

Effects of State Tax Structure on Business Organizational Form

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Introduction

The distortionary effects of state and local taxes have commonly been measured by estimates of the behavioral response of mobile factors of production and consumers to various tax structure parameters. Perhaps the best example of such applications is the extensive literature on business location determinants which has explored how tax policy has affected the physical location of real business activity, using empirical measures like job creation, income growth and business starts. A general finding of this research is that taxes on mobile agents and factors of production cause flight to lower-tax jurisdictions, though the effects tend to be modest.¹ This physical movement of economic activity across jurisdictional lines has important implications for the tax base and revenue yield, and thus state tax policy toward business.

The business location literature has captured the physical mobility of factors and agents in response to taxation. But taxes may affect behavior in other ways, in particular, the organizational form of the business enterprise. The federal government and the states unevenly tax different types of business entities, and these differences may affect the decision regarding the choice of form. The web of hundreds of business affiliates, including corporations, partnerships, limited partnerships, and limited liability corporations (LLCs) that were linked to Enron when it collapsed in 2001, is at least in part attributable to tax planning opportunities and tax planning responses. The choice of organizational form may in turn affect real economic activity and revenue collections, with impacts that could be large or small. But the transmission mechanism for these

¹ Bartik (1991) provides a review of the business location literature.

effects is the form of the economic activity, rather than the initial physical mobility response of a factor of production or an economic agent to taxation.²

The impact of taxes on business organizational form is important for a number of reasons. First are the implications for the location of real economic activity, as noted above, and the related excess burdens of state income tax systems.³ Second are the potentially large costs associated with tax administration, tax compliance and tax planning. Third are the revenue consequences for the states. While state corporate tax revenues rebounded prior to the slowdown in economic activity in 2008, they have been in long-term decline as a share of state taxes. Whether these declines represent lower total tax collections from business activity, or are perhaps just a shift of taxes from the corporate to the individual income tax ledger, is a critical issue for states' budgets and planning efforts. Finally, the states' response to tax planning around business organizational form—for example, the introduction of combined reporting—may have deleterious effects on economic development by signaling a negative business climate. The states seem to want it both ways. On the one hand they enable planning opportunities through the introduction of pass-thru business forms, while on the other hand they try to limit the responses to such opportunities through policies like combined reporting and throwback rules.

To our knowledge, there are no empirical inquiries on the way in which state income tax policies have affected state-level organizational form. Several papers have,

² A similar situation arises with the cross-border shopping phenomenon. The literature shows that sales tax rate differentials induce consumers to physically cross jurisdictional boundaries to make retail purchases. (See, for example, Chervin, Edmiston and Murray, 2000.) Border shopping also can take place absent the physical movement of a final consumer to a retailer in another taxing jurisdiction. Consumer “mobility” is facilitated by longstanding mail order opportunities and more recently the Internet which provides remote access to retailers across the globe.

³ See, for example, Goolsbee (1998) for a discussion of the deadweight losses that arise from the differential taxation of corporate versus non-corporate businesses.

however, examined how the federal income tax system influences organizational form and business behavior (see below). Goolsbee's (2004) application, which considers the role of state personal and corporate income taxes, is closest in spirit to our analysis. Goolsbee uses state personal and corporate income tax rates to explain federal filings of corporate retail firms as a share of retail businesses in all organizational forms. He finds that state rates do affect form, as well as real activity like establishments and payroll. But the analysis is confined to the retail trade sector, a limited set of state tax policy instruments (only personal and corporate income tax rates) and federal rather than state returns.

This paper examines mobility in terms of the way in which state tax policy influences the organizational form of businesses. Specifically examined is the creation of regular C corporations versus limited liability pass-thru entities (both corporations and partnerships) as measured by state-level business registrations and, alternatively, federal IRS return filings. The relative attractiveness of doing business in alternative business forms is captured by detailed features of state corporate and personal income tax systems, including the presence of combined reporting and throwback rules for corporations, and whether limited liability entities are subject to withholding on behalf of out-of-state members. The analysis relies on state business organizational form registration data for 2000-07, and encompasses regular corporations along with partnerships and the family of limited liability entities. Similar to Goolsbee, we also examine federal return filings across the states, but we generalize this empirical application to encompass firms across all sectors of the economy. The results indicate that tax policies do affect organizational form decisions. Unsurprisingly, high tax rates on one form of doing business encourage

alternate forms, but other factors also play an important role in selecting entity type. For example, we find that the presence of a throwback rule and UDITPA treatment of nonbusiness income reduces the corporate share of returns filed. On the other hand, a more highly educated workforce and a higher manufacturing presence result in a higher corporate share. Other factors, such as required combined reporting, which were predicted to affect corporate formations had no significant impact in the models we have estimated.

The remainder of the paper is organized as follows. The first section below provides a discussion of the way that taxes may affect tax planning and organizational form to frame the empirical inquiry. The next section develops the logic that underlies the empirics. We then turn to our empirical strategy and findings. The final section offers a conclusion and suggestions for further research.

Taxes and Organizational Form

Why do some firms choose the corporate form while other firms choose not to incorporate? The tax literature has generally focused on the interaction between the federal corporate and personal income taxes, with business income taxed at the entity level and distributed earnings taxed again as dividends under the personal income tax, leading to double taxation.⁴ This double taxation can be avoided at the federal level by forming an S corporation or partnership, or a sole proprietorship. Several empirical studies have examined how this federal tax wedge influences business behavior. For example, Mackie-Mason and Gordon (1997) find that differential taxation influences assets, taxable gains and taxable losses across business forms. Ayers, Cloyd and

⁴ The Jobs and Growth Tax Relief Reconciliation Act of 2003 lowered the maximum tax rate on qualified dividends to 15%, reducing the double tax penalty for operating in the corporate form.

Robinson (1996) consider small businesses and the choice of election as a C corporation, S corporation, partnership, or small proprietorship; they find only weak evidence that taxes matter. Omer, Plesko and Robinson (2000) find that the Tax Reform Act of 1986 influenced the propensity for firms in the natural resources industry to convert from a C to an S corporation.

At the state level a business can avoid the double taxation of a C corporation by forming a pass-thru entity such as a partnership or LLC. Earnings for these entities flow to their owners and are taxed only once on the owners' returns. While an LLC is not formally recognized under the federal income tax, its formation at the state level can enable federal taxation at the individual level as a sole proprietorship or through a partnership; an LLC may alternatively elect to be taxed at the federal level as a C corporation.

There are two additional tax considerations that may affect the choice of business organizational form. First is the progressivity of the federal corporate income tax and most state corporate income tax systems. A pass-thru entity like an LLC may enjoy lower tax burdens if its income is spread among several members and taxed at member rates as opposed to having all income taxed at the entity-level corporate rate. At high levels of profitability, this advantage of the LLC form vanishes if top bracket rates are similar. Thirteen states had progressive corporate rate structures in 2008. Second is the generally higher rate structure imposed on corporations versus individuals at the state level. Of the states with a tax on corporate income and personal income, 24 states had a

higher top bracket rate on corporations while 11 states had a higher top bracket rate on personal income.⁵

Nontax factors are of considerable importance, since there must be some benefit to the formation of a C corporation to offset the more burdensome taxation that it confronts. Both Mackie-Mason and Gordon (1997) and Ayers, Cloyd and Robinson (1996) find that nontax factors are more important than tax factors in affecting form and business decision making.

There are numerous potential nontax benefits associated with the corporate form. Limited liability is an important benefit that can be realized by forming a regular corporation at the federal or state level, or a limited liability pass-thru partnership or corporation at the state level; sole proprietorships and general partnerships do not benefit from limited liability. The ability to issue common stock and access national and international capital and credit markets is a distinct advantage for corporations. Investing in the stock of a corporation is simple and easily understood by potential investors, whereas the rights and obligations of an equity interest in an LLC will vary from entity to entity depending on the individualized LLC agreement. Gordon and Mackie-Mason (1994) consider the differential ability of different business forms to bear risk and find advantages to regular corporations in some instances, and advantages to pass-thru entities in other instances. Finally, Gravelle and Kotlikoff (1989) amend the Harberger tax incidence model to accommodate the empirical reality that both corporate and noncorporate businesses operate in the same product markets. While large corporations may benefit from scale economies, Gravelle and Kotlikoff argue that small business

⁵ These counts omit Rhode Island which taxes personal income at 25 percent of the federal liability; Rhode Island's tax rate on corporate income is 9.0 percent. See http://www.taxadmin.org/fta/rate/corp_inc.html and http://www.taxadmin.org/fta/rate/ind_inc.html,

enterprises may benefit from entrepreneurial advantages that allow them to compete and coexist in the same market.

New Business Formations Versus Multi-entity Firms

The literature has generally examined the formation of new business entities that would be domiciled in a single taxing jurisdiction and has ignored potential ownership linkages between businesses of similar or different organizational form both within and across jurisdictions. The choice of organizational form for an independent startup would presumably depend on the tax and nontax considerations discussed above. Tax planning in this instance is minimized in importance and scope because there is a single choice of state of location and type of business form. As for nontax factors, a need to access public capital markets (debt or equity) might suggest organizing as a C corporation. But a business contemplating joining with an investment partner can use many business forms, including the LLC. A firm that is expected to have early losses could either form a corporation to keep the losses on the books at the entity level to apply against future income or organize as a pass-thru such as an LLC and immediately pass early losses out to the members.

The situation may differ markedly for a new business entity that will be linked by common ownership to other firms. Federal taxation of the new entity is often dictated by the taxation of the existing business. For example, income earned by entities formed under a corporate umbrella will be ultimately taxed on the parent's corporate return, either through consolidation of corporate entities, or, for pass-thru entities such as LLCs, passed through to the corporate owner. Questions that might be critical to the stand-alone entity, such as federal individual rates versus corporate rates and the tax rate on

dividends, will often be irrelevant to this type of new entity. However, the entity choice might be critical for state tax planning efforts depending on state tax parameters.

In practice, state tax planning may extend beyond income taxes. A very unique form of in-state tax planning that elicited a response from Congress has been referred to as SUTA (State Unemployment Tax Act) Dumping (Crumbley and Gamin, 2006). Under state unemployment insurance systems, employers pay an experience-rated tax that depends on past usage of the unemployment insurance system and the payout of benefits. Firms with a high prevalence of terminations and layoffs will thus confront relatively high unemployment insurance tax rates. New firm entrants to an industry will, depending on the state, confront an average rate for that sector; rates will fall over time for such firms if they do not rely heavily on the system. So in practice different firms both within and across industries will confront different unemployment insurance tax rates giving rise to tax planning incentives. While the amount of revenue is small compared to major state taxes, the incentive to game the tax system still exists.⁶

As an example, consider a corporation with a relatively high unemployment insurance tax rate. The same corporation might form a new entity that at inception or with the passage of time enjoys a lower tax rate. The corporation then transfers employees from the high unemployment rate corporation to the newly-formed entity in turn benefiting from lower tax liabilities. In principle this form of tax planning might affect both the mix and the number of businesses. The *mix* could be affected, for example, if dumping relied primarily on LLCs or LLPs; the *number* of business entities

⁶ Christensen, Cline and Neubig (2001) estimate that unemployment insurance taxes represented only 2.3 percent of total state taxes on corporations in 1999. Edmiston (2006) finds that state unemployment insurance systems (as measured by the ratio of benefits paid to payroll) have statistically significant but small effects on wages and employment.

might be affected through the churning process of establishing new businesses that will be the recipients of transferred payrolls. Federal legislation was passed in 2004 to combat these schemes and the states have since become increasingly aggressive in order to ward off revenue losses. The revenue losses have been substantial, totaling \$100 million in California and \$40 million in Colorado in 2004 (Crumbley and Gamin, 2006).

State Tax Planning Across Borders and Entity Choice Decisions

State tax reduction strategies are made possible by two basic elements of states' income tax laws. First, the various states tax items of income and expense differently, and at different rates. Second, states generally respect the separate legal existence of a separately formed entity, even if that entity is wholly owned by, or a sibling corporation to, an existing entity. For purposes of many state income tax laws, the right hand really does not impact what the left hand is doing. Many tax planning strategies take advantage of one or both of those elements.

For state income tax purposes, the choice of entity can be as simple as determining if the business as a whole wants taxable income to remain in the state where it was earned, in which case a separately formed corporation doing business in a single state is called for.⁷ Alternatively, a firm may prefer that the income be shifted to another state with a more favorable tax environment, in which case the business might be formed as an LLC and the income passed out to an out-of-state owner. Operating a corporation in more than one state and taking advantage of apportionment rule differences is another option for shifting income into or out of a state.

⁷ Note that combined reporting requirements will limit the effectiveness of using separate entities to shift income among states. See Fox, Luna and Murray (2005).

As an example, for several years, in Tennessee, LLCs were taxed as pass-thru entities. Many large organizations reorganized their operating activities as LLCs with a 99 percent owner organized as a Passive Investment Corporation (PIC) located in Delaware, which does not tax the LLC profits of a PIC. This arrangement effectively removed 99 percent of the operating income of the business from Tennessee and likely fueled an increase in LLC formations in the state with a corresponding drop in corporate formations. Now that Tennessee imposes entity level taxes on LLCs, the incentives to organize as an LLC are diminished.

“Nowhere income”—income that is not taxed in any state—can more generally be created by doing business in a state without a corporate income tax. An alternative is exploitation of P.L.86-272 which allows a firm to avoid nexus if its only contact with a state is solicitation of sales of tangible goods. In the absence of nexus, there is no apportionable income that might be taxed in states where sales tax place. Throwback rules, discussed below, attempt to ensure that this type of “nowhere income” is ultimately taxed in the corporation’s state of domicile.

Another popular planning strategy using PICs is to “park” income and expenses in tax-advantaged states using entities that are not pass-through (e.g. corporations). In this planning model, a business transfers intangible assets such as trademarks and trade names to a Delaware PIC. Operational entities in other states make royalty payments to the Delaware PIC for the right to use the intangible assets. The payments are deductible to the operating entities, but non-taxable to the Delaware PIC. The transaction creates deductible expenses and non-taxed income, but its success is dependent on the ability to park both the income and the expense in the state with the most favorable income tax

treatment. The ability to park income in low-tax or no-tax states should encourage corporate formations in those states versus corporate formations in high tax jurisdictions.

The states have a number of options that can be used to limit the effectiveness of strategies intended to create nowhere income or to shift income from high- to low-tax states. Required combined reporting is the most comprehensive and effective tool against these potentially abusive strategies because the policy rules effectively ignore the presence of separate legal entities. Entities engaged in a unitary business are combined as one, and the combined income is apportioned to the various states. With combined reporting, for example, the impact of the PIC collapses and has the same practical effect of a tiny Delaware office with few employees and/or little property. Add-back provisions and throw-back rules are piecemeal remedies. Add-back rules disallow deductibility of a targeted list of payments such as royalties paid to related parties; throw-back rules allow income that is not taxed in any other state to be “thrown back” to the state of business residence and taxed there. The presence or absence of these rules might affect both the existence and the form of an organization.

Differences in apportionment methods across states and business forms create incentives to use one entity versus an alternative. If a business operates in more than one state, the income of the entity is apportioned to each state based on an apportionment formula, historically using a three-factor equally-weighted formula of property, payroll, and sales. However, some states, such as Kentucky, use different apportionment formulas for LLCs versus corporations. Kentucky apportions LLC income using a single factor sales formula, but apportions corporate income using a three factor formula. Therefore, transferring capital and labor intensive manufacturing operations into

Kentucky, for example, using an LLC (where those factors are ignored) has the effect of diminishing income apportioned to the state.

Empirical Framework

Our starting point for the empirical analysis is estimation of models taking the form:

$$CSHARE_{i,t} = \beta_0 + \mathbf{CIT} \beta_1 + \mathbf{PASS} \beta_2 + \mathbf{OTH} \beta_3 + \mu_{i,t} \quad (1)$$

where the dependent variable CSHARE is defined as the corporate share of total business federal tax returns (alternatively business registrations) for state i in time period t . This model assumes that total business activity in a state could be supported by any mix of businesses with different organizational forms. **CIT** represents a vector of state corporate tax structure parameters while **PASS** is a vector that includes characteristics of taxes that fall on entrepreneurs and limited liability business entities. **OTH** are other characteristics of the states, including a set of sociodemographic variables, fiscal factors and a sectoral control.

We also estimate models in level form using analogous explanatory variables:

$$CORP_{i,t} = \alpha_0 + \mathbf{CIT} \alpha_1 + \mathbf{PASS} \alpha_2 + \mathbf{OTH} \alpha_3 + v_{i,t} \quad (2)$$

$$PARTNERSHIP_{i,t} = \theta_0 + \mathbf{CIT} \theta_1 + \mathbf{PASS} \theta_2 + \mathbf{OTH} \theta_3 + \varepsilon_{i,t} \quad (3)$$

Consistent with the small empirical literature on organizational form, the state corporate income tax rate (*Corp_rate*) serves as the primary measure of tax burden for regular corporations. Controlling for the rate on pass-thru income, a higher *Corp_rate* should reduce the share and count of businesses taking the corporate form. Taxes as a share of personal income (*Burden*) is used to account for the overall tax burden and

business climate in the state. This factor may adversely affect both corporations and other business entities so the effect on CSHARE is ambiguous.

The tax burden measure is complemented by a number of other tax structure characteristics that may influence the formation of corporations. Sales-weighted apportionment (*Salesappor*) makes the formation of an in-state business more attractive when the firm is a large exporter. Pass-thru firms and regular corporations both can benefit from such a provision so the effect on CSHARE is ambiguous. Whether the state corporate income tax conforms to the Internal Revenue Code (*IRC_Conform*) reflects the relative ease of the state reporting process and should encourage corporate formations. However, during the study period, taxes were lowered on business activity through two major federal tax acts. Therefore states choosing to decouple from federal provisions likely did so to reduce the state income tax losses projected by conforming to the federal changes. The net impact of *IRC_Conform* is therefore unclear. On the other hand, conformity with the Uniform Division of Income for Tax Purposes (UDIPTA) on the treatment of nonbusiness income (*Nonbusinc*) should be a disincentive to incorporation since it reduces planning opportunities and the flexibility of shifting allocable income across jurisdictions.⁸

A state's policy toward corporate tax planning opportunities on apportionable income is measured by three variables. First is the presence or absence of combined reporting (*Comb_Rep*)⁹ for firms that have nexus in the state. In practice combined reporting may raise or lower a corporation's tax burden; if viewed as a signal regarding

⁸ The uneven nexus rules for partnership interests result in an unclear effect of UDIPTA treatment of nonbusiness income on partnerships.

⁹ Some states require partnerships owned by corporate interests to be included in the corporation's combined report.

the aggressiveness of state tax policy toward business, combined reporting should discourage incorporation. Second is the presence of add-back provisions (*Addbacks*) for firms that do not have nexus in the state. Like combined reporting, these provisions (which may vary in substance across states) should dampen corporate activity relative to all business activity. Finally, a dummy variable is used to indicate whether the state has a throw-back rule (*Throwback*) for sales that have not been fully apportioned to other states. Throwback rules should diminish the likelihood of corporate formation and the creation of in-state nexus.

The first element of **PASS** is the top-bracket personal income tax rate (*Ind_rate*). The higher this rate, given the corporate rate, the more likely a business will take on the corporate form. The remaining elements are features of the state tax system that apply to limited liability entities. A dummy variable (*LLC_WH_Tax*) controls for whether or not the state imposes withholding tax on out-of-state members of LLCs. This measure may directly dampen pass-thru formation, but may also discourage corporate locations by diminishing tax planning opportunities. Together the net effect on CSHARE is ambiguous. Another variable (*LLC_Corprate*) represents the top marginal tax rate on LLCs if the state imposes an entity level tax on such businesses. The presence of this tax rate should decrease the attractiveness of the LLC and lead to more incorporations as regular corporations.

A small set of additional controls (**OTH**) are also included. First is a sectoral control for the share of employment in manufacturing (*Manuf_Share*). We expect a larger manufacturing sector to be associated with more regular corporations. Second is population (*Pop*), which serves as a scale control with uncertain implications for the mix

of business activity. Third is the share of the adult population with a bachelor of arts degree (*BAdeg*), a measure reflecting the quality of labor force. The effect of education on CSHARE is unclear. On the one hand, a better educated population may lead to more entrepreneurship and therefore more pass-thru businesses. But corporations may as well choose to establish a presence in places where there is a more highly educated workforce.

Following Greene (2000), we apply a weighted least squares estimator to the grouped proportion data represented by $CSHARE_{i,t}$. Weighted least squares and Huber/White robust standard errors address the heteroskedasticity problem that is commonly associated with grouped proportions data.¹⁰ As discussed more fully below, we also estimate level and change models for corporations and pass-thru entities using panel methods. Statistical tests show that fixed effects are appropriate for the empirical models. Time fixed effects are included in all of the models.

The estimation is applied alternatively to two different datasets on business organizational form for the period 2000-2007. The first includes federal IRS tax returns filed at the state level. The IRS data do not distinguish between C-corporation and S-corporations for the years 2000-2003. Therefore, CSHARE for all years is defined as the ratio of S and C corporate returns divided by the sum of corporate, and partnership returns filed; level models on corporations include both S and C corporations. For IRS purposes, entities formed as general or limited partnerships as well as the limited liability entities (LLCs and LLPs, etc.) will file partnership returns using Form 1065. The IRS data also do not distinguish between the various types of entities filing Form 1065. Using

¹⁰ While the range of CSHARE falls in the 0-1 interval, we do not apply censored or truncated regression methods to the data. The distribution has not been truncated, it is instead a reflection of aggregation. Censoring does not apply either since the underlying choice is to form a business as a pass-thru entity or a corporation.

a filing address on a federal return generally implies that the business entity has nexus in that state through physical presence at a minimum, so our empirical analysis is capturing this choice regarding organizational form. These data track total returns filed by year, with new returns adding to the prior year's total.

The second dataset provides state-level registrations of businesses by organizational form type, including regular corporations, limited liability corporations, limited liability partnerships and partnerships. Unlike the IRS data, the registrations dataset includes only new registration filings by year. As such, the data give a better picture of discrete organizational choice preferences each year since prior year choices are not carried over to current year totals. In this instance, CSHARE is defined as corporate registrations divided by total business registrations. These data are taken from the International Association of Commercial Administrators which gathers data from the respective states. Unlike the IRS returns, these data are supplied on a voluntary basis and provide an unbalanced panel for our application, i.e., we do not have complete data for every state in every year. It is important to recognize that registration as a business entity need not imply physical nexus in the state.

A second distinction between the IRS and registration data is the former uses the address on the tax return to assign the location. For a company with operations in many states, the IRS data will assign the entire business's activity to the filing state or the state where the business is headquartered. As a result, the IRS data will generally reveal the location of both active businesses and corporate headquarters. The business registration data tracks the type of entity filing to do business in any state for the year. A single legal entity could file to do business in many states, and the data will show the year an existing

entity expands into a new state as well as registrations of new businesses. Furthermore, a business could register to do business in a state but not possess sufficient nexus to file a return due to the protections of PL 86-272. Accordingly, for variables such as throwback rules, and combined reporting, the registration data should show weaker impacts since not all businesses registering will file a state tax return. We presume that the business does have nexus in the state used for its filing address through physical presence.

To capture annual changes in business entity choices for the IRS data, we calculated the change in the number of entities filing as corporations and partnerships each year. The amount will include both births and deaths of each entity type and therefore does not produce an amount that represents *new* IRS filings each year. Accordingly, this figure is still not directly comparable to the registration data which capture all new filings, but will not include businesses which dropped out of the states authorized business listings. The correlations between the two measures reveal that these differences are real.

Data and Empirical Findings

Descriptive statistics

Descriptive statistics for the variables are presented in Table 1. The share of businesses filing federal returns as corporations decreased for most states during the sample period, in some cases by significant amounts. Similarly, the share of firms registering with the states as corporations declines between 2000 and 2001. The corporate percentage of total federal business returns filed averaged 69 percent for all states for the years 2001-2007 but varied tremendously from state to state. The lowest corporate share was 48 percent for Connecticut in 2007. While scale has a large

influence on the number of business entities, it has much less influence on the share of economic activity by business type. For example, Florida had the highest corporate share of any state for all years, and recorded a value of 88 percent in 2001. But Maine and Vermont also recorded high shares of corporate returns during the sample period.

The annual net increase in the number of federal returns filed each year averaged 3,219 for corporations and 2,958 for partnerships. Although the LLC is becoming a preferred choice for those looking for flexible ownership rules, limited liability, and avoidance of double taxation of dividends, corporations still represented on average the most new returns filed. However, because corporations represented 69 percent of all business returns filed, the fact that the change in partnership returns is approaching the change in corporate returns indicates that new businesses seem to be leaning more towards partnerships or, more likely, the set of limited liability forms of doing business.

Approximately one-half of the state observations conform to the UDIPTA definition of non-business income, require combined reporting, and impose throwback rules. About 72 percent conform to the Internal Revenue Code, and 23 percent require add-back of certain related-party expenses. The average sales apportionment factor was 0.48. Approximately 50 percent of the observations had an LLC withholding tax, with many states implementing the withholding requirement during the sample period. Few states imposed an entity level tax on LLCs, with the highest such tax levied at a rate of 8.5 percent. Simple correlations show that these various provisions are not closely linked to one another within given states.

Empirical Results

The models used in this analysis will take the overall trend of movement towards pass through entities as a given, since many of the key changes apply equally to all states, such as the check the box rules for LLCs which apply to federal returns. Time trend variables will capture these overall influences on business formation. In this study, the variables of interest are state-level variables that show variation across both time and space. The goal is to identify the way state tax structure influences variation in the mix of corporate and noncorporate business entities between the states.

We test our baseline model with CSHARE as the dependent variable, and we present the results in Table 2. Note first that this model, along with those discussed below, include all states, regardless of whether the state has a personal or corporate income tax. This is the appropriate set of states since those without an income still represent viable locations for doing business. Eliminating states without a corporate income tax, for example, would eliminate a handful of states that might represent tax haven states or simply states with a good tax climate. We have estimated a model of this form and find weaker results than those presented below. This is to be expected since we have narrowed the possible effects of state tax policy to only those states with a corporate income tax.

Recall that the IRS corporate share includes both S and C corporations as well as single member LLCs with corporate owners and those LLCs electing to be taxed as a corporation at the federal level. Entities filing as partnerships could be general or limited partnerships, or one of the limited liability entities such as LLCs or LLPs. The IRS data

do not include other potential business forms such as sole proprietorships or business activities conducted within non-profit entities.

As shown in Table 2, an increase in *Corp_rate* reduces the corporate share of total returns filed, and therefore increases the percentage of firms choosing to file as a partnership, as expected. Also consistent with predictions, the coefficient on *Nonbusinc*, which captures UDIPTA's treatment of non-business income, was negative and highly significant. The existence of a throwback rule (*Throwback*) decreased the corporate share of business returns, as expected. This finding has been robust across a wide array of model specifications.

The coefficient for the weight of the sales apportionment factor (*Salesappor*) is negative, contrary to expectations, indicating that increasing the weight on sales in the formula reduced corporate formations and increased the share of those organizing as partnerships. The predicted effect of increasing the sales weight is to attract or retain net exporting in-state businesses, typically capital and labor intensive operations, would favor manufacturing firms. Indeed, the share of manufacturing in the state (*Mfg_Share*) is positively associated with a higher corporate share. The manufacturing variable may be capturing some of the influence of the apportionment factor. But the negative coefficient on *Salesappor* has been robust across a wide variety of different model specifications. One possible explanation is that states with weak growth in corporate entities are the states which have adopted sales-weighted apportionment. To test this conjecture, we re-specified the apportionment factor as a dummy variable taking a value of 0 if the sales apportionment weight was less than 0.5 and 1 if the apportionment weight was greater than 0.5. In this instance, the coefficient of *Salesappor* was positive

but insignificant. *Salesappor* remains negative and statistically significant even when we drop states without a corporate income tax from the database.

Combined reporting requirements, which are often criticized by the business community, has an insignificant effect on corporate share. This finding may reflect the fact that not all businesses lose under such a reporting relationship. Some firms may be encouraged to locate in a state with combined reporting (e.g., those businesses wishing to consolidate loss entities with profitable entities, or to accomplish some transfer pricing tax planning schemes), while some other firms (e.g. those with high profit entities located in low tax states other than the combined reporting state) might be discouraged, together yielding no net effect on corporate formation.

Similarly, we find that requiring add-backs of certain expenses paid to related parties has no impact on corporation formation. Add-back provisions and combined reporting represent a tax policy continuum, with combined reporting being the most comprehensive means of combating tax planning. We experimented with alternative formulations of the combined reporting and add-back variables, including a variable that accounted for the absence of either policy, the presence of either policy and the presence of both policies. In general these alternative specifications did not produce statistically significant results.

Neither of the variables related to the taxation of LLCs impacted the share of businesses in the corporate form. The percentage of workers with a college degree (*BAdeg*) was positive and marginally significant, suggesting that corporations establish roots in states with a well-educated workforce.

The latter two columns of Table 2 reflect regression results for total corporate and partnership returns. As one would expect, the results are largely similar to the corporate share specification, although nonbusiness income, education, and manufacturing do not have a significant effect on total corporate and partnership returns filed. Nonbusiness income has a negative sign and approaches conventional significance levels for the count of corporations, which suggests that this is the source of the negative effect on the corporate share discussed above. The *Mfg_Share* coefficient is positive and has a t-statistic of 1.45, suggesting that corporate activity is the source of the positive coefficient on the corporate share of businesses.

Burden is positive and statistically significant for both entity types, while the same variable has no effect on the corporate share. One interpretation, given the way our models are specified, is that a higher overall tax burden is offset by the spending side of the budget, including advantages such as better infrastructure and better quality government services, including elementary and secondary education.

Throwback rules have a negative effect on the number of corporate returns filed, but have no positive effect on the number of partnership returns filed. The transmission mechanism for the negative effect of throwback rules on the corporate share is the number of corporate entities. Finally, the imposition of a corporate tax rate on LLCs is associated with a decrease in partnership tax returns. Taxing partnerships at the potentially higher corporate tax rate increases the incentive to form as a corporation and reduces tax planning opportunities that seek to shift income to entities that enjoy a lower tax rate.

We excluded any measure of the unemployment insurance tax burden from the baseline model because the data were unavailable for the final year of the study period. We did test the effect of unemployment insurance tax policies for the remaining years by calculating a variable representing unemployment benefits paid as a share of payroll, *ui_benperpay*, and adding it to the baseline model for CSHARE. *Ui_benperpay* was negative and highly significant in this model, indicating that high unemployment benefits discourage corporate formations. But the same variable failed to show significance in the levels models. These results offer little or no support for the SUTA dumping argument.

Sensitivity Tests

The IRS data did not permit us to isolate the number of new business returns filed each year. The data will include repeat filers, plus new entities filing initial returns, but omits those businesses who failed to file that year because of dissolution or other reasons such as insufficient business activity. However, we did calculate the change in the number of corporate and partnership returns filed each year to get some idea of the annual flow for the two entity types, Δ CORP and Δ PART. We specify these models in analogous fashion to those presented above.¹¹

The regression results using Δ CORP as the dependent variable are presented in Table 3. As in previous models, the top bracket corporate tax rate (*Corp_rate*) has a significant and negative effect on the change in corporate returns filed. *IRC_Conform* also has a negative and significant effect. This is consistent with predictions that during the sample period, with two major tax cuts for business activity, departure from the Internal Revenue Code was more likely to result in higher tax burdens and reduce

¹¹ An alternative strategy would be to estimate changes-in-changes models. We do not pursue this path because of the large number of dummy variables and the modest variation in these factors over time.

corporate filings. The existence of a throwback rule was also negative, indicating that the change in corporate returns filed was smaller when this rule is imposed. The imposition of an LLC withholding tax increased the change in corporate returns filed. Presumably, the withholding tax decreased tax planning opportunities for LLCs, increasing the relative desirability of the corporate form. Population was positive and significant, as expected.

The results of the regression with Δ PART are also presented in Table 5. Surprisingly, neither the corporate rate nor the individual rate is significant in this model. In fact, statistical significance was found only with *IRC_Conform* and *Throwback*, with coefficients of both variables negative, similar to the results using Δ CORP. Notably, throwback rules require that if income is not apportioned to any state, they will be “thrown back” to the home state and taxed there. The implication is throwback rules discourage new business filings for both partnerships (and therefore LLCs) as well as corporations. It is not possible to determine whether this has a dampening effect on business activity in general, or just the location of the business headquarters in a throwback state. Similarly, departure from the IRC during the sample period could indicate a generally unfriendly business environment, although further investigation of the manner with which the states departed from the IRC would be needed to confirm this conclusion.

Conclusion

The choice of business entity is determined by both state and federal factors. The trend towards pass through entities versus corporations is perhaps attributable to both federal check the box rules and state level developments that provide businesses the limited liability, organizational flexibility, and pass through income tax treatment in the

limited liability forms. However, the large variation in corporation versus partnership filings across the states, even when controlling for scale (i.e. population) suggests that state tax policy may have an important effect on organizational form and nexus decisions.

The results of this analysis suggest that state tax policy does affect business decisionmaking. State policy impacts the mix of returns and business planning opportunities within and across states, and ultimately real economic activity and state tax revenue. For example, throwback rules which seek to tax nowhere income reduce corporate formations. While the states may find that they can tax the nowhere income of some firms located in the state, other firms presumably choose not to locate in states with throwback rules, dampening both economic activity and revenues. On the other hand, no significant impacts were identified for states with required combined reporting. This suggests that the business community's expressed concerns about combined reporting requirements have been overstated.

Mobility in response to tax policy parameters has generally been viewed as the movement of mobile factors of production and consumers who seek low-tax jurisdictions to produce or make purchases. The empirical work presented here provides strong evidence that tax policy can influence mobility in an extended fashion by affecting the choice of business organizational form. More empirical work is needed to translate these impacts on organizational form into real effects on economic activity and state tax revenue.

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TABLE 1
Descriptive Statistics
N = 350

Variables:	Mean	Standard Deviation	Minimum	Maximum
Dependent Variables				
Corp	119,567.20	140,740.00	10,057.00	771,419.00
Partnership	50,680.75	54,428.34	4,083.00	341,249.00
CShare	0.69	0.06	0.48	0.88
PShare	0.31	0.06	0.12	0.52
ΔCorp	3,219.59	8,214.99	-21,118.00	61,379.00
ΔPart	2,958.32	4,133.70	-4,843.00	34,801.00
Policy Variables				
Corp_rate	6.64	2.75	0.00	12.00
Ind_rate	5.50	2.94	0.00	14.00
Burden	0.10	0.01	0.07	0.14
IRC_Conform	0.72	0.45	0.00	1.00
Nonbusinc	0.47	0.50	0.00	1.00
Comb_Rep	0.51	0.50	0.00	1.00
Salesappor	0.48	0.24	0.00	1.00
Throwback	0.47	0.50	0.00	1.00
Addbacks	0.23	0.42	0.00	1.00
LLC_Corprate	0.01	0.02	0.00	0.09
LLC_WH_Tax	0.51	0.50	0.00	1.00
Control Variables				
Pop (in millions)	5.85	6.45	0.49	36.60
BAdeg	26.44	4.82	15.10	40.40
Manuf_Share	0.11	0.04	0.02	0.21

TABLE 2
REGRESSION RESULTS
N=300

Dependent Variable	CShare		Corp		Partnership
Policy Variables	Coefficient (Stand. Errors)		Coefficient (Stand. Errors)		Coefficient (Stand. Errors)
Corp_rate	-0.0026 ** (.0013)		-3,774 ** (1,729)		1,096 * (602)
Ind_rate	-0.0009 (.0008)		577 (692)		453 (451)
Burden	-0.1725 (.2416)		398,311 ** (179,072)		195,444 ** (87,344)
IRC_Conform	0.0004 (.0031)		56 (3,807)		-143 (1,562)
Nonbusinc	-0.0165 *** (.0045)		-11,635 (7,462)		-863 (1,722)
Comb_Rep	0.0046 (.0038)		4,000 (3,042)		185 (1,023)
Salesappor	-0.0231 *** (.0079)		-24,527 ** (11,742)		-4,613 (5,152)
Throwback	-0.0187 ** (.0089)		-52,838 *** (16,521)		1,590 (4,149)
Addbacks			-822 (3,018)		1,781 (1,541)
LLC_Corprate	-0.3183 (.5195)		105,612 (107,126)		-387,737 *** (120,417)
LLC_WH_Tax	0.0005 (.0020)		1,328 (1,459)		1,067 (882)
Pop (in millions)	0.0000 *** (.0000)		0 *** (0.008)		0 *** (0.002)
BAdeg	0.0006 * (.0004)		273 (331)		185 (153)
Mfg_Share	0.4505 ** (.1934)		215,179 (148,432)		20,480 (73,311)

***, **, * represent p-values < .001, .05, and .01, respectively

TABLE 3
REGRESSION RESULTS
N = 270

Dependent Variable	Δ Corp	Δ Part
Policy Variables	Coefficient (Stand. Errors)	Coefficient (Stand. Errors)
Corp_rate	-1,559 ** (628)	62 (200)
Ind_rate	93 (401)	75 (116)
Burden	20,523 (97,644)	27,801 (30,626)
IRC_Conform	-4,971 ** (2,436)	-1,219 * (705)
Nonbusinc	-2,168 (6931)	161 (438)
Comb_Rep	1,817 (1,339)	268 (410)
Salesappor	-4,002 (4,004)	-1,688 (1,673)
Throwback	-12,793 *** (3,826)	-7,583 *** (1,585)
Addbacks	-88 (2,385)	324 (752)
LLC_Corprate	31,493 (71,206)	35,623 (31,802)
LLC_WH_Tax	1,569 * (901)	351 (262)
Pop (in millions)	0 *** (0.003)	0 *** (0)
BAdeg	53 (167)	79 (54)
Mfg_Share	48,560 (91,414)	19,071 (31,733)

***, **, * represent p-values < .001, .05, and .01, respectively