), this literature has relied on the full set of state corporate tax changes. Because changes in taxes are often a response to changes in economic conditions, it is difficult to separate the effects of the tax changes from the events or trends that prompted the change. Furthermore, to the extent that firms understand economic trends and anticipate government policy, firms may also anticipate tax changes, making it more difficult to identify an effect.

By separating tax changes into exogenous and endogenous changes, we find that consistent with prior literature, endogenous tax increases appear to decrease the number of public firms headquartered in a state. However, this effect appears before the tax change, indicating a violation of the parallel trends assumption. Furthermore, we find that when only looking at the tax changes identified by Giroud and Rauh (2019), the results both satisfy parallel trends and flip in direction. In other words, exogenous increases in taxes appear to increase the number of headquarters in a state. We repeat this analysis for the level of aggregate assets and income in a

state and do not find that tax changes have a significant effect in either case. Finally, we use a linear probability model to test the degree to which state tax changes are predictable. We find that the tax changes identified by Giroud and Rouh are significantly less predictable than other tax changes.

The rest of the paper continues as follows. Section II describes prior literature. Section III describes our data selection. Section IV provides our research design and test of assumptions. Section V covers our main results and robustness tests. Section VI concludes.

II. Prior Literature

State corporate tax changes have a variety of impacts. Not only do they have the potential to raise revenue for state governments, but they also can affect the decisions of firms, capital providers, and workers. Because of this, there is a large existing literature on tax incidence. As a recent example, Suarez Serrato and Zidar (2016) use a spatial equilibrium model and census data to estimate state corporate tax incidence on firm owners, workers, and landowners. They assume that both firms and workers are imperfectly mobile, and they find that tax incidence falls around 40% on firm owners, 30-35% on workers, and 25-30% on landowners.

While state tax incidence studies have the advantage of tight identification, they suffer from severe measurement issues. First, it is difficult to properly measure the changes in the cost of capital at the state level. Suarez Serrato and Zidar (2016) use property rental rates as a measure of the local cost of capital, which completely ignores business-related cost of capital (for example, the risk of investing in R&D is very different from the risk in purchasing a factory, leading to very different costs of capital). Additionally, rental rates are only available through the census once every 10 years. The low frequency of data means that tax changes will likely be

severely mismatched from the wage and rental rate data analyzed (i.e. a tax change occurs in 2011, but wage and rental data isn't observed until 2020). Because of this, it is impossible to see how tax incidence evolves in the first year, second year, etc. following a rate change. Second, even domestic firms operate across many states. Because firms have business activity in many jurisdictions and do not report specifically where this activity takes place, it can be difficult to assess how tax rates in one individual state affect their decisions. Firm headquarter location is an easily measurable firm attribute that illustrates one mechanism through which firms might respond to tax changes.

Previous literature has also linked tax changes directly to firm responses. Giroud and Rauh (2019) look at the effect of corporate tax rates on business activity by differentiating between C corporations, which are affected by the state corporate tax rate, and pass-through entities, which do not have to pay state corporate taxes. Using this variation in the data, they estimate short-run corporate tax elasticities for firms, finding that changes in state-level tax rates drive reallocation of business activity between states. Specifically, they document that a 1 percent increase in the state corporate tax rate is associated with 0.04 establishments belonging to C corporations closing in that state. While this research question is similar to ours, it is important to note that we examine the location of firm headquarters and not firm establishments. Firm headquarters have unique labor and capital requirements compared to typical firm establishments, which means that the location of a firm's headquarters has distinct economic implications. For example, the decision of a restaurant chain to open a restaurant in a certain state likely has much different consequences than the decision of a restaurant chain to locate its headquarters in that state.

As mentioned previously, Chow et al. (2021)[1] also examine the response of headquarters location to changes in state corporate tax rates. One key differentiator between our study and the Chow et al. study is that we separately label the tax changes identified by Giroud and Rauh (2019) as exogenous. This is essential because if the tax changes are endogenous, the underlying economic conditions which drove the tax changes might also drive our results; and firms may anticipate the tax changes and alter headquarters locations prior to the adoption of the new tax law.

We are not the only study to utilize the Giroud and Rauh tax changes. Nallareddy, et al. (2018) use these same tax changes to examine the effect of state corporate tax changes on income inequality, finding that corporate tax cuts lead to higher overall income but greater income inequality. Given the use of these changes in prior literature, we believe that our research design makes a sufficient contribution over Chow et al. (2019) to motivate its use.

III. Hypothesis Development

Tax changes have two competing effects that might affect headquarters locations. The first effect has to do with how a firm's income is allocated between states for taxing purposes. Each state has an individual set of rules that determines how much of a firm's total income will be taxed in that state. While these rules have evolved over time, the three main factors historically used to determine a firm's presence in a state are the percentage of a firm's sales, property, and payroll located in that state. Because of these apportionment factors, when one state increases its corporate tax rate, firms will be disincentivized to locate capital and labor in that state because those actions will lead to a higher percentage of the firm's income being taxed

[1] Note this paper was published after we submitted our project proposal.

at the higher rate. The second effect arises because increases in corporate tax rates are indicative of increases in state tax revenue, which funds public goods. If increases in tax rates signal future increases in public goods provision, firms may wish to locate in a state to capture the benefits of public goods. We therefore arrive at our first hypothesis (stated in null form):

H1: A change in the corporate tax rate in a state will not be associated with a significant change in the number of firms headquartered in that state.

While we wish to capture both changes in existing headquarters locations and choice of new headquarters locations, we recognize that existing headquarters locations are sticky. It is relatively rare for existing firms to change their headquarters location compared to the number of new firms that open headquarters each year. Thus, any results that we find will likely be driven by new entrants, rather than changes in existing headquarters.

Finally, although headquarters locations are important, not all headquarters are created equal. Even if a state experiences an increase in firm headquarters, it is unclear if the type of firm that opens or relocates headquarters tends to be large or small. To assess this, we also test how tax changes affect the aggregate income and assets of all public firms headquartered in a state. This brings us to our second hypothesis:

H2a: A change in the corporate tax rate in a state will not be associated with a significant change in the aggregate assets of firms headquartered in that state.

H2b: A change in the corporate tax rate in a state will not be associated with a significant change in the aggregate income of firms headquartered in that state.

IV. Data

We use data on state corporate tax rate changes from the data set collected in Nallareddy et. al (2018). Our two main independent variables are *Rate Change* and *Exogenous*. The variable *Rate Change* is the percent change in the state corporate tax rate in any given year. The variable *Exogenous* is an indicator variable set equal to 1 if the tax rate change is one of the changes identified by prior literature as exogenous from surrounding economic factors, and 0 otherwise.

Our dependent variables consist of data on headquarter count, log aggregate firm assets, and log aggregate firm earnings by state. These data come from individual 10-K filings, therefore limiting our sample to public companies.

Control variables related to economic conditions include the natural log of GDP scaled by total population, the natural log of GDP due to (1) finance, (2) government, and (3) military, each scaled by total population, and the year-over-year percent change in population. These numbers come from the Federal Reserve Economic Data (FRED) online database. Additionally, we include a set of indicator variables related to changes in tax *rules* (not rates), such as the allowance of a federal income tax deductible, the use of bonus depreciation, etc. to control for potential simultaneous treatments. These data come from Suarez Serrato and Zidar (2016). All control variables are also calculated at the state-year level.

Descriptive statistics are provided in Table 1, and a correlation matrix is provided in Table 2. To place all our results in perspective, the median state-year has 42 headquarters, with a standard deviation of 133 headquarters. The amount of aggregate income and assets in a given state is highly similar, with a correlation of 92%, while the total number of headquarters in a given state is only moderately correlated with assets or income at 62%. Our sample size contains 700 observations, ranging from years 1997 to 2011. Slightly fewer observations may be available depending on the dependent variable.

V. Research Design

We run our model using a standard OLS regression. The dependent variable is the count of public firms headquartered in a given state and year. Because the decision to establish or relocate a firm headquarter is substantial, we do not expect to see a solely instantaneous reaction to changes in tax rates. Therefore, we run our regression multiple times using the dependent variable for years $t - 2$ through $t + 2$ to capture the effect over time. By examining the results prior to year t, we are able to assess the parallel trends assumption and assess to what degree firms are able to anticipate tax changes. We also rerun our regressions using two alternative measures for the dependent variable, aggregate assets and aggregate income for public firms in a given state-year.

We include an interaction term between *Rate Change* and *Exogenous* because our primary variable of interest is the sum of the *Rate Change* coefficient and this interaction. If this response is significantly different in certain years compared to others, this indicates that there is a significant association between tax rates and firm headquarter location for exogenous shocks. By including *Rate Change*, we can determine whether endogenous shocks affect headquarters location. This separation is key to our incremental contribution.

Our economic condition control variables include the log of GDP per capita, the share of GDP in finance, the share of GDP in government, the share of GDP in military, and population growth. Although we assume that tax rate changes are exogenous, we use these as measures for state-level economic conditions to control for any contemporaneous variation that could be driving our results.

A primary threat with any tax study is the risk that tax law changes that do not involve the actual tax rate but that also could affect firm decisions may occur simultaneously to rate changes. Our simultaneous treatment control variables include loss carryback and carryforward provisions, the research and development tax credit, and indicator variables for presence of a franchise tax, a federal income tax deductible, use of a federal income tax base, allowance of accelerated depreciation, allowance of MACRS, allowance of bonus depreciation, and presence of throwback rules. These are all measures of changes to the tax base (the underlying amount of profits being taxed) and not the tax rate. Suarez Serrato and Zidar (2018) find that changes in tax bases and credits explain greater variation in state corporate tax revenues than changes in tax rates, so it is important to control for potential simultaneous changes in the state tax base that could also affect a firm's headquarters decision.

VI. Results and Analysis

Table 3 shows the results from our first regression. Both the coefficient on *Rate Change* and the interaction term are significant prior to and after year *t.* Consistent with prior literature, we find that *Rate Change* is significantly negative; however, the statistical significance prior to the treatment indicates that either 1) firms anticipated the tax change and reacted accordingly, or 2) there is a violation of parallel trends. In either case, it makes it difficult to identify our desired effect. While the interaction term is also significant in the pre-period, it is important to recognize that it is incremental to *Rate Change,* and so the sum of the interaction term and *Rate Change* is our coefficient of interest.

To test the statistical significance of the sum of the interaction term and *Rate Change,* we use an F-test. We find that exogenous changes have a statistically significant effect in periods t and $t + 1$. The sum indicates that a 1% exogenous increase in the tax rate is associated with an

increase in 2.792 headquarters in year *t,* and 3.241 headquarters in year *t+1*. Importantly, we see that the sum is not statistically significant prior to year *t,* indicating that firms are likely unable to anticipate the tax change. This also provides evidence that these exogenous tax changes satisfy parallel trends. A potential concern with these results is that the coefficients in the pre-period are relatively large and trending downwards. However, since we find an increase in headquarters in the post-period, not a decrease, a downward sloping pre-period trend would bias against us finding a result, making our results more robust. Additionally, the larger coefficients in the pre-period are less significant than the smaller coefficients in the post-period, which means that our results may be driven by a decrease in the variance in firm headquarters by state.

Tables 4 and 5 repeat the analysis using aggregate assets and income, respectively. In this analysis, our F-tests only yield a significant effect for aggregate income in year *t+1*. Because the number of headquarters changes significantly, but total firm assets do not, these results suggest that small firms are primarily affected. This is reasonable given that smaller and younger firms are typically more mobile than larger firms. The statistically significant effect for income (and lack of effect for assets) suggests that either 1) because assets are stickier than income, we have a power problem in Table 4, or 2) firms receive some benefit (in terms of income) from the tax changes. However, we cannot say with certainty what might be causing this discrepancy.

Finally, Table 6 contains the results of our exogeneity robustness check. We regress exogenous and non-exogenous tax rate changes on our lagged economic conditions and simultaneous treatment control variables. We find that the F-statistics are not significant in either regression; however, several T-statistics are significant for the endogenous tax changes. Furthermore, we see that the adjusted R-squared values from the endogenous tax change regressions are larger than those from the exogenous tax change regressions. In summary, we

find no evidence to suggest that the tax changes identified in Giroud and Rauh are predictable. Furthermore, the evidence we do have suggests that other tax changes might be somewhat predictable. We acknowledge that because Giroud and Rauh identify far fewer tax changes as exogenous, the discrepancy in results could be driven by differences in power across specifications, and we are unaware of a way to correct for this difficulty.

It is of interest to note that our results are somewhat counterintuitive: higher taxes tend to attract more firm headquarters instead of fewer. We believe this could occur because firms anticipate that states with higher taxes will provide more public goods. For example, higher state corporate tax rates may lead to better education, reduced crime rates, nicer roads, and better public transportation. These factors would the state a more desirable place for business activity overall, but perhaps they are more important in determining headquarter location than, for example, a manufacturing plant or storage facility. While determining the specific channel through which this could happen is beyond the scope of this paper, these findings create an interesting venue for future research.

VII. Conclusion

While changes in tax policy have been studied in a variety of settings, working around the endogeneity of tax rate changes has proved a limitation for prior research. We utilize a dataset identifying exogenous changes in state corporate tax rates, and we find that changes in state tax rates have a significant effect on number of firms headquartered in that state in the years following the tax change. However, these results are not as strong when using aggregate assets and aggregate income as outcome variables instead of firm headquarter count. Finally, we test our assumption that the previously identified list of exogenous tax rate changes really are

exogenous, and find that the identified tax changes are on average less predictable than other state corporate tax rate changes in our sample period.

Table 1: Descriptive Statistics

Variables								
Dependent Variables	**N**	**Mean**	**SD**	**Min**	**Q1**	**Q2**	**Q3**	**Max**
# of HQ	700	90.99	133.39	1	14.75	42	105	928
Income	615	7.85	2.03	1.24	6.36	8.17	9.35	12.08
Assets	700	11.47	2.06	4.10	10.24	11.68	12.77	16.31
Main Independent Variables								
Rate Change	700	-0.01	0.20	-3.5	0	0	0	1.5
Exogenous	700	0.01	0.11	0	0	0	0	1
Economic Conditions Controls								
GDP per Capita	700	3.64	0.23	3.06	3.48	3.64	3.79	4.38
GDP from Finance per Capita	700	0.28	0.61	-0.82	-0.11	0.18	0.57	2.54
GDP from Government per Capita	700	1.64	0.27	1.06	1.45	1.62	1.79	2.57
GDP from Military per Capita	700	-0.79	0.76	-2.69	-1.37	-0.77	-0.28	1.34
Population Growth	700	0.01	0.01	-0.06	0.00	0.01	0.01	0.12
Simultaneous Treatment Controls								
Loss Carryback	700	0.87	1.16	0	0	0	2	4
Loss Carryforward	700	13.56	7.08	0	7	15	20	30
Franchise Tax	700	0.54	0.50	0	0	1	1	1
Federal Income Tax Deductible	700	0.09	0.29	0	0	0	0	1
Federal Income Tax Base	700	0.86	0.35	0	1	1	1	1
Allow Accelerated Depreciation	700	0.83	0.38	0	1	1	1	1
MACRS	700	0.85	0.36	0	1	1	1	1
Bonus Depreciation	700	0.51	0.50	0	0	1	1	1
Throwback	700	0.49	0.50	0	0	0	1	1
R&D Tax Credit	700	0.05	0.05	0	0	0.05	0.07	0.2

Table 2: Correlations

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
# of HQ	1																			
Income	0.61	1																		
Assets	0.62	0.92	1																	
Rate Change	0.01	0.01	0.01	1																
Exogenous	-0.05	-0.06	-0.05	-0.10	1															
GDP per Capita	0.29	0.43	0.34	-0.02	-0.04	1														
GDP from Finance per Capita	0.32	0.39	0.43	-0.05	-0.05	0.60	1													
GDP from Government per Capita	0.01	0.01	-0.07	0.01	0.00	0.66	0.16	1												
GDP from Military per Capita	-0.09	-0.14	-0.20	-0.02	0.05	0.32	0.03	0.75	1											
Population Growth	-0.01	-0.01	-0.02	-0.02	-0.02	0.01	0.04	-0.02	0.08	1										
Loss Carryback	-0.18	-0.28	-0.18	0.04	-0.06	-0.16	-0.04	0.03	0.08	-0.06	1									
Loss Carryforward	-0.03	0.01	0.14	0.00	0.02	-0.03	0.03	0.04	-0.01	-0.14	0.46	1								
Franchise Tax	-0.03	0.27	0.18	0.01	-0.01	-0.04	0.04	-0.02	0.11	-0.10	-0.06	-0.04	1							
Federal Income Tax Deductible	-0.13	-0.07	-0.02	-0.04	0.06	-0.14	-0.05	-0.13	-0.06	-0.16	0.23	0.19	0.06	1						
Federal Income Tax Base	0.04	0.01	0.18	-0.01	0.04	0.07	0.05	0.07	-0.01	-0.17	0.20	0.56	-0.15	0.09	1					
Allow Accelerated Depreciation	-0.27	-0.14	-0.02	-0.01	0.05	-0.13	-0.04	0.05	0.15	-0.10	0.34	0.53	-0.03	0.15	0.57	1				
MACRS	-0.29	-0.13	0.02	-0.01	0.05	-0.11	-0.06	0.04	0.07	-0.13	0.32	0.57	0.06	0.14	0.61	0.82	1			
Bonus Depreciation	-0.17	-0.29	-0.23	-0.03	0.03	-0.34	-0.15	-0.18	-0.03	0.09	0.26	0.20	-0.04	0.16	0.34	0.39	0.35	1		
Throwback	0.02	-0.25	-0.17	0.01	0.03	-0.19	-0.27	-0.01	0.09	-0.04	0.14	0.13	-0.17	0.06	0.07	0.20	0.23	0.14	1	
R&D Tax Credit	0.19	0.03	0.11	-0.03	-0.01	0.23	0.15	0.14	0.12	-0.04	0.02	0.05	-0.20	-0.02	0.33	0.13	0.16	-0.06	0.06	1

Table 3: Tax Rate Changes and Firm Headquarters

	Number of Headquarters				
	T-2	T-1	T	T+1	T+2
Exogenous*Rate Change	19.619**	15.222**	11.186**	14.197***	12.589*
	(9.032)	(5.967)	(5.417)	(4.769)	(6.786)
Rate Change	-11.456	-10.283*	-8.394	-10.956**	-10.125
	(7.689)	(5.307)	(5.197)	(4.473)	(6.481)
Exogenous	12.472	7.371	6.183*	7.857**	5.814
	(10.211)	(6.005)	(3.225)	(3.171)	(3.942)
Observations	(19.721)	(13.014)	(8.435)	(8.257)	(11.305)
Adjusted R-Squared	-5.508	-3.493	-2.728	-1.354	0.915
State Fixed Effects	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes
Economic Condition Controls	Yes	Yes	Yes	Yes	Yes
Simultaneous Treatment Controls	Yes	Yes	Yes	Yes	Yes
Exogenous*Rate Change + Rate Change	8.163	4.939	2.792*	3.241**	2.464
	0.122	0.111	0.065	0.039	0.212

Table 4: Tax Rate Changes and Aggregate Assets

Log Aggregate Assets of Headquartered Firms					
	T-2	T-1	T	T+1	T+2
Exogenous*Rate Change	-0.129	-0.033	-0.279	-0.053	0.115
	(0.206)	(0.169)	(0.180)	(0.201)	(0.231)
Rate Change	0.118	0.127	0.376**	0.177	0.020
	(0.182)	(0.156)	(0.163)	(0.184)	(0.211)
Exogenous	-0.069	0.125	0.163	0.268*	0.216
	(0.140)	(0.113)	(0.139)	(0.150)	(0.201)
Observations	(0.114)	(0.084)	(0.077)	(0.077)	(0.081)
Adjusted R-Squared	-0.020	-0.025	-0.088	-0.134**	-0.146***
State Fixed Effects	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes
Economic Condition Controls	Yes	Yes	Yes	Yes	Yes
Simultaneous Treatment Controls	Yes	Yes	Yes	Yes	Yes
Exogenous*Rate Change + Rate Change	-0.011	0.094	0.097	0.124	0.135
	0.894	0.161	0.209	0.124	0.155

Table 5: Tax Rate Changes and Aggregate Income

Log Aggregate Income of Headquartered Firms					
	T-2	T-1	T	T+1	T+2
Exogenous*Rate Change	-0.371	-1.085**	-0.235	0.425	0.085
	(0.339)	(0.482)	(0.219)	(0.312)	(0.250)
Rate Change	0.410	1.097**	0.308	-0.066	-0.089
	(0.329)	(0.459)	(0.202)	(0.227)	(0.229)
Exogenous	0.251	-0.107	0.076	0.340	0.303
	(0.193)	(0.317)	(0.252)	(0.416)	(0.203)
Observations	(0.322)	(0.262)	(0.188)	(0.189)	(0.174)
Adjusted R-Squared	0.011	-0.052	-0.053	-0.088	-0.021
State Fixed Effects	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes
Economic Condition Controls	Yes	Yes	Yes	Yes	Yes
Simultaneous Treatment Controls	Yes	Yes	Yes	Yes	Yes
Exogenous*Rate Change + Rate Change	0.039	0.012	0.073	0.359*	-0.004
	0.691	0.932	0.405	0.0526	0.964

Table 6: Predictability of Identified Exogenous Tax Rate Changes

	Exogenous Change Lead	Exogenous Change Lead	Nonexogenous Change Lead	Nonexogenous Change Lead
GDP per Capita	-0.021	-0.013	0.008	-0.015
	(0.042)	(0.086)	(0.029)	(0.040)
GDP from Finance per Capita	-0.002	-0.014	0.005	0.001
	(0.009)	(0.013)	(0.006)	(0.014)
GDP from Government per Capita	-0.007	-0.071	0.026	0.102
	(0.050)	(0.195)	(0.024)	(0.145)
GDP from Military per Capita	0.013	0.055	-0.017*	-0.191*
	(0.011)	(0.058)	(0.009)	(0.108)
Population Growth	0.774	1.296	0.372	0.679
	(0.850)	(1.225)	(0.414)	(0.520)
Loss Carryback	-0.007	-0.020	-0.005*	-0.001
	(0.006)	(0.016)	(0.003)	(0.005)
Loss Carryforward	0.000	0.002	-0.000	-0.003
	(0.001)	(0.002)	(0.001)	(0.004)
Franchise Tax	-0.003	-0.018	0.006	0.102
	(0.008)	(0.016)	(0.007)	(0.072)
Federal Income Tax Deductible	0.027	0.143	-0.004	-0.013
	(0.024)	(0.117)	(0.004)	(0.020)
Federal Income Tax Base	0.016	0.071	-0.005	-0.000
	(0.013)	(0.095)	(0.011)	(0.015)
Allow Accelerated Depreciation	-0.001	-0.003	0.020**	-0.005
	(0.005)	(0.011)	(0.010)	(0.010)
MACRS	0.005	0.006	0.004	-0.006
	(0.004)	(0.011)	(0.006)	(0.024)
Bonus Depreciation	0.001	0.027	0.005	0.002
	(0.008)	(0.016)	(0.012)	(0.021)
R&D Tax Credit	-0.043	-0.012	0.064*	-0.196*
	(0.120)	(0.209)	(0.036)	(0.111)
Throwback	0.002	0.015	-0.004	-0.003
	(0.009)	(0.012)	(0.006)	(0.021)
Constant	0.084	0.116	-0.097	-0.262
	(0.082)	(0.402)	(0.102)	(0.319)
Observations	700	700	700	700
Adjusted R-Squared	0.002	0.019	0.006	0.115
State Fixed Effects	No	Yes	No	Yes
Year Fixed Effects	No	Yes	No	Yes

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