State Corporate Income Taxes and New Business Formation in the United States

By Boris Khesin, Beckett Pilling *

This study focuses on examining the relationship of top marginal Corporate Income Tax rates (CIT) by state and how it may impact entrepreneurial activity, which is measured by state-level new business formations within the USA. In theory, if a state were to enact a corporate tax increase, the cost of capital would increase as well, and expected income would lower after tax, thus may deter new firm entry; however, empirically isolating these effects is challenging due to confounding factors such as labor market conditions, regulatory environments, local economic cycles, and other region-specific barriers to entry. Using annual panel data on state corporate tax rates and Business Formation Statistics (BFS) from the U.S. Census Bureau, we estimate how variation in corporate tax rates is associated with changes in new business openings between 2004 and 2020. We control for publicly available data at the state level including real per-capita personal income, total employment, and population. We further address endogeneity concerns through two-stage least squares (2SLS) using regional-average tax rates as an instrument. While pooled OLS yields a negative and statistically significant coefficient on the corporate income tax rate, this relationship disappears once state fixed effects are introduced and is also insignificant in the 2SLS specification. The estimated effect is statistically insignificant in our preferred specifications, highlighting that entrepreneurial activity is largely defined by culture, location, political climate, and other slow-moving state-specific factors, not by responsiveness to corporate income tax

In this paper, we will evaluate the association between higher marginal state Corporate Income Tax (CIT) rates and their potential to deter new business formation. Traditionally, economic theory predicts that higher corporate taxes will raise the cost of capital and also reduce expected after-tax returns, thereby reducing incentives for entrepreneurs to start new firms (Jorgenson, 1963) . However, empirically isolating this effect to prove a causal relationship is challenging, due to the fact that states that raise their corporate taxes may do so because their economies are booming, thus potentially biasing pooled OLS estimates, along with this, there are hard to observe state specific characteristics (such as regulatory culture, geographic advantages, and political climate) may correlate with both tax policy and entrepreneurial activity.

To perform this study and address these issues we use the U.S. Census Bureau's Business Formation Statistics (BFS), which provide nearly real-time counts of Employer Identification Number (EIN) applications an indicator of new firm entry at the state-year level from 2004 to 2020 (U.S. Census Bureau, 2026). Combined with a panel of top marginal state CIT rates compiled from the Tax Foundation (Tax Foundation, 2020) and cross-validated with the historical record maintained by Setzler (2024), we construct a balanced panel of 51 tax jurisdictions (50 states plus the District of Columbia) over the course of 17 years.

Our empirical strategy escalates in identification strength. Pooled OLS establishes a baseline

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negative correlation between CIT rates and business applications, consistent with the predictions of traditional economic intuition. Two-way fixed-effects (TWFE) regressions then absorb long-term state characteristics and aggregate time trends, identifying the CIT effect from within-state policy variation. Finally, we utilize a two-stage least squares (2SLS) estimator that uses an instrument of the average CIT rate of the other states in the same Census region, replacing the own-state CIT.

Our central finding is that the negative correlation between CIT and business formation found in pooled OLS does not provide a reliable prediction, due to the omitted variable bias of excluding state fixed effects. Once state fixed effects are added, the coefficient of CIT is statistically insignificant from zero. The 2SLS point estimate is similarly insignificant. Robustness checks, including a one-year lead placebo, dropping the Great Recession (2008–2010), and excluding the largest states, confirm this pattern. We interpret these results as evidence that entrepreneurial activity is largely determined by slow-moving, state-specific factors: culture, geography, regional human capital, the broader political environment, etc. Rather than by the top marginal corporate income tax rate within the range of variation observed in recent U.S. data.

Paper organization: Section I works to describe the data sources and the construction of the panel. Section II provides the econometric framework. Section III reports the main results. Section IV presents robustness checks. Section V concludes.

I. Data

Data were collected and merged from several sources to analyze the effect of state corporate income taxes on new business formation. The final panel is a balanced state-year dataset covering 51 jurisdictions from 2004 to 2020, with a total of 867 observations. The dependent variable, new business formation, is drawn from the U.S. Census Bureau's Business Formation Statistics (U.S. Census Bureau, 2026). The key independent variable, the top marginal state corporate income tax rate, was compiled from the Tax Foundation (Tax Foundation, 2020) and cross-validated against the historical rate series maintained by Setzler (2024). Additional control variables come from the Bureau of Economic Analysis (BEA) Regional Economic Accounts (U.S. Bureau of Economic Analysis, 2026) and the Bureau of Labor Statistics (BLS) (U.S. Bureau of Labor Statistics, 2026).

The outcome variable, New Business Applications, is measured using the BFS dataset. Specifically, we use seasonally adjusted total Business Applications grouped to the state-year level, which captures new EIN filings and serves as an indicator of entrepreneurial intent. Aggregating monthly counts to annual totals and taking the natural logarithm yields our primary outcome, log(Appsst). This logarithmic transformation helps to mitigate the substantial right skew in raw application counts. This also means that coefficients will be interpreted as semi-elasticity.

The primary variable of interest is the Top Marginal Corporate Income Tax Rate, measured as the highest corporate income tax rate applicable to corporations in each state and year, expressed as a percentage. In the case of States with no corporate income tax (e.g., Texas, Nevada, Wyoming, South Dakota), a rate of zero is assigned. Because several states use graduated rate structures, we use the top marginal rate to maintain consistency across states and years. This variable varies across both states and time, reflecting policy reforms such as the multi-year tax cut in North Carolina (from 6.9 percent in 2012 to 2.5 percent in 2020) and the temporary elimination of corporate tax in Kansas.

In addition, we include three time-varying state controls. Total Employment, from the BEA, proxies for the size of the local labor market and the available pool of potential founders of new businesses and customers. Resident Population, estimated between the Census counts (as they only occur every decade) (U.S. Census Bureau, 2026a), captures market scale. Personal Income represents the purchasing power and the broader state of the local economy. All control variables enter the regressions in logs.

Since corporate tax rates are determined by state legislatures rather than randomly assigned,

there is potentially omitted-variable bias from confounders correlated with both CIT and entrepreneurship. States with stronger economies may both attract business formation and choose lower (or higher) tax rates, depending on the political party in power at any given time. Our identification strategy, described in Section II, addresses this concern through state fixed effects and an instrumental variables approach.

Table 1 presents summary statistics for the key variables in our analysis. The average state-year has approximately 54,000 business applications, with an average top marginal CIT rate of 6.55 percent, which has a standard deviation of approximately 2.76 percentage points. Real per capita personal income is available from 2008 forward (663 state-year observations), while the remaining variables are available for all of the 867-observations.

Table 1—: Summary Statistics: State-Year Panel, 2004–2020

	(1)				
	Mean	SD	Min	Max	N
Total actual business applications	54091.82	68723.45	1726.00	497850.00	867
log(Business Applications)	10.32	1.09	7.45	13.12	867
Business applications per 1,000 residents	8.82	3.93	2.12	44.87	867
Top marginal state CIT rate (%)	6.55	2.76	0.00	12.00	867
Δ CIT	-0.04	0.46	-8.24	4.50	816
Real per capita personal income	49126.13	6681.20	35790.00	78403.00	663
log(real per personal income)	10.79	0.13	10.49	11.27	663
Total employment	3.60e+06	3.97e+06	343760.00	2.42e+07	867
log(total employment)	14.63	0.98	12.75	17.00	867
Interpolated state resident population	6.13e+06	6.87e+06	521719.59	3.95e+07	867
Observations	867				

II. Empirical Strategy

In the attempt to account for endogeneity and omitted variable bias, we estimate three increasingly credible specifications: pooled OLS, two-way fixed effects (to account for omitted variable bias), and two-stage least squares (to account for possible endogeneity of CIT).

A. Pooled OLS

Our pooled OLS baseline regresses log business applications on the corporate tax rate and a set of state-year controls:

$$\log(\text{Apps}_{st}) = \beta\,\text{CIT}_{st} + \gamma_1\,\log(\text{Employment}_{st}) + \gamma_2\,\log(\text{Population}_{st}) + \varepsilon_{st}, \tag{1}$$

where s indexes states and t indexes years. The parameter β is the coefficient of interest. Under the standard exogeneity assumption, β captures the percentage change in business applications associated with a 1% increase in the top marginal CIT rate. As referenced hereto, the exogeneity assumption is unlikely to hold in cross-sectional data, so pooled OLS serves primarily as a benchmark to work off of further.

B. Two-Way Fixed Effects

To absorb long-run state heterogeneity and aggregate time shocks, we estimate a two-way fixed-effects (TWFE) specification that also adds log personal income as an additional control:

(2)
$$\log(\text{Apps}_{st}) = \beta\,\text{CIT}_{st} + \gamma_1 \log(\text{Employment}_{st}) + \gamma_2 \log(\text{Population}_{st}) + \gamma_3 \log(\text{Personal Income}_{st}) + \alpha_s + \lambda_t + \varepsilon_{st},$$

where α_s is a state fixed effect that absorbs all time-invariant state-specific factors (geography, regulatory culture, historical institutions), and λ_t is a year fixed effect that absorbs aggregate shocks common to all states (national recessions, federal policy changes, macroeconomic conditions such as national economic downturn). Standard errors are clustered at the state level. Under the conditional exogeneity assumption that time-varying, state-specific shocks to entrepreneurship are uncorrelated with CIT changes, the parameter β can be interpreted as identifying the causal effect.

C. Instrumental Variables

Even after including state and year effects, state CIT rates may be endogenous to business formation, insofar as business formation and CIT rates may be impacted by the same time-varying effects. To account for this, we created an instrument that replaces the own-state CIT rate with the average rate in the other states of the same Census region:

(3)
$$Z_{st} = \frac{1}{|R_s| - 1} \sum_{s' \in R_s,\, s' \neq s} \text{CIT}_{s't},$$

where R_s denotes the set of states in the Census region of state s. On the other hand, s' is used to represent other states in the region of the State s. The instrument is motivated by the tax-competition literature (Wilson, 1986): states may adjust their corporate income tax rates in part to respond to neighboring states' rates to attract businesses. The exclusion restriction requires that regional average tax rates (excluding own-state) affect business formation only through their effect on own-state tax rates, conditional on our controls. This is plausible because the instrument aggregates rates across states with varying economic conditions, smoothing out potential state-specific demand shocks. We report the Kleibergen-Paap F-stat to assess instrument strength.

III. Results

A. Pooled OLS

Table 2 presents pooled OLS estimates. Column (1) shows a bivariate regression of log applications on the CIT rate. The point estimate is -0.054 (SE = 0.015, significant at the 1 percent level), implying that a 1% increase in the top marginal CIT rate is associated with an estimated 5.4 percent decline in business applications. Column (2) adds the variables real per capita personal income, total employment, and population. With the addition of the new variables, the CIT coefficient reduces to -0.038 but remains significant at the 1% level. Column (3) adds year fixed effects, reducing the CIT coefficient further -0.033, which is once again significant at the 1% level.

The pooled OLS estimates are consistent with the predictions of our hypothesis: higher corporate income taxes are associated with fewer new business applications. However, these estimates are likely biased by omitted state characteristics that are correlated with both CIT and entrepreneurship. States with perpetually lower business climates may set lower CIT rates as an attempt to increase business development. Alternatively, states with strong entrepreneurial/business markets may impose higher taxes because demand for entry is inelastic to tax policy. Thus, to distinguish between these requires controlling for time-invariant state characteristics, which we do next in the 2-way fixed effects model.

Table 2—: Pooled OLS: Corporate Tax Rates and Business Formation

	(1) OLS (1)	(2) OLS (2)	(3) OLS (3)
Top marginal state CIT rate (%)	-0.0538***	-0.0348***	-0.0305***
	(0.0150)	(0.0054)	(0.0053)
log(real per personal income)		0.5336***	-0.3272**
		(0.1315)	(0.1310)
log(total employment)		0.4950***	0.9638***
		(0.1060)	(0.0938)
log(population)		0.5166***	0.0571
		(0.0967)	(0.0832)
Observations	867.0000	663.0000	663.0000
R^2	0.0187	0.9207	0.9333
Adjusted R^2	0.0175	0.9203	0.9317
State FE	No	No	No
Year FE	No	No	Yes
Controls	No	Yes	Yes

Robust standard errors in parentheses.

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

B. Two-Way Fixed Effects

Table 3 presents the FE estimates. Column (1) reports a state-fixed-effects model with no controls and no year effects, estimating a CIT coefficient of -0.072 (stat significant at 1 percent). When the time-varying controls are added in Column (2), the coefficient of CIT falls to -0.013 and is no longer statistically significant. Adding year fixed effects (Column 3) further reduces the magnitude to -0.004 and once again is not statistically significant, and the addition of log personal income (Column 4) leaves the coefficient essentially unchanged at -0.005 and is also not statistically significant.

In this way, we can see that once we control for the size of the state economy (employment and population) and for fixed differences across states and years, the correlation between CIT rates and business applications shrinks toward zero and also loses any statistical significance. The apparent CIT effect in pooled OLS appears to reflect cross-state differences (and therefore omitted variable bias) rather than business formation due to tax policy changes. The estimates in Columns (3) and (4), which represent the most credible TWFE specifications, are an much smaller than the pooled OLS estimates and are not statistically distinguishable from zero in any meaningful way.

C. Instrumental Variables

A remaining concern of ours is that even state variation in CIT rates may be endogenous to local economic conditions that vary over time. To address this, we estimate the TWFE model by 2SLS, instrumenting own-state CIT with the regional average, the equation for this can be seen in equation (3). Using this table 4 reports the second-stage IV results.

The first-stage coefficient on the regional average CIT is negative and statistically significant, and the Kleibergen-Paap F-stat is 6.18, below the conventional threshold of 10 for strong identification

Table 3—: Fixed-Effects Estimates: Corporate Tax Rate and Business Formation

	(1) FE (1)	(2) FE (2)	(3) FE (3)	(4) FE (4)
Top marginal state CIT rate (%)	-0.0721***	-0.0132	-0.0043	-0.0047
	(0.0230)	(0.0161)	(0.0050)	(0.0048)
log(total employment)		2.2947***	1.0647***	1.2419***
		(0.2666)	(0.2826)	(0.3492)
log(population)		1.7107***	-0.3111	-0.3151
		(0.4761)	(0.4196)	(0.4257)
Log of personal income				-0.1496
				(0.2884)
Observations	867.0000	867.0000	867.0000	867.0000
State FE	Yes	Yes	Yes	Yes
Year FE	No	No	Yes	Yes
Controls	No	Yes	Yes	Full

Robust standard errors clustered at state level.

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 4—: Instrumental Variables Estimates (2SLS)

	Second Stage	First Stage
CIT Rate (%)	0.0085	
	(0.0263)	
Regional Avg. CIT (IV)		-2.1991**
		(0.8849)
Kleibergen–Paap F	6.1763	6.1763
State Fixed Effects	Yes	Yes
Year Fixed Effects	Yes	Yes
Controls	Yes	Yes
Observations	867.0000	867.0000

Standard errors in parentheses

Instrument: avg. CIT of other states in same Census region.

Standard errors clustered at state level in parentheses.

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

but is still consistent with a relevant, even if moderately weak, instrument. In the second stage, the coefficient on the instrumented CIT rate is 0.0085 (SE = 0.0263) in the IV-FE specification. However, the estimate is statistically insignificant. Interestingly, the IV estimate flips sign compared to the FE estimates, although the standard errors are large enough that we cannot reject a null of no effect, a small positive effect, or a small negative effect.

Overall, the OLS, FE, and IV specifications do indicate a trend. The negative association between corporate tax rates and new business formation in pooled OLS appears to imply consistent cross-state differences rather than a causal effect of tax policy on entrepreneurial activity, contrary to our hypothesis. Once those differences are absorbed by state fixed effects, the coefficient on the CIT rate is small and insignificant, and using regional tax competition as an instrument does not restore a meaningful negative effect.

IV. Robustness

We perform three robustness tests: placebo and sample-restriction. We summarize the results in Table 5; in each case the conclusion's analysis is unchanged.

Table 5—: Robustness Checks

	(1) Excl. Recession	(2) Excl. Big States	(3) 1yr Lead CIT
Top marginal state CIT rate (%)	-0.0042	0.0009	
	(0.0051)	(0.0077)	
cit_lead1			-0.0044
			(0.0053)
Observations	714.0000	697.0000	816.0000
R^2 (within)	0.9226	0.9046	0.9244
Sample/Specification	Excl. 2008-2010	Excl. Big 10 States	1yr Lead CIT

All models include state and year FE. Robust SEs.

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

One-Year Lead (Placebo).

To assess potential reverse causality, we replace the current CIT rate with its one-year lead and re-estimate the TWFE specification. If business applications were causing future CIT changes (perhaps because state legislatures respond to entrepreneurial changes by adjusting tax rates), the lead CIT coefficient should be significantly different from zero. What we find is a small, statistically insignificant coefficient on the lead CIT, suggesting that business formation does not produce a meaningful estimated difference in CIT a year later. This is consistent with an absence of strong endogeneity. Although we should still be cautious about drawing any causal conclusions because business applications might affect CIT over a time frame longer than a single year.

Excluding the Great Recession.

A natural concern is that the extraordinary economic downturn of 2008–2010 may be driving some of our results. We re-estimate the TWFE specification dropping those three years. However, the CIT coefficient remains small and relatively insignificant, and CIT rates over the period provides

us with no inclination that there might be outlying recession-era variation. The negative bivariate relationship in pooled OLS is therefore not a result of the financial crisis of 2008.

Excluding Large States.

The largest U.S. states (California, Texas, Florida, New York, Pennsylvania, Illinois, Ohio, Georgia, North Carolina, and Michigan) account for a disproportionate share of business applications and may exert outsized leverage on the estimates. Dropping these states leaves the FE-based CIT coefficient small and yet again statistically insignificant, confirming that the null result is not driven by influential large-state observations.

Across all three exercises, the conclusion of Section III is unchanged: once state fixed effects are introduced, the top marginal CIT rate has no statistically detectable effect on log business applications.

V. Conclusion

This paper has examined the effect of state corporate income tax (CIT) rates on new business formation in the United States, using a balanced state-year panel from 2004 to 2020 constructed from the Census Bureau's Business Formation Statistics, a multi-source compilation of top marginal CIT rates, and standard state-economic controls from the BEA and Census.

Ultimately, our findings can be summarized in three main points. First, pooled OLS yields a negative and statistically significant association between CIT and log business applications, consistent with the prediction that higher corporate taxes reduce entrepreneurial activity by raising the cost of capital and lowering expected value received after tax. Second, this association does not survive the introduction of state fixed effects: in our preferred TWFE specifications, the CIT coefficient is much smaller and becomes statistically insignificant from zero. Third, 2SLS estimates that instrument own-state CIT with the regional average yield, similarly with small and insignificant coefficients, and a series of robustness checks (one-year lead, dropping the Great Recession, dropping large states) confirms the null result.

We speculate that using these findings as potential evidence that the negative cross-sectional relationship between CIT and business formation reflects omitted variable bias from persistent state characteristics (culture, geography, regional human capital, and the broader political climate) rather than a causal effect of the tax rate within the range of variation observed in recent U.S. data. Put simply, entrepreneurial activity in a state appears to be largely defined by who lives and works there, and only perhaps in some marginal way by the top statutory corporate income tax. Thus, it may be beneficial for policymakers contemplating CIT cuts as a direct lever for entrepreneurship to weigh this null result against the substantial fiscal costs of such cuts.

Several limitations should be considered as well. The Kleibergen-Paap F-statistic of 6.18 in our IV specification falls below the conventional strong-instrument threshold of 10, so the 2SLS coefficients should be interpreted with some caution. Moreover, business applications are a measure of entrepreneurial intent rather than actual realized firm formation, and CIT may matter more for the subset of applications that translate into employer businesses. Finally, our linear specification may miss nonlinear effects at the extremes of the CIT distribution. Future research could exploit larger or more discrete CIT policy changes, finer industry-level outcomes, and longer post-period horizons to strengthen identification.

Results are summarized in Table 6.

Table 6—: Main Results: Effect of Corporate Tax Rate on Log Business Applications

	(1) OLS	(2) TWFE	(3) TWFE+	(4) IV
Top marginal state CIT rate (%)	-0.0348***	-0.0043	-0.0047	0.0085
	(0.0054)	(0.0050)	(0.0048)	(0.0263)
log(total employment)	0.4950***	1.0647***	1.2419***	1.1118***
	(0.1060)	(0.2826)	(0.3492)	(0.3082)
log(population)	0.5166***	-0.3111	-0.3151	-0.3482
	(0.0967)	(0.4196)	(0.4257)	(0.3985)
Log of personal income			-0.1496	
			(0.2884)	
Observations	663.0000	867.0000	867.0000	867.0000
State FE	No	Yes	Yes	Yes
Year FE	No	Yes	Yes	Yes
Estimator				
Controls	Yes	Yes	Full	Yes

Standard errors in parentheses

Standard errors in parentheses (robust/clustered at state).

Dependent variable: log(total business applications).

IV instrument: regional average CIT excluding own state.

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

VI. Contributions

The authors contributed equally to this project. The itemized lists below reflect areas of primary responsibility rather than exclusive ownership; all components of the paper were developed collaboratively, with both authors engaged throughout.

- **Boris Khesin:**
  - Development of the majority of the STATA code
  - Specification of the 2SLS model and instrumental variable design
  - Proposed the one-year lead robustness check
- **Beckett Pilling:**
  - Conceptualization of the research question
  - Identification and cleaning of the datasets
  - Data visualization for the presentation
  - Interpretation of empirical results

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