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Constitutional Limits on State and Local Aid to Private Enterprise

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Table of Contents

I. Introduction

State and local government efforts to recruit and retain businesses within their jurisdiction take place within a competitive environment. U.S. state and local governments compete for mobile economic activity using a variety of economic development policies, including taxes, public service, and incentives. Providing firms with economic development incentives has become standard practice over the last fifty years. A slow return to full employment coupled with limited federal resources to address the issue will likely increase demands for state and local officials "to do something about jobs" (Bartik 2012, p. 545). Despite criticism of the practice, this pressure often causes policy-makers to increase available economic development incentives.

Economic development incentives packages are bundles of tax and non-tax incentives, often with non-tax incentives comprising the largest share. A recent survey of state economic development programs finds that "the percentage of businesses receiving more than $50,000 through non-tax programs significantly exceeded that percentage for tax programs" (Council for Community and Economic Research 2013, p.19). Comprehensive data are not available; however, some evidence suggests these incentives may comprise as much as three-quarters of state and local resources devoted to economic development (Bartik, Erickcek, and Eisinger 2003). Analyzing the incentive packages contained in the Good Jobs First Mega deals subsidy database from 1985–2000, the reported value of the non-tax portion were 1.7 times greater than the value of the tax incentives.[1] Non-tax incentives are also at the forefront of the public debate on incentives because this type of incentive (cash and near-cash grants, low-interest financing, free land and buildings, etc.) looks most like legalized bribery of companies (Bartik 2005). In economic parlance, these non-tax incentives effectively subsidize capital rather than labor. Job creation, higher earnings, and tax revenues are presumably the indirect outcome of capital attracted by non-tax incentives.

The incentives available in a particular jurisdiction are a response to local economic conditions as well as the "rules of the game" dictated by federal and state constitutions. Unique circumstances in the nineteenth century caused states to impose constitutional constraints on state and local governments' ability to aid private enterprise through non-tax incentives. The provisions originated in the mid- and late-19th century in response to state and local government financial crises caused by participation in risky economic development projects (via railroads, canals, ferries, etc.) (Roy 1969; Rubin 1999; Tarr 1998). The fiscal consequences of investment in private ventures that ultimately failed were serious, including

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[1] The total value of non-tax incentives was $2,925,800,000 compared to $1,750,120,000 for tax incentives based upon the author's calculations. These values are exclusive of worker training incentives when possible. Another $95,000,000 was classified as "other". Incentives classified as other were unspecified in the source data. Analysis is available upon request from the author.

long-term debt obligations, default, and bankruptcy.[2] This culminated in the 1837 collapse, when nine states defaulted on their debts, and states throughout the U.S. enacted constitutional reforms curtailing legislative promotion of economic development and creating barriers to prevent abuses (Tarr 1998). These state constitutional provisions are relevant to today's competitive environment because they continue to limit and structure jurisdictional ability to match and innovate in response to economic circumstances. The type of non-tax economic development incentives available in a location are a direct reflection of the allowable activities under the state constitution.

State constitutional constraints may restrict the ability of governments to provide needed incentives—limiting growth—or allow governments to credibly argue that they cannot offer incentives, which reduces the possibility that they will offer wasteful incentives or overleverage their jurisdictions through offering large incentives. Increasing the available non-tax capital subsidies beyond those allowed under the state constitution requires amendment or revision. In an environment characterized by increasing pressure to offer incentives, the trend over the last fifty years has been to relax the constraints imposed by state constitutions. In 2010, for example, three states amended their state constitutions to allow public entities to use general obligation bonds to finance economic development incentives (Dinan 2011). However, other attempts to increase available non-tax capital subsidies through constitutional change have been defeated by voters. For example, Texas rejected a 2011 amendment to expand county government issuance of general obligation bonds for economic development (Dinan 2012).

Patrick (2014a) develops the Incentives Environment Index (IEI) from state constitutional limits on public aid to private enterprise. The IEI measures the availability of state and local non-tax incentives for capital. It improves upon existing measures which do not account for the dynamics of incentives competition, do not contain data on local incentives, and often include data on tax incentives as well workforce, labor, marketing, and other activities outside the capital incentive paradigm (Patrick 2014a). The IEI measures the ability of state and local governments to use three broad types of economic development incentives—credit, current funds, and equity. Credit incentives use public debt to provide aid to private entities, often through issuing general obligation or revenue bonds. Incentives using current funds entail appropriations of current revenues for gifts, loans, and donations to private firms. Equity incentives imbue the public with ownership in private ventures, such as public-private partnerships and public venture capital funds.

Patrick (2014a) uses the IEI to estimate the job creation effects of increasing available non-tax capital incentives in continental U.S. counties from 1970-2002. She finds a negative medium-term effect on rural county employment and no significant effect on rural county employment growth, urban county employment levels, or urban county employment growth. In new research funded in part by the W.E.

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[2] The risk of similar fiscal consequences still exists for public entities in states whose constitutions contain few restrictions on non-tax incentives. For example, Rhode Island's state constitution is one of the least restrictive in the U.S. (see Table 1 below). Rhode Island recently enticed Curt Schilling's now defunct Studio 38 video game company with a rich incentive package, including $75 million in state guaranteed financing. The State's obligation to repay debt incurred on behalf of the failed venture continues and is the subject of much public debate (Bray 2012; Cohan 2012).

UpJohn Foundation, she finds subsidy-induced capital-labor substitution and changes in county industry composition. This research suggests that increasing available non-tax capital subsidies is an ineffective job creation policy; however, it may be an effective productivity-enhancing policy.

The report proceeds by discussing constitutional provisions on public aid to private enterprises in Section II. Section III describes the IEI. Section IV elaborates on changes in constitutional provisions, the IEI, and available non-tax incentives. Patrick's (2014a) findings on the job creation effects of increasing available non-tax capital subsidies are summarized in Section V. Section VI explores the capital expenditure and industrial composition effects of increasing non-tax economic development incentives. Section VII provides some concluding remarks.

II. Constitutional Provisions on Public Aid to Private Enterprises

State and local efforts to attract or retain economic activity with non-tax incentives take place within the context of state constitutional provisions limiting and structuring official's freedom to use public credit, money, and property for the benefit of private enterprises (Pinsky 1963; Green 1990; Schaefer 1998). Gray and Spina (1980) analyze the various incentives available across U.S. states. They assert constitutional prohibitions as the primary reason that gifts of land and money are the least used incentives. Anderson and Wassmer (2000) note that few state use general obligation bonds for economic development incentives. Analysis of state constitutions reveals that most prohibit the use of general obligation debt for economic development. Industrial Revenue Bonds (IRBs) provide another example. Low-cost financing provided through IRBs became widespread during the 1960's and 1970's. The few states whose constitutions prohibited IRBs were disadvantaged from competing for new firms and amended their constitutions to be competitive (Reich 1983; Eisinger 1988). Studies examining state constitutional amendments to expand the number of incentives available also highlight the role of state constitutional constraints.[3]

It is generally accepted that there are three State Constitutional provisions governing public aid to private enterprises: (1) Credit Clause(s), (2) Current Appropriations Clause(s), and (3) Stock Clause(s) (Pinsky 1963; Roy 1969; Gray and Spina 1980; Gelfand and Amdursky 1986; Marks and Cooper 1988; Green 1990; Schaefer 1998; Rubin 1999). The Credit Clause governs the use of public credit to aid private enterprises. It covers activities such as IRBs, loan guarantees, bond financed grants provided to private firms, borrowing financed industrial park land, etc. The Current Appropriations Clause determines allowable appropriations for economic development donations, grants, loans, etc. The Stock Clause governs the financial relationship between public and private entities, including public-private partnerships, seed capital funds, etc.

State constitutional constraints may restrict the ability of governments to provide needed incentives— limiting growth—or allow governments to credibly argue that they cannot offer incentives, which reduces the possibility that they will offer wasteful incentives or overleverage their jurisdictions through offering large incentives. As discussed above, interjurisdictional competition causes rapid policy convergence and innovation. The dynamics of innovation and response caused by competition may be the most significant element in determining the overall effect of incentives. The argument follows from Oates's (1972) assertion, formalized by Zodrow and Mieszkowski (1986) and Wilson (1986), that interjursidictional competition for investment is inefficient and, because all governments are behaving this way, none are gaining a competitive advantage (Wilson 1999; Patrick 2014b). For example, ÓhUallacháin and Satterthwaite (1992) conjecture that the ease with which Industrial Revenue Bond (IRB) programs can be

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[3] See for example Amdursky (1967) regarding New York; Roy (1969) regarding Colorado; Reich (1983) regarding Washington, and Gold (1985) regarding Ohio. Of these efforts to relax constitutional constraints on public aid to private entities, New York and Washington approved amendments while Colorado and Ohio did not.

duplicated in competing jurisdictions explains their estimated negative impact of IRB subsidies. Eisinger (1988) describes the proliferation of economic development programs in the 1960s. Although aggressive incentives were first used by economically underdeveloped Southern and Western states, by 1966 Northeastern and Midwestern states had taken the lead. Northeastern and Midwestern states responded by matching the available Southern and Western programs as well as creating programs unavailable in those areas.[4] According to *Site Selection* magazine, financial assistance programs were available in all 50 states by 1985. The average state offered nine of the 15 types of financial assistance reported. In a recent survey of U.S. local governments, 95.1 percent of all respondents report offering business incentives (International City/County Management Association 2009).

Theoretical models of incentives competition predict jurisdictions will match bids until the potential benefits are exhausted (or exceeded) (Guisinger 1985; Ellis and Rogers 2000; Patrick 2014b). If there are no constraints on jurisdictions, then they may create incentives in order to match competing offers. For example, the incentives package used to induce Mercedes Benz's 1993 selection of Vance, Alabama as the location for its first U.S. manufacturing facility contained a number of programs developed specifically to induce Mercedes to locate in Alabama. The incentives package was designed to replicate the incentives used to lure Toyota to Kentucky (White 1993).

The competition for BMW's first U.S. automotive manufacturing facility provides another example. Strategic behavior implies that a location's initial incentive bid is unlikely its final incentive bid. In 1992, BMW announced its decision to locate in Greenville, SC. The decision was the culmination of a public bidding war between competing locations which resulted in an increase of Greenville's initial incentive bid of $35 million to the $150 million final bid (Kurylko 1992a–c; Patrick 2012). Constitutional constraints bound the types of incentives that state and local governments' may use in such strategic bidding wars.

Site selection consultants (and in-house personnel specializing in site selection) intensify bid replication behavior. While negotiating for incentives from a particular location, the firm/consultant transfers knowledge of other jurisdictions' incentives to get a matching bid. Suppose the location doesn't currently offer the incentive. If the rules governing incentives allow them to create a similar incentive, then the location may feel more pressure to do so; otherwise, state legal limitations may credibly constrain their jurisdictions from offering this incentive.

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[4] The IEI reflects the fact that Northeastern and Midwestern states could respond with additional programs. The average 1970 IEI is higher in the Northeast and Midwest than in the South and West.

III. Measuring Available Non-Tax Incentives: The IEI

The Incentives Environment Index (IEI) is created for every state and year 1970–2000 from the three constitutional clauses governing non-tax economic development incentives. An index based on these provisions of state constitutions measures the ability of locations to provide a certain level of non-tax incentives or capital subsidies. The types of non-tax economic development programs available in locations across the United States are a direct reflection of the limits placed by these constitutional provisions. Thus, they measure both available programs as well as the limitations placed on the nature of the public policy response to local economic conditions.

The number and type of incentives available is an important factor determining the value of incentive bids. Further, the marginal value to the firm of compensating provisions decreases, compared to the more desirable incentives. Although one type of incentive may be substituted for another, compensating provisions are generally less valuable. For example, the incentive package provided by Alabama to Mercedes included a $100 million payment to the company. Most state constitutions prohibit direct transfers of public funds to private firms. In order to match Alabama's cash offer, a restricted state can offer a different type of incentive. Compensating incentives could come in the form of an additional $100 million in tax breaks, loans, or property. The present value of tax incentives is the discounted value of the decrease in future tax liabilities. Therefore, the present value of $100 million in tax incentives is less than the present value of a $100 million cash transfer. Similarly, the present value of a $100 million loan must be discounted by the (usually reduced) interest rate. While cash is liquid and fungible, property is not. Cash is not subject to diminishing marginal returns, but there are diminishing marginal returns to additional property for any given project—land and machinery beyond a certain point add little to no value to firm output at the site. The cost of providing additional property, however, is not decreasing. If additional property must be financed (as opposed to funded out of current revenue), then the costs may actually increase. Further, many states that prohibit cash transfers also prohibit property donations. Instead, the public entity must own the property and lease it to the private company (usually at a reduced rate). Clearly, any type of compensating incentive will have to be larger than the more desirable cash transfer to achieve the same present value to the company. Additionally, the compensating provisions represent less risk for the public entities. Thus, both present value and public risk are increasing in the type and number of incentives available as measured by the IEI.

IEI SCORING METHODOLOGY

The IEI is the sum of the state and local credit, current appropriations, and stock clause scores. Adding the individual state and local clause scores allows the summary index to reflect substitution of one type of

incentive for another.[5] A higher score means more freedom to use incentives governed by that clause. The clause scoring methodology is similar to Ameil, Deller, and Stallman (2009)'s Tax and Expenditure Limitation Index. Each clause is scored based on sub-categories and the sub-category scores are then summed. The scoring system for each clause captures variation in the type of activity covered, the scope or entities restricted, explicit exemptions, and the approval process. Additional detail on the clauses and scoring may be found in the web appendix to Patrick (2014a). The scoring tables are also available from the author upon request. In the following discussion particular attention is paid to peculiarities within each clause that impact scoring.

As noted above, the Credit Clause governs the use of public credit to aid private enterprises. In other words, it determines whether a state or local government may offer economic development incentives such as loan guarantees and IRBs as well as how public entities may use debt to finance economic development programs. State credit clauses vary by the type of credit restricted and which entities are covered by the restriction, as well as by exempted uses and approval processes.

Government credit may be backed by the full taxing power of the entity or not. The latter type of credit is referred to as revenue secured debt, but it includes moral obligation bonds and debt secured by a dedicated special tax. The project or other revenue stream secures revenue debt rather than the full faith and credit of the issuing entity; hence, it represents much less valuable aid to the beneficiary project than general obligation credit secured by the entity's taxing power. Industrial Revenue Bonds are the most common form of revenue-secured economic development financing. Debt secured by a special tax, such as capital improvement bonds issued in anticipation of increased tax revenues in a special district, does rely on the entity's taxing power. However, it is equivocated to revenue debt per judicial interpretation (Gelfand and Amdursky 1986).

Depending upon the type of debt covered by the credit clause, there is further variation in the scope, exemptions, and required approvals. The scope category gives one point for each entity excluded from the credit clause restriction. For example, a state may restrict use of state credit to aid private enterprises but allow the state to extend its credit to state authorities and political subdivisions to use in financing economic development incentives. If the local governments are prohibited from using those funds in a particular way, then that prohibition is reflected in the local score not the state score. Similarly, a state may require super-majority legislative or electorate approval before using its credit in aid of private entities. Requiring approval to use credit for a particular activity hampers use of the incentive. Thus, approvals enter score calculations negatively.

The Current Appropriations Clause covers funds appropriated to donate as well as funds appropriated to provide loans. Thus, this clause governs the ability of state and local governments to use cash

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[5] Summing gives equal weight to each clause. In the composite index, a value of zero indicates the most restrictive combination of clauses possible, and values are interpreted with respect to it. A state with no state or local restrictions on the use of public funds to aid private enterprise would achieve the highest possible value indicating that it has the ability to provide economic development incentives in any manner.

inducements, give free land, provide loans, or fund similar activities through current appropriations. For example, the clause can restrict the appropriation of money to a state agency for grants to private enterprises. If current revenue may be appropriated to loan funds for private entities, then the current appropriations clause is invoked rather than the credit clause (Pinsky 1963). For the purposes of scoring current appropriations clauses, it is assumed that loans are unrestricted unless specifically mentioned (in accordance with judicial interpretations). "Grant" is interpreted as a donation prohibition but not loan prohibition. The methodology for scoring current appropriations clause scope, exemptions, and approvals is the same as described for the credit clause.

Finally, the Stock Clause governs the financial relationship between public and private entities. Some stock clauses only mention stock. Others are more inclusive with restrictions on direct or indirect ownership or any interest in a private company, association, or non-profit. The Stock Clause is relevant for economic development activities such as public-private partnerships, investment in seed capital funds, and other types of stock or ownership. The scoring methodology is similar to that used for the credit and current appropriations clauses.

INTERPRETING THE IEI

Table 1 provides descriptive statistics for the IEI as well as for the state and local clause scores. The mean clause scores help give interpretation to the mean IEI in terms of specific mechanisms for aiding private enterprise. For example, the mean local credit clause (LCC) score is 17.14 with a standard deviation of 4.92. In a location with a LCC score of 17, local governments and authorities may issue revenue backed debt for economic development and most political subdivisions may use general obligation debt to aid private enterprise. A five point increase in the LCC implies that all local governments, authorities, and political subdivisions can use general obligation financing for any economic development purpose, including providing working capital. A five point decrease in the LCC implies that all local governmental units can issue revenue debt to aid private companies; however, general obligation debt is almost completely restricted.

Table 1. Annual State IEI Summary Statistics

	MEAN	STANDARD DEVIATION	MIN	MAX
Incentives Environment Index	96.16	23.88	27	129
Local Credit Clause	17.14	4.92	0	23
Local Current Appropriations	18.95	7.98	0	25
Local Stock Clause	13.23	6.52	2	24
State Credit Clause	15.30	4.14	0	21
State Current Appropriations	19.00	5.45	0	23
State Stock Clause	12.46	4.73	3	17

Notes: The panel includes 48 states over 31 years giving a total of 1488 observations.

The mean local current appropriations clause (LCA) score is 18.95 with a standard deviation of 7.98. The mean LCA score indicates that local governments may appropriate funds to use for loans to private entities. They may also use a finance authority to provide grants for one exempt purpose, such as land for a new facility. An increase in the LCA by one standard deviation allows unrestricted use of current funds. In other words, one standard deviation increase from the mean LCA score allows local governments to use current tax revenues for gifts of money and property to private companies. On the other hand, decreasing the LCA to 12 implies that all grants funded by tax collections are prohibited, but loans and loan guarantees are allowed.

The local stock clause (LSC) score has a mean value of 13.23 over the period and standard deviation of 6.52. A LSC score of 13 indicates that all governmental entities in the location are prohibited from stock or direct ownership in private entities, but are allowed to have indirect equity. For example, local governments many have indirect equity through a donation to a nonprofit that invests to aid private companies. Increasing the LSC by one standard deviation implies that only stock ownership is prohibited. A decrease of one standard deviation indicates indirect ownership prohibitions, which would cover activities like donations to venture capital funds.

The interpretation of the state clause scores are similar to the local interpretations above and is omitted for brevity. The mean IEI can be interpreted as characterizing a location which may aid private firms with the mean local and state mechanisms. The mean IEI over the period is 96, with a standard deviation of 24.

To illustrate the relationship between the IEI and economic development incentives even more clearly, consider the following example: It is 1992 and a local government wants to use general obligation debt to finance the purchase of land to donate to a prospective industry. The following summarizes the relevant local IEI (LIEI) score in three states that often compete for the same firms and how it pertains to the ability of the local government to provide such an incentive:

- AL: LIEI= 65 → Sure, no problem!

- SC: LIEI=52 → If a majority of the voters approve it, then yes.

- GA: LIEI=33 → No way! The debt would need to be secured with a revenue stream and the company would need to lease the property from a public authority.

Finally, a few additional features of the IEI are worth noting before proceeding. The IEI is not measuring the actual incentives given, but rather the types of non-tax incentives available. This is important because, as discussed above, incentive packages evolve in response to competition. The Mercedes Benz 1993 selection of Vance, Alabama discussed above, where legislative action lagged the commitment to the company, provides an example. The IEI reflects the ability of Alabama to make commitments that were later institutionalized through statutory change. It measures the ability of state and local governments to offer non-tax and discretionary incentives that effectively act as capital subsidies for private firms. The IEI does not measure tax exemptions and credits. Further, the IEI captures information

about the incentives environment that is very different from business climate measures. Business climate measures often include both tax and subsidy economic development programs, measures of regulatory environments, labor force characteristics, quality of life indicators, and economic growth outcomes. The IEI is also not simply a measure of regional variation in state policies. Figures 1 and 2 show the 1970 and 2000 state distributions of the IEI. Clearly, there is intraregional variation.

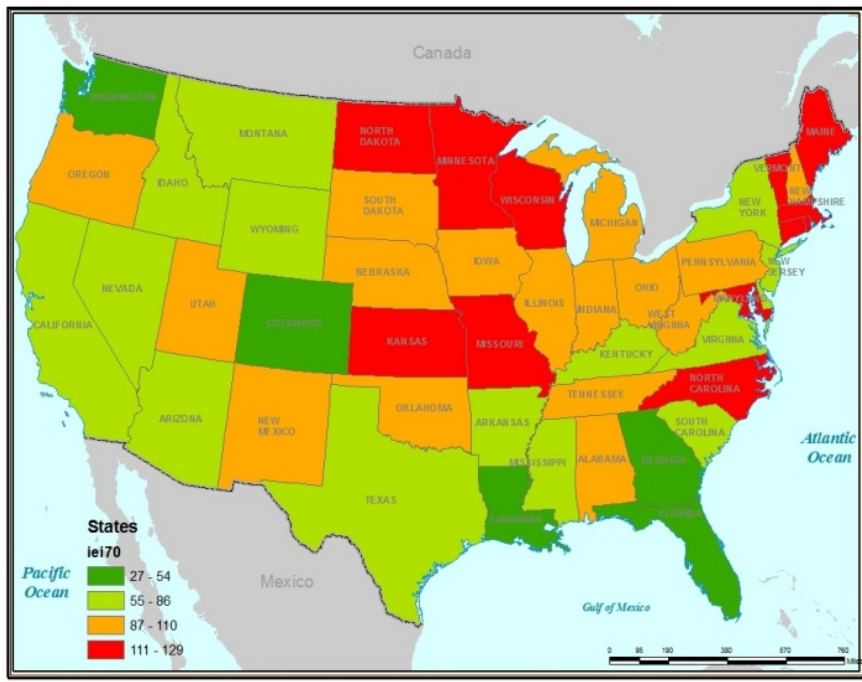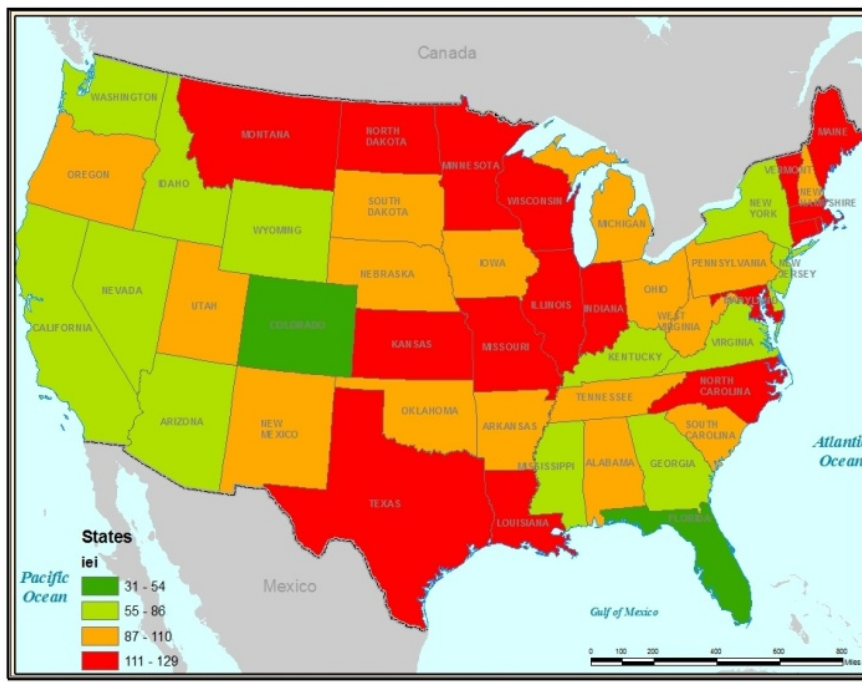**Figure 1. 1970 IEI (Distributed by 1970 Jenks Breaks)**

Figure 2. 2000 IEI (Distributed by 1970 Jenks Breaks)

IV. Constitutional Change and Available Non-Tax Economic Development Incentives

The clauses originated in the mid- and late-19th century in response to state and local government financial crises caused by participation in risky economic development projects (Roy 1969; Rubin 1999; Tarr 1998). Changes to these clauses occur through the adoption of new state constitutions and amendments. The changes are generally due to political movements focused on the role of government and/or to allow the location to provide the new relevant baseline incentives (Tarr 1998). For example, Idaho's 1982 amendment was specifically designed to allow IRBs. Prior to the amendment, Idaho had the most restrictive local credit clause in the country.[6] The amendment allowed city and county authorities to issue IRBs, and also enabled revenue-secured debt in general. Tax Increment Financing (TIF) enabling legislation followed.

Table 2 provides the IEI ranking for each of continental U.S. state in 1970 and 2000. Connecticut, Missouri, and Vermont have the highest possible IEI score in both 1970 and 2000. Therefore, Connecticut, Missouri, and Vermont tie for first, meaning their constitutions allow the most types of non-tax economic development incentives among the states at that time. Over one-third of the states change their constitutions at least once between 1970 and 2000, with approximately thirty percent changing multiple times. The vast majority of these changes increase the ability of public entities to aid private entities; thus the states that did not amend their constitutions moved down in the rankings from 1970 to 2000. With the exception of Connecticut, Missouri, and Vermont, the states that maintained their ranking from 1970 and 2000 did so through constitutional change increasing the ability of public entities to provide non-tax capital subsidies. For example, a 1983 amendment to the state and local credit clause of the Washington Constitution removes restrictions on the issuance of IRBs. The resulting increase in Washington's IEI score maintains its ranking among states, but is not a sufficient increase in Washington's available non-tax incentives to increase its ranking.

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[6] Idaho's local credit clause score in 1982 is 3, which is well below the next lowest score of 11.

Table 2. State IEI Rankings

STATE	1970	2000	CHANGE	STATE	1970	2000	CHANGE
Alabama	22	27	-5	Nebraska	27	31	-4
Arizona	30	37	-7	Nevada	35	39	-4
Arkansas	29	29	0	New Hampshire	18	21	-3
California	40	41	-1	New Jersey	42	46	-4
Colorado	44	47	-3	New Mexico	25	25	0
Connecticut	1	1	0	New York	33	34	-1
Delaware	31	38	-7	North Carolina	10	10	0
Florida	47	48	-1	North Dakota	5	6	-1
Georgia	45	42	3	Ohio	15	18	-3
Idaho	42	44	-2	Oklahoma	23	27	-4
Illinois	13	16	-3	Oregon	24	30	-6
Indiana	13	16	-3	Pennsylvania	21	25	-4
Iowa	20	23	-3	Rhode Island	6	8	-2
Kansas	8	5	3	South Carolina	35	24	11
Kentucky	41	42	-1	South Dakota	26	32	-6
Louisiana	48	6	42	Tennessee	15	18	-3
Maine	11	12	-1	Texas	34	15	19
Maryland	8	10	-2	Utah	28	33	-5
Massachusetts	12	13	-1	Vermont	1	1	0
Michigan	19	22	-3	Virginia	31	36	-5
Minnesota	6	8	-2	Washington	45	45	0
Mississippi	37	40	-3	West Virginia	17	20	-3
Missouri	1	1	0	Wisconsin	4	4	0
Montana	39	14	25	Wyoming	37	34	3

State constitutional change occurred most frequently in the South and West during the 1970's and 1980's. Approximately 13.6 percent of the changes occurred in the 1990's compared to 40.9 percent and 45.5 percent in the 1970's and 1980's, respectively. States located in the South Census region account for 43.75 percent of the states that change these provisions of their constitutions from 1970 to 2000 but represent only 33.33 percent of continental states. Similarly, 22.92 percent of all states are located in the Western Census region, but Western states account for 31.25 percent of the states that change their constitutional provisions on public aid. Less frequent change among Midwestern and Northeastern states reflects the generally less restrictive constitutions in the Midwest and Northeast in 1970. Relative economic activity, as measured by Gross State Product (GSP) per capita, also varies among the changers. Approximately 59 percent of constitutional changes occur in states with lower GSP per capita than the average state in the year of the change and 41 percent in states with higher than average GSP per capita.

The average change in a State's IEI score is 13 with a standard deviation of 22. Amendment to allow additional incentives provides evidence that these constraints are binding. When these constraints are lifted, policy-makers respond with statutory and policy changes. It would be ideal to have similar measures of economic development incentives to compare to the IEI. However, reviewing the available incentives data and indices for the period, only *Site Selection* magazine produced consistent tabulations of state financial assistance programs over multiple years. The magazine produced yes/no listings of available state financial assistance programs from 1985–2000. The IEI is positively and significantly correlated with a state financial assistance policy measure created from these yes/no listing, with a correlation coefficient of 0.3 significant at the one percent level. Creating another measure from the portions of the *Site Selection* listing which are most related to credit and relating it to the IEI credit scores yields a significant 0.4 correlation coefficient. The yes/no measures are blunt measures and do not account for allowable sources and uses of funds. Considering these points, the correlations are relatively high.

The IEI does not reflect changes in tax incentives, changes in target industries, or other statutory changes in economic development policy unless they require constitutional change. For example, the IEI for states with post-1970 constitutions that allow public entities to provide aid through revenue-secured debt does not change when the first governmental entity in the state issues on IRB or enacts TIF enabling legislation—both of which are responses to local economic conditions. The estimation results discussed below include detailed tax/expenditure/debt data to reflect these types of changes. The IEI does change for those states whose post-1970 constitutions constrained public entities from issuing revenue-secured debt to aid private companies. Montana, for example, adopted a new constitution in 1973. Although the new constitution was not motivated by local economic development concerns, the authors chose to exclude some of the public aid restrictions contained in the previous constitution. In particular, the new constitution removed many of the restrictions on the use of public credit for economic development. The legislature responded to the relaxed restrictions by enacting TIF enabling legislation in 1974.

The IEI measures the type of incentives which can be used in response to local economic conditions. When these constraints are lifted, like in the Montana and Idaho cases discussed above, policy-makers respond with statutory and policy changes. Another example is provided by the 1987 Texas constitutional amendment authorizing grants and loans to private entities for the purposes of economic development as well as allowing political subdivisions to finance loans or grants through bonds. The *Site Selection* magazine listings reflect the policy responses to this change. The post-amendment listings include new city and state incentives for investing in high unemployment areas, new state matching funds, state loan guarantees, city or county loans, and city and county general obligation debt financing; all of which were unavailable prior to the 1987 amendment.

V. Increasing Available Aid and Job Creation

Non-tax and discretionary economic development incentives (cash and near-cash grants, low-interest financing, free land and buildings, etc.) effectively subsidize capital—reducing the relative cost of capital compared to labor. As argued above, the idea is to increase capital in a location and thereby increase employed labor, earnings, and tax revenues. Since state and local governments generally face balanced budget requirements, any change in the non-tax and discretionary economic development incentives provided in a particular location can be expected to induce changes in at least one other element of the government's budget. Labor demand and supply respond to the subsidy-induced changes in the jurisdiction's taxes and public services as well as to the incentives. Thus, it is reasonable to think of the employment effect of incentives as being the sum of the direct and indirect effects. Figure 3 illustrates the effect of incentives on employment. The downward sloping curves $L_{Fj}(\cdot)$, $L'_{Fj}(\cdot)$, and $L''_{Fj}(\cdot)$ illustrate the number of employees demanded by firms at a given wage before and after the subsidy, respectively, in location j. Similarly, the upward sloping curves $L_{Hj}(\cdot)$ and $L'_{Hj}(\cdot)$ depict the labor supplied by households.

Figure 3. The Effect of Incentives on Employment
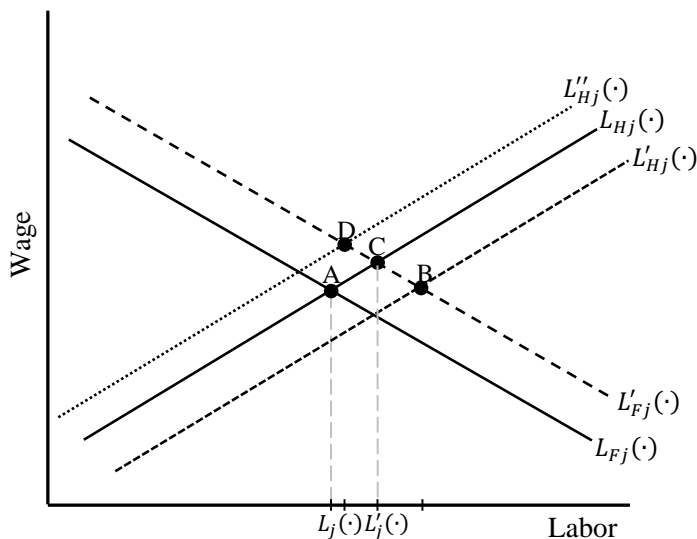
Suppose that equilibrium employment in location *j* is given by point A in Figure 3 where the initial labor supply and demand curves intersect. The idea underlying non-tax incentives directed at capital is that the induced capital will shift the aggregate labor demand schedule in location *j*, say from $L_{Fj}(\cdot)$ to $L'_{Fj}(\cdot)$. At the pre-existing wage, firms demand labor at point B. The change in employment levels from point A to point B is the employment change estimated by the employment multiplier in basic input-output models. However, induced capital is expected to affect wages for two reasons. New capital should increase the marginal productivity of labor and put upward pressure on wages. If there are no indirect effects shifting the aggregate labor supply curve, then wages would also be expected to rise to achieve the new equilibrium at point C. Thus, if there are no tax and service indirect effects, the increase in equilibrium employment is less than the direct effect of incentives on employment holding wages constant.

Proponents of incentives argue that the increase in employment and wages will have positive effects on government tax revenues and service provision. If proponents are correct, then firms and/or individuals will receive tax reductions or more/better services. Individuals receiving a tax reduction or improved public services can accept a lower before-tax wage rate and achieve the same level of utility. Supporters thus argue the subsidy-induced indirect effects of better government services and lower taxes will also shift the labor supply curve to the right. In Figure 3, a shift in labor supply from $L_{Hj}(\cdot)$ to $L'_{Hj}(\cdot)$ must accompany the shift in labor demand from $L_{Fj}(\cdot)$ to $L'_{Fj}(\cdot)$ in order to achieve equilibrium employment at point B.

Critics argue that incentives cost more government resources than they generate. The difference must be recouped through either increased taxes or reduced public services. It has also been argued that the competition for mobile capital implies that tax increases and public service reductions are borne by residents rather than firms. If this is the case, then revenue shortfalls would cause individuals to demand higher wages in location *j* and shift the labor supply schedule, say from $L_{Hj}(\cdot)$ to $L''_{Hj}(\cdot)$. The new equilibrium level of employment and wages would be point D in Figure 3. Equilibrium employment increases in the figure, but by much less than the direct effect of incentives.

Figure 3 demonstrates that the overall change in equilibrium employment will depend on the subsidy-induced change in labor demand as well as the induced changes in wages, taxes, public services, etc. Patrick (2014a) estimates the direct effect of increasing non-tax incentive availability (as measured by the IEI) on U.S. county jobs from 1970-2002, controlling for wages, state and local tax rates, service levels, outstanding debt, industrial composition, and the location-specific growth path.

As suggested by previous studies of incentives, she finds rural and urban areas respond differently to incentives as a job creation stimulus. Table 3 summarizes the results from Patrick's (2014a) preferred empirical specification using separate samples of rural and urban counties that share a state border. The table reports the estimated average change in jobs associated with a standard deviation increase in the

Table 3. The Effect of Increasing Available Non-Tax Incentives on U.S. County Jobs 1970-2002

	--------------------ANNUAL--------------------		----------------------FIVE-YEAR---------------------	
	WAGE & SALARY EMPLOYMENT	**GROWTH RATE OF EMPLOYMENT**	**WAGE & SALARY EMPLOYMENT**	**GROWTH RATE OF EMPLOYMENT**
Rural Counties				
Average Change	195	-0.0015	-1,390**	-0.0195
Percentage Change	1.14%	-8.72%	-13.72%	-26.44%
Observations	10,619		3,969	
Urban Counties				
Average Change	232	-0.0014	12,441	0.0104
Percentage Change	0.18%	-6.92%	11.16%	9.84%
Observations	5,360		1,069	

Notes: The table summarizes random trend model results from Patrick (2014a) for the border county samples. Asterisks denote significance at the 1 percent (***), 5 percent (**), and 10 percent (*) levels. The empirical specification includes controls for county demographic composition, wages, industrial composition, taxes, public services, and governmental debt.

IEI. The table also reports the average change in jobs as a percentage of the average employment in sample counties. Table 3 indicates that increasing the available non-tax economic development incentives has a significant negative medium-term effect on rural county employment levels but otherwise has no effect on employment levels or growth.

Specifically, the only significant effect is on five-year rural employment level. A one standard deviation increase in incentives is associated with a decrease in five-year county employment of approximately 1,390 jobs. For the average rural county, creating more available non-tax economic development incentives through constitutional change results in a 14 percent decrease in employment in the five years following the change. Only a one standard deviation increase in individual income taxes has a larger negative impact on county employment levels.

There is no statistically significant effect on urban levels, rural growth, or urban growth.[7] Although the rural county results suggest that there might be small initial gains in annual employment levels, the annual growth effect is negative and negative effects dominate in the medium term. The annual urban level effect is both statistically and economically insignificant, indicating an increase of 232 jobs (0.18 percent of the sample mean). The five-year urban estimates are large in an economic sense; but these effects cannot be statistically distinguished from zero. In other words, the standard error for these results is large enough that we cannot reject that the effect is zero.

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[7] It should be noted that the five-year urban estimates are not very powerful due to small sample size. The estimated coefficients imply that urban county employment levels increase by 11 percent—double the estimated five-year level effect from the full urban county sample. .

These results are similar to the findings in ÓhUallacháin and Satterthwaite (1992), Gabe and Kraybill (2002), and Goetz et al. (2011). Gabe and Kraybill (2002) study the firm-level employment change in response to an Ohio economic development incentive program. The firms receiving the incentives created fewer jobs than similar firms that did not receive the incentive. Goetz et al. (2011) find tax incentive and financial assistance programs may harm growth rather than promote it.

Patrick (2014a) controls for potential indirect effects on wages, taxes, public service, etc. Thus, the estimated negative and insignificant effect is the direct effect on jobs. If there are not positive direct effects, then it is unlikely that the indirect effects are positive. Patrick (2014a) postulates two potential reasons for the negative and insignificant direct effects:

1) either increasing the availability of incentives in an area does not result in a net capital increase, or

2) the net new capital does not result in new jobs (perhaps due to capital-labor substitution).

Increasing the availability of incentives could fail to increase capital in an area for a variety of reasons, including:

- Incentives do not fundamentally change firm location decisions, but use valuable public resources. Incentives go to firms that already find the location an attractive place to do business. The costs of the incentives are borne by existing residents or firms through changes in public services and taxes—altering their location, wage, and production decisions.

- Induced capital might replace, displace, or prop up outdated existing capital. For example, an existing firm may use capital subsidies to purchase new machines. The new machines do not increase productive capacity or the firm's capital stock, though—either because they replace old machines or make it cost-effective for firms to continue using obsolete technology.

- Increase in competition may force existing firms to close. As new firms enter an area, they compete with existing firms for customers, land, and labor. Competition for customers drives output prices down, while competition for land and labor puts upward pressure on input prices. This combination may be untenable for some existing firms.

However, it is possible that the subsidies attract new capital without increasing employment. There are several possible reasons this could occur, including:

- Induced capital could redirect capital from productive activities into overcapacity. Unsubsidized firms face a cost disadvantage compared to subsidized firms and cannot outbid subsidized firms for capital. Lowering the cost of capital causes subsidized firms to get too much capital, some of which is underemployed.

- Managers may adjust to public aid by substituting capital or public inputs for labor. Reducing the cost of capital causes firms to adjust their input mix in favor of capital—buying more machines and hiring fewer workers.

- Capital subsidies may induce changes in local industry composition, with more capital-intensive firms replacing more labor-intensive firms. Capital-intensive firms experience larger total cost reductions from capital-subsidies, enabling them to outbid labor-intensive firms for land and other inputs.

- Managers may engage in additional rent-seeking as a result of increased incentive availability. Managers divert time and resources to extracting subsidies that would otherwise be used to enhance productive efficiency.

New research funded, in part, by the W.E. UpJohn Foundation explores the capital expenditure and industry composition effects of reducing constitutional restrictions on public aid to private enterprises. The following section discusses the preliminary findings from this research.

# VI. Capital Subsidies, Capital-Labor Substitution, and Industry Churning

Figures 4 and 5 present the relationship between states' 2000 IEI score and capital stock per employee and capital expenditure per employee, respectively. The figures indicate states with higher IEI scores, meaning more available capital subsidy tools, also have higher capital stocks and higher capital expenditure per employee. Although these figures do not represent a causal relationship, they do suggest that negative and insignificant job effects might not be driven by incentives' failure to induce net new capital. Instead, they suggest that the new capital may not increase jobs.

Figure 4. State Capital Stock per Employee and IEI (2000)
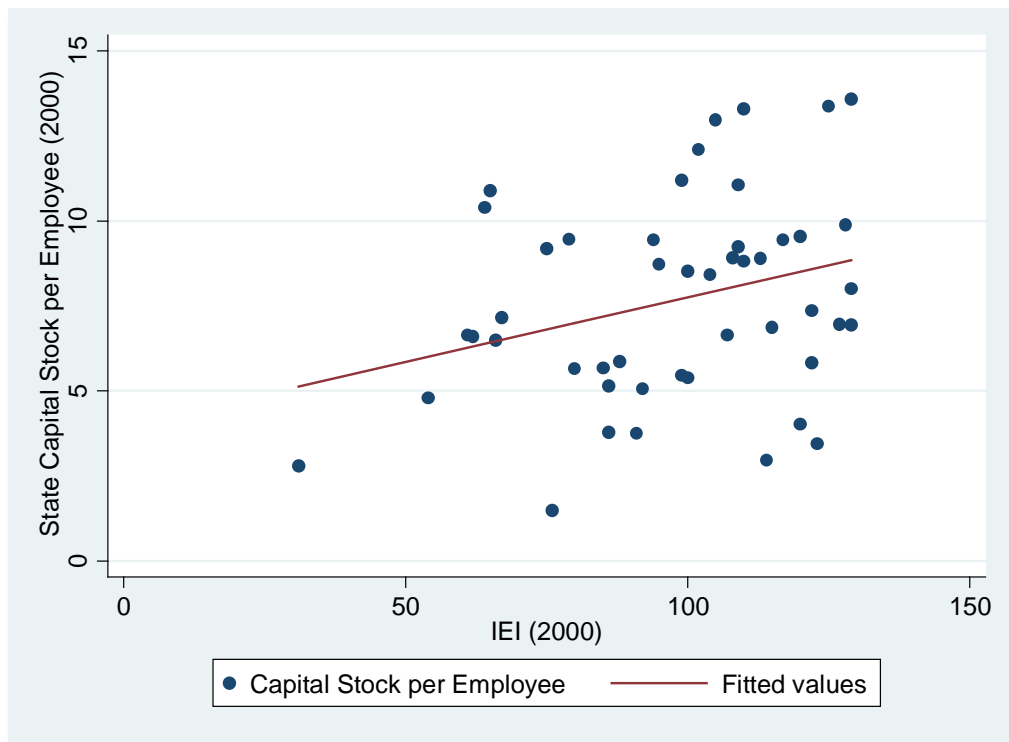
Note: Capital stock data from Chirinko and Wilson (2009). Capital stock measured in thousands of 2000 U.S. dollars.

Figure 5. State Capital Expenditure per Employee and IEI (2000)
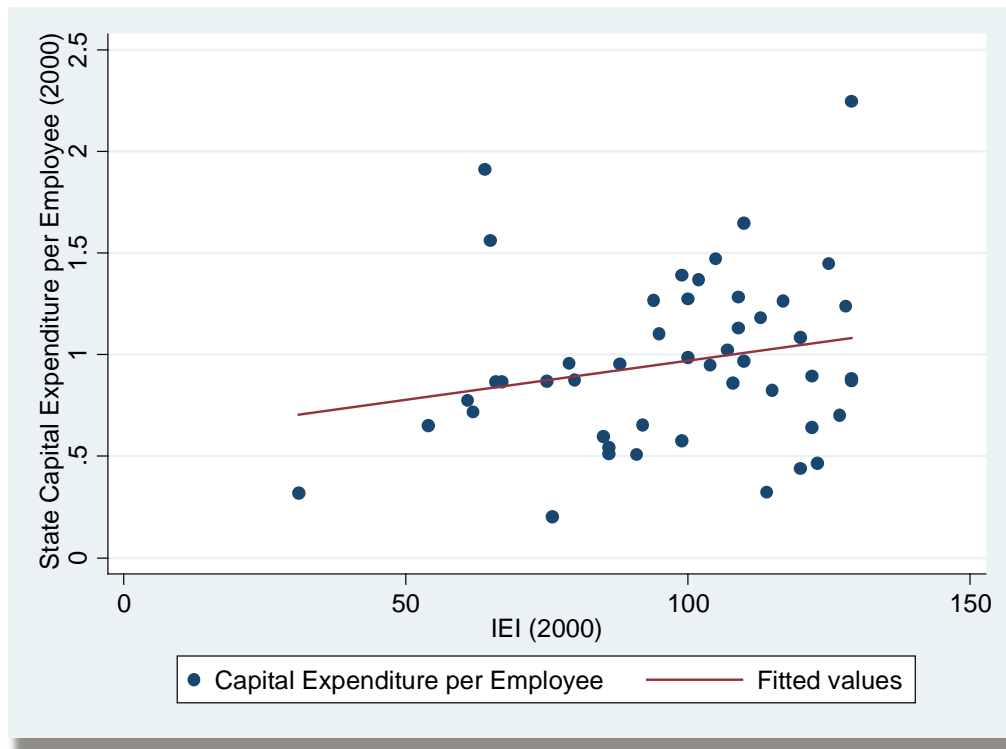
Note: Capital expenditure data from Chirinko and Wilson (2009). Capital expenditure measured in thousands of 2000 U.S. dollars.

If capital subsidies induce additional capital without associated increases in jobs, then a number of underlying mechanisms may be at work as discussed above. This section reports the preliminary findings in Patrick (2013) which investigates two explanations for "jobless capital". Economic theory predicts capital subsidies will have two effects:

1) Capital-labor substitution, whereby firms that can easily substitute between capital and labor adjust their input mix in favor of capital.

2) Subsidy-induced changes in total costs will cause changes in locations' industry mix.

These two predictions have testable empirical implications. All else equal, we should see firms that can easily substitute capital for labor increase capital expenditure in areas with more capital subsidies. Capital subsidies are most valuable to firms that have little ability to substitute away from capital. In a world where land goes to the highest bidder and bids are determined by the amount leftover after costs, those firms experiencing the largest cost reductions should win the bids for land. As available capital subsidies increase, relatively capital-intensive firms will outbid relatively labor-intensive firms. Thus, as available capital subsidies increase the share of firms in relatively capital-intensive industries will also increase. Hanson and Rohlin (2011) use data from the Bureau of Economic Analysis National Income Accounts to calculate the relative capital intensity and ease with which capital may be substituted for

Table 4. Capital-Labor Substitution Parameter Approximations by SIC Major Division

SIC MAJOR DIVISION	ALPHA	SIC MAJOR DIVISION	ALPHA
Retail	0.255	Manufacturing	0.532
Services	0.275	Transportation	0.656
Construction	0.293	Mining	0.737
Wholesale	0.409	Agriculture	0.813
FIRE	0.477		

Notes: Approximations from Hanson and Rohlin (2011).

labor in each industry major division. Table 4 presents their approximations. High values in Table 4 indicate relatively capital-intensive industries within the major division; while low values suggest relatively labor-intensive industries. Major divisions with industries that can easily substitute between capital and labor have values around 0.5.

Table 4 reveals that manufacturing and FIRE industries can most easily substitute capital for labor, with manufacturing industries being relatively more capital intensive. This suggests manufacturing will experience that the largest changes in capital expenditure as capital subsidies increase. Table 4 also suggests that the share of establishments in manufacturing, mining, and transportation will increase at the expense of the relatively labor-intensive industries which compete for land with these sectors, such as wholesale trade and construction.

Patrick (2013) employs the Incentives Environment Index and five year county panels to test these theoretical predictions on county manufacturing capital expenditure, manufacturing capital expenditure per employee as well as industry establishment and employment shares. Tables 5-6 summarize the sign and significance of preliminary results for these tests.

Table 5 presents the estimated direction of change in county manufacturing capital expenditure and county manufacturing expenditure per employee from an increase in the IEI. Generally, increasing capital subsidies tools increases manufacturing capital expenditure as predicted by theory. However, the effect varies across samples. Similar to the job creation findings, incentive effects appear to vary with the level of economic activity.

Capital subsidies do not appear to be as affective at inducing new capital in rural counties as they are in urban counties. Although the results suggest an increase in rural counties, the effect is statistically indistinguishable from zero. The point estimates (not shown) are also small in an economic sense. The urban county and multi-state MSA county increases are both statistically and economically significant. The urban county point estimates indicate that one standard deviation increase in the IEI increases manufacturing capital expenditure by $5,088,879 in urban counties, 4.5 percent of average urban county

Table 5. Effect of Capital Subsidy Availability on Counties' Manufacturing Capital Expenditure and Manufacturing Capital Expenditure per Employee 1972-1997

	RURAL	URBAN	MULTI-STATE MSAS
Manufacturing Capital Expenditure	-	+**	+***
Manufacturing Capital Expenditure per Employee	+	+	+**

Notes: The table summarizes preliminary results from Patrick (2013) for the border county samples. Asterisks denote significance at the 1 percent (***), 5 percent (**), and 10 percent (*) levels. The empirical specification includes controls for county demographic composition, wages, industrial composition, taxes, public services, and governmental debt.

manufacturing capital expenditure. Table 5 also indicates that manufacturing capital expenditure is higher in counties with higher IEI scores than counties in the same MSA with lower IEI scores. The increase is substantial, with one standard deviation associated with over $9 million in additional manufacturing capital expenditure (approximately 10 percent of sample county manufacturing capital expenditure).

Table 5 also reports the change in manufacturing capital expenditure per employee for the same samples of counties. An increase in the IEI is associated with increased manufacturing capital expenditure per employee, which is consistent with theoretical predictions about subsidy-induced capital-labor substitution. Manufacturing firms in counties with more available capital subsidy tools purchase more capital for each employee. The effects are largest for counties in multi-state MSAs. The point estimate indicates that one standard deviation increase in capital subsidy availability increases capital expenditure per employee by $666, 16 percent of mean multi-state MSA county expenditure per employee. Again, the effects vary substantially between rural and urban areas. The increase is imprecisely measured and small for rural counties.

Taken together, the manufacturing capital and manufacturing capital expenditure results indicate:

- Increasing available capital subsidies induces substitution of manufacturing capital for labor in urban counties and multi-state MSA counties, as evidenced by the increase in capital expenditure and capital expenditure per employee.

  - Capital incentives do result in more capital in urban areas, but capital-labor substitution limits the job creation effects of the induced capital.

- Capital subsidies do not appear to induce additional manufacturing capital expenditure in rural counties. Similarly, manufacturing firms do not spend significantly more on capital per employee as available capital subsidies increase.

  - The decrease in rural county employment associated with an increase in the IEI does not appear to be driven by capital-labor substitution in the manufacturing sector.

Table 6. Effect of Capital Subsidy Availability on Counties' 2-Digit SIC Shares of Establishments and Employment by Major Division

	--------------RURAL-------------		-------------URBAN-------------		----------MULTI-STATE MSA---------	
	ESTABLISHMENT SHARES	EMPLOYMENT SHARES	ESTABLISHMENT SHARES	EMPLOYMENT SHARES	ESTABLISHMENT SHARES	EMPLOYMENT SHARES
Construction	-**	-	+	+	+	+
Manufacturing	+***	+*	+**	+	+**	+
Transportation	+	+	-	+	+	+
Wholesale Trade	-**	-*	-**	-	-*	-
Retail	+	-**	+**	+*	+*	+
FIRE	+**	+	-	+	-	+
Service	+***	-	+	+	+	+

Notes: The table summarizes preliminary results from Patrick (2013) for the border county samples. Asterisks denote significance at the 1 percent (***), 5 percent (**), and 10 percent (*) levels. The empirical specification includes controls for county demographic composition, wages, industrial composition, taxes, public services, and governmental debt.

Table 6 above presents the direction of the estimated subsidy-induced change on counties' 2-digit Standard Industrial Classification (SIC) shares of establishments and employment by SIC major division. Each SIC major division contains many 2-digit SIC industries. The results are from separate regressions of all 2-digit SIC industries within each major division for each sample of counties. The dependent variable is the 2-digit SIC industry share of total establishments or employment in each sample county. Thus, an increase in one industry's share must be offset by a decrease in another industry's share.

The first panel of Table 6 reports the change in establishment and employment shares associated with increasing the IEI for the sample of rural border counties. Column 1 indicates that an increase in the IEI is associated with an increase in manufacturing, FIRE, and service establishment shares at the expense of wholesale trade and construction. Column 1 also indicates an imprecisely measured increase in transportation establishment shares. Recall that manufacturing and transportation are relatively capital-intensive. Thus, the increase in their share of establishments is consistent with theoretical predictions. This supports the notion that the subsidies are valuable to relatively capital intensive firms and/or those that easily substitute capital for labor. Similarly, wholesale trade and construction are relatively labor-intensive. The decrease in their shares is consistent with the prediction that capital-intensive firms will outbid labor-intensive firms for land. This provides further evidence that capital subsidy-induced cost savings allow manufacturing firms to outbid construction and wholesale trade firms for land.

However, the increase in FIRE and service establishment shares is not entirely consistent with theoretical predictions. The FIRE and service SIC major divisions contain a wide variety of 2-digit industries. It is therefore plausible that relatively capital-intensive 2-digit industries drive the increase in FIRE and service establishment shares. Alternatively, FIRE and service firms may experience cost decreases from positive externalities generated by capital-intensive industries. It also seems possible that FIRE and service establishments don't compete with manufacturing and transportation firms for land due to zoning regulations and differential site requirements. On the other hand, manufacturing and transportation likely compete with wholesale trade and construction firms for the same land within counties.

Rural counties with higher IEI scores also increased employment share in manufacturing at the expense of wholesale trade and retail (column 2 of Table 6). The increase in manufacturing establishment shares drives the increase in employment shares. In results not shown, manufacturing employment per establishment decreases as the IEI increases, consistent with subsidy-induced capital-labor substitution.[8] This suggests that manufacturing firms are crowding out firms in labor-intensive sectors which increases manufacturing share of employment. However, capital-labor substitution decreases employment per manufacturing establishment. Consistent with previous studies' findings that incentives do not support local job growth, replacing labor-intensive firms with capital-intensive firms would result in lower levels of overall employment in rural counties. This is further evidenced by the decreases in wholesale trade and retail employment in column 2. Firms that can easily substitute capital for labor and/or get large cost reductions outbid labor-intensive firms for land and the increase in establishments is compensating for the decrease in per establishment employment caused by capital substitution.

The second panel of Table 6 reports the change in establishment and employment shares associated with increasing the IEI in urban counties. Manufacturing and retail establishment shares increased and wholesale trade establishment shares decreased. The manufacturing and wholesale trade results are consistent with the theory that manufacturing establishments compete with wholesale trade establishments for the same land and the subsidy-induced cost savings allow manufacturing firms to outbid wholesale trade firms. The increase in retail trade establishment shares is unexpected given the theory, but may suggest some positive spillovers between manufacturing and the retail sectors in urban areas. Recall that the rural county results indicated positive spillovers between the FIRE and services sectors and manufacturing. Thus, these results also suggest that manufacturing may generate different externalities in rural and urban areas, perhaps due to different forward/backward linkages.

The only significant increase in employment shares (column 4) associated with urban border counties' increased incentives occurs in the retail sector. The increase in retail employment share is consistent with its increase in establishment shares since retail establishments cannot easily substitute capital for labor. The increase in manufacturing establishment shares is not associated with a significant increase in manufacturing employment shares. In results not shown, an increase in the IEI is associated with an imprecisely measured decrease in employment per establishment for both retail and manufacturing. However, the decrease is much larger for manufacturing. In addition to reinforcing capital-labor substitution, this suggests that the increase in retail employment share may be due to increased retail employment levels coincident with decreasing employment levels in other sectors. These results also provide further evidence that there exist positive spillovers or forward/backward linkages between manufacturing and retail in urban areas.

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[8] Results are available upon request from the author. Regressions of rural border county change in employment per establishment in other major divisions reveal employment per establishment decreased in all major divisions except mining and FIRE. The effect in these two sectors was imprecisely measured.

The third panel of Table 6 reports estimates for another set of urban counties, counties in multi-state MSAs. Column 5 of Table 6 shows that manufacturing and retail establishment shares increased in multi-state MSA counties, while wholesale trade establishment shares declined as the IEI increases. This is consistent with the estimates from urban county samples. It is also congruent with the theory that manufacturing and wholesale trade establishments compete for the same land and the cost decrease from capital subsidies allows manufacturing firms to outbid wholesale trade firms for land. The increase in retail trade establishments again suggests some positive spillovers between retail and manufacturing in urban areas.

The employment share results suggest that there were no significant changes in employment shares. Given the increase in manufacturing establishment shares associated with capital subsidies, lack of employment effects indicate subsidy-induced capital-labor substitution. In results not shown, employment per establishment decreases in manufacturing firms and increases in retail and wholesale trade. This is consistent with theoretical predictions about capital-labor substitution.

Thus, the preliminary results in Patrick (2013) indicate:

- Increasing capital subsidy availability is associated with both capital-labor substitution and changes in local industry mix.

- Consistent with previous findings, urban and rural counties respond differently to an increase in the IEI.

- Capital subsidies do not appear to be as effective at inducing new capital in rural counties as they are in urban counties.

  o This suggests that incentive effects may interact with agglomeration externalities.

- The industry employment and establishment share estimates also indicate different spillovers in rural and urban counties.

- As predicted by theory, relatively capital-intensive industries increase their establishment shares at the expense of relatively labor-intensive industries with which they compete for land.

- Rural counties' service establishment shares also increase, suggesting either capital-intensive industry within the service sector outbid other firms for land or positive spillovers between the manufacturing and service sectors.

- The results also suggest spillovers between manufacturing and retail, rather than services, in urban areas.

VII.   Concluding Remarks

Although the U.S. incentive environment is characterized by a lack of federal level constraints on lower level jurisdictions, unique circumstances in the nineteenth century caused states to impose constraints on state and local governments' ability to aid private enterprise with non-tax incentives. These state constitutional provisions enacted in response to historic events are relevant to today's competitive environment. They determine the available non-tax capital subsidies in a jurisdiction, which comprise a substantial portion of many economic development incentive packages.

Patrick (2014a) develops the IEI from state constitutional provisions on aid to private entities. Comparing the state scores in 1970 and 2000, it is clear that the general trend has been to relax restrictions and increase the ability of governmental entities to aid private companies with non-tax incentives. Recent efforts to amend state constitutional restrictions on public aid indicate that this trend is likely to continue. Patrick (2014a) uses the IEI to estimate the job creation effects of increasing available non-tax capital subsidies. The results summarized above suggest this strategy does not result in job growth. In fact, employment in rural counties may be harmed by increasing non-tax economic development incentives. Preliminary results from Patrick (2013) indicate that Patrick's (2014a) findings are caused by subsidy-induced capital-labor substitution and changes in local industry composition. Taken together, these results suggest that increasing available non-tax capital subsidies is an ineffective job creation policy, but may be an effective productivity-enhancing policy.

To the extent that additional capital makes workers more productive and more productive workers earn higher wages, increasing non-tax incentives for capital may produce desirable economic development. However, the rhetoric surrounding economic development incentives often focuses on job creation. These results suggest that policy-makers should clearly differentiate between economic development incentives directed at capital and labor. Capital-labor substitution and changes in local industry composition limit the job creation effects of capital subsidies.

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The Center for State and Local Finance (CSLF) mission is to develop the people and technologies for next generation public finance. Key initiatives include: 1) Developing executive education programs in public finance to provide professional development for the next generation of practitioners in state and local finance; 2) Building technical assistance capacity in next generation technologies for the public sector that include the use of "big data" and improved analytics to better inform policy-makers and to better target solutions to public sector problems; 3) Supporting scholarship on critical challenges in state and local fiscal and economic policy; and 4) Building and strong capacity to translate and communicate academic research for the practitioner audience.

CSLF Reports, Policy Briefs, and other publications maintain a position of neutrality on public policy issues in order to safeguard the academic freedom of the authors. Thus, interpretations or conclusion in CSLF publications should be understood to be solely those of the author(s).

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