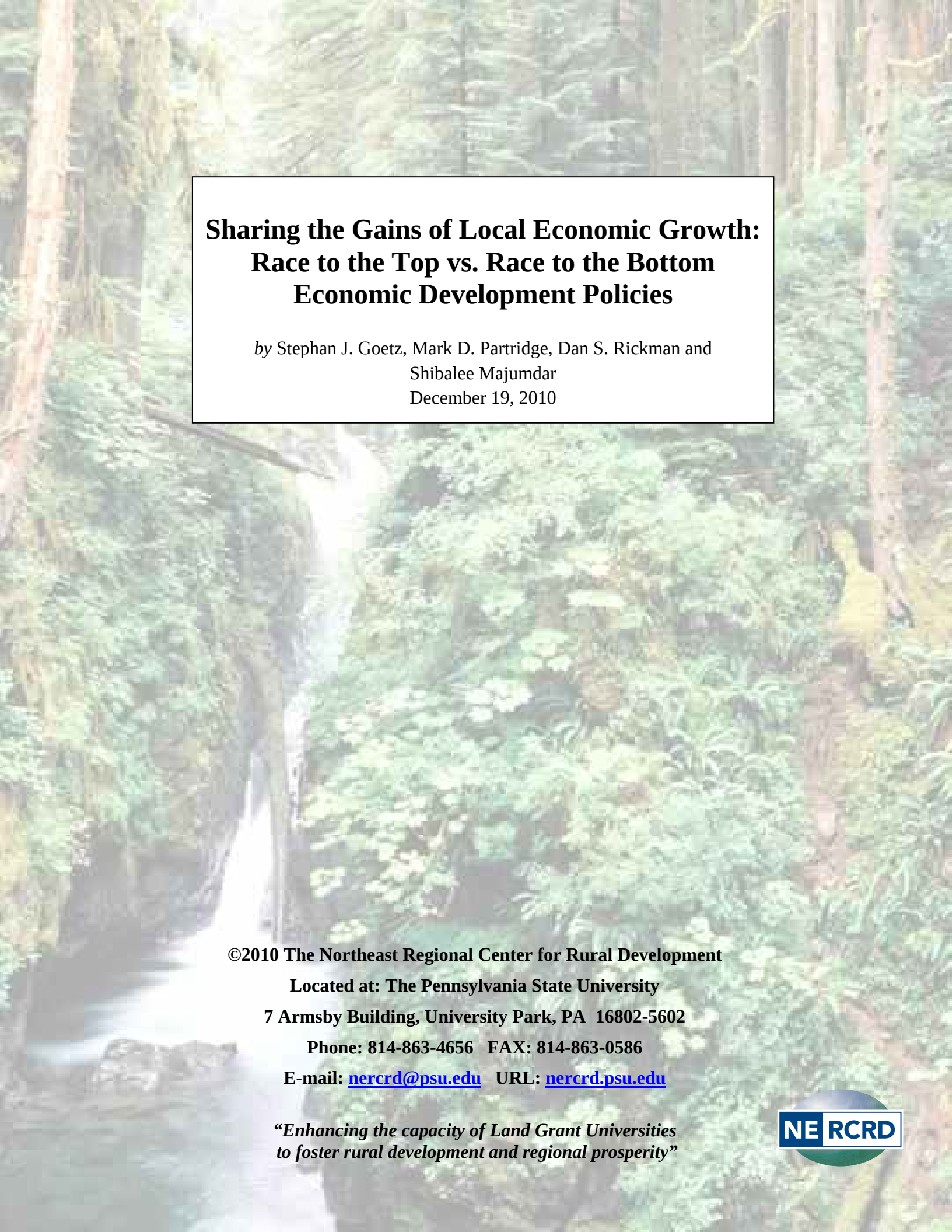

Sharing the Gains of Local Economic Growth: Race to the Top vs. Race to the Bottom Economic Development Policies

by Stephan J. Goetz, Mark D. Partridge, Dan S. Rickman and Shibalee Majumdar

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"Enhancing the capacity of Land Grant Universities to foster rural development and regional prosperity"

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Abstract. In attempting to promote economic development, states often pursue either a race to the bottom approach focused on lowering business costs or a more investment-based, race to the top approach that aims to increase productivity, innovation, and entrepreneurship. Whether either approach promotes growth and produces broad-based economic gains across the population is the subject of this paper. The novelty of our approach is that an extensive array of variables representing examples of the two economic development approaches are examined for their effects on various indicators of state economic performance, including income distribution, over the 2000-2007 period. We find that lower taxes are statistically insignificant in explaining state economic performance, and that targeted tax incentives and financial assistance – as currently practiced – are more likely to harm growth and income inequality. Some support exists for state and local governments to encourage entrepreneurship and to enhance internet connectivity.

1. Introduction

U.S. states and localities have a long history of attempting to use policy to stimulate job growth, often competing with each other to attract households and businesses. The idea that regions compete in terms of taxes and public goods dates to Tiebout (1956) and Tullock (1971). Estimates of the economic effects of fiscal policy in the academic literature vary widely (Bartik, 1991; Wasylenko, 1997) and fail to provide clear direction on which policies best promote growth and economic well-being. Economic theory also is not clear on whether tax incentives targeted at firms versus broad-based tax cuts are desirable (Glaeser, 2001) and little empirical evidence exists on the question. Even so, competition for jobs remains intense in the current economic environment. Whether this competition manifests itself as a race to the bottom (RTB) in taxes, spending and regulation, or a race to the top (RTT), may affect long-term regional economic growth, general economic well-being, and income distribution.[1]

Evidence of a RTB in state taxation of mobile factors abounds. State corporate tax revenue as a share of reported corporate profits declined from 6.6 percent in 1980 to 4.0 percent in 2000, while the share of total state tax revenue comprised of corporate income tax revenues declined from 9.4 to 5.0 percent by 2002. Before recent changes in federal estate tax policy, more than 30 states had eliminated estate, inheritance and gift taxes since 1976, with many others reducing them. Economic freedom, as measured by lower taxes and less restrictive

[1] We refer to RTB and RTT in terms of the level of taxes, government spending, and government regulation, not in welfare terms. This corresponds more to lay uses of RTB and RTT rather than to their academic interpretations.

regulations, increased across U.S. states during the 1980s and 1990s (Karabegovic et al., 2003).

The use of specially designed tax incentives for job creation also has increased dramatically. Approximately half the states offered them in the early 1980s, while now all states offer them in some form (Site Selection, 2000; Davies, 2005). About 40 percent offer a statewide credit on investment in machinery and buildings, with the average rate of credit exceeding six percent in 2004 (Chirinko and Wilson, 2008). High-profile examples include the $160,000 cost per job to Alabama in attracting Mercedes-Benz in the 1990s (Figlio and Blonigen, 2000).[2]

To avoid in-migration of poor households, states also may engage in RTB redistributive policies such as limiting welfare assistance (Brueckner, 2000). For example, North Carolina's experiment with local control of Temporary Assistance to Needy Families led to only 45 of 100 counties meeting welfare maintenance of effort budget requirements (Berner, 2005). However, large variation in local redistributive policy suggests limits to RTB strategies (Craw, 2006).

Income inequality and poverty also can be reduced by regional growth (Partridge and Rickman, 2005; 2006), and hence potentially indirectly relate to other policies affecting growth. Overall, however, low state tax burdens are significantly correlated with higher child poverty and overall lower child well-being (Every Child Matters Education Fund, 2008). Public ignorance may facilitate or even encourage RTB policies, which may harm the middle and lower classes (Champlin and Knoedler, 2008).

In contrast, expenditures viewed as investments could lead to a RTT. If expenditures on education and public infrastructure increase economic activity, states could compete by spending more in these areas. The role of urban consumption amenities in economic growth (Glaeser et al., 2001; Florida, 2003; Markusen, 2006; Comunian, et al., 2010) suggests the importance of related public spending. Oklahoma City used dedicated sales tax revenue to fund downtown development projects and build new schools, which have been credited with fueling subsequent growth (Johnson, 2009). Yet, to the extent that spending in areas such as higher education is seen as redistributive (Bailey, Rom and Taylor, 2004), or there are geographic spillovers such as with

[2] Such incentives are also used in other countries (e.g., Chittenden and Derriega, 2009).

highway spending (Bruce et al., 2007), states may engage in RTB spending in these areas.

This study advances the literature by considering an extensive array of novel indicators along five different dimensions of RTB and RTT policies: 1) tax climate; 2) regulatory and firm assistance programs; 3) human and social capital; 4) entrepreneurship and innovation; and 5) government expenditures and investment. We explore how different dimensions of RTB and RTT policies influence economic activity as well as income distribution and poverty rates. This analysis allows us to assess whether a "growth versus equity" tradeoff exists in terms of RTB and RTT policies. Our assessment includes both descriptive and regression analysis.

The next section discusses the theoretical context for the empirical investigation of RTB and RTT policies. The empirical strategy follows in Section 3, while Section 4 presents and discusses the empirical results. Our general finding is that a simple strategy of pursuing RTB strategies in the form of lower taxes, fewer regulations and greater use of firm-specific incentives does not advance state economic development and may even be counterproductive. RTT policies related to investments in education, highway infrastructure, and technology more likely lead to desirable economic development outcomes. Concluding comments appear in the final section.

2. Theoretical Context

Our empirical analysis rests on vast literatures on the spatial location of economic activity and regional competition for mobile factors. We first present a general conceptual framework of regional economic development policies and spatial equilibrium. Included is a discussion of the potential linkage between regional policies, growth, and the distribution of economic rewards. This is followed by a discussion of regional policy competition, including the possibilities of both RTB and RTT outcomes.

2.1 Spatial Equilibrium Framework

Our theoretical framework revolves around the concept of spatial general equilibrium. The general equilibrium framework provides the underpinnings for examining how regional public policies influence key regional economic indicators. Antecedents include Gyourko and Tracy (1989), Brown, Hayes and Taylor (2003), and Partridge and Rickman (2003).

Households maximize utility in their location choice, in which regions are assumed to differ in their economic opportunities as well as in both man-made and natural attributes. Households consume a nationally-traded good and local housing services. Labor force participation and unemployment in the region represent the probability of obtaining regional employment. Among man-made attributes are regional fiscal policies. A locally-provided public good is assumed nonexcludable but potentially rival in consumption. Taxes reduce earnings that are used for private consumption. Thus, *ceteris paribus*, household taxes reduce a region's attractiveness while valued public good expenditures make the region more attractive.

Firms take the traded good price as given and minimize unit costs of production in their location choice. Costs are determined by the wage rate, cost of land, regionally-invariant capital costs and an exogenous component. Unit land rents are equalized across residential and firm uses. Examples of the exogenous cost component include economic development policies in the form of tax breaks, or subsidies such as free land. Other examples include human or public capital (Brown, Hayes, and Taylor, 2003) or access to markets (Partridge et al., 2008b).

Perfect mobility of firms and households equalizes utility and costs across areas, whereby differences in site characteristics such as public policies are associated with equilibrium wage and rent differentials (Gyourko and Tracy, 1989; Dalenberg and Partridge, 1997). Wages, rents and factor quantities change as the economy transitions between spatial equilibria in response to changing exogenous factors or the importance of these factors. A notable feature of the general equilibrium framework is that government policies can have wide-ranging effects. For example, increasing a region's human capital should attract firms into the region, while the higher business taxes used to finance human capital creation should have an inhibiting effect. Public infrastructure may make a region more attractive both to firms and households, especially if they are in a central region (Crescenzi and Rodriguez-Pose, 2008), while again budget-balancing taxes may have negative effects. Environmental policies may directly increase costs to firms but indirectly reduce them by making an area more attractive to households, thereby lowering nominal wage rates.

Beyond the question of whether regional government policies affect growth (i.e., the positive effects) there also are normative considerations. Partridge and Rickman (2003) argue that social planners should maximize the utility of the original residents, without considering the utility of residents arriving after the implementation of policies. Such considerations revolve around whether the policies generate sufficient benefits to pay for their costs (Fisher, 2007). For example, original residents benefit if their rate of employment increases, wages rise (Partridge and Rickman, 2003), and they move up the occupational ladder (Persky, Felsenstein and Carlson, 2004). Low income individuals may particularly benefit from local job growth as their mobility may be below average. Growth is then reflected in reduced poverty rates and income inequality (Bartik, 2001; Partridge and Rickman, 2005; 2006).

2.2 Regional Policy Competition

The economic effects of a state's fiscal and regulatory policies depend not only on firm and household responses but also on how other states react. States can compete with each other in a RTB or RTT in fiscal and regulatory policies. The chosen paths affect the delivery of state and local government services and potentially the size and distribution of income.

The standard tax competition literature predicts that capital taxes will be competed downwards because of capital mobility, reducing welfare because lower tax rates cause under-provision of public goods (Wilson 1986; Zodrow and Mieszkowski, 1986). According to this view, an efficient level of public goods would be provided if capital were less mobile. Contrarily, tax competition leads to a more efficient level of public goods if regional governments act as Leviathans that over-provide public goods (Brennan and Buchanan, 1980). Based on generalizations of standard tax competition models and a wide range of parameter values, Parry (2003) suggests moderate efficiency losses from tax competition, particularly if government operates as a Leviathan, though in other cases tax competition can improve welfare (Wilson and Wildasin, 2004).

In contrast to standard tax competition models, New Economic Geography models predict that agglomeration economies create capital rents, which can be taxed by local

governments, whereby capital taxes are instead driven by incentives to export taxes (Krogstrup, 2008). Thus, a RTT in capital taxes occurs.

Other models allow regions to compete with instruments beyond capital taxation. Competition may occur for mobile labor (Bucovetsky and Wilson, 1991), cross-border trade of goods and services, and expenditures (Wildasin, 1988). Regions may particularly compete for highly educated workers (Hansen, Ban and Huggins, 2003). Quality differences in government services such as education also may limit tax competition effects (Hoyt and Jensen, 2001). Regional spillovers can limit regional spending. For example, if the benefits of a region's highway spending spill over across boundaries, these benefits will be ignored by the region and highway spending will be under-provided (Bruce et al., 2007).

There is empirical support for the view that gains to the state may not offset the cost of the subsidies required to attract jobs (Head et al., 1995; Rodriguez-Pose and Arbiz, 2001). Yet, Greenstone and Moretti (2004) report greater employment and payroll income growth in counties which competed for and won million dollar plants relative to closely competitive counties that lost the competition. They further report there was no deterioration in relative public good provision in the winner counties. However, they do not consider the opportunity cost of the funds to the state, only to the county, leaving open to question whether the *state* gained by "winning" the competition. Moreover, it is not clear that the "loser" location in the competition is the true counterfactual for their comparisons.[3]

A RTB among regional governments constrains the downward redistribution of income through transfers, particularly to individuals unable to obtain formal employment (Boadway, Cuff and Marceau, 2002). Thus, programs which affect poverty and income inequality such as

[3]For example, Greenstone and Moretti (2004) describe how Omaha, Nebraska was the 'loser' to Greenville-Spartanburg, South Carolina for a BMW auto assembly plant. Thus, Omaha formed the counterfactual to Greenville-Spartanburg in the analysis. Is Omaha the true counterfactual location even though it is much farther from customer markets, suppliers, and linkages from the auto industry? Without the BMW plant, would the two areas have performed the same? Or was Omaha only in the BMW mix of areas because it was willing to offer large tax incentives and Omaha's bid could be used to leverage better bids from other locations? If the latter is true, Omaha should not have been the counterfactual area for comparison. Better counterfactual areas would have been economically similar locations to Greenville-Spartanburg, probably in the Southeastern United States.

unemployment insurance and welfare may be adversely affected by tax competition. In addition, concerns about migration to states with more generous programs may limit their generosity, furthering a RTB (Brueckner, 2000). Regions with generous programs may attract least-skilled workers and lose taxed capital and higher-skilled workers.

Regions also can compete in their regulatory structures. Costly environmental protection could lead to a RTB in such policies, although empirical evidence suggests this has not recently occurred in the U.S. (List and Gerking, 2001; Millimet and List, 2003). Whether a state has a right-to-work law or is considered to have a less restrictive regulatory structure (greater economic freedom) also may affect growth (Holmes, 1998; Karabegovic et al., 2003; Partridge, 2006; Ashby, 2007). In fact, consistent with our theoretical framework, through their effect on growth, less restrictive regulatory policies may indirectly reduce regional income inequality by increasing economic growth (Ashby and Sobel, 2008).

In short, different levels of taxes and expenditures and regulatory policies across regions may have differential effects on growth and trigger different policy reactions from other regions. Policies may directly affect poverty through the generosity of transfer programs, while indirectly affecting poverty by affecting regional economic growth. Thus, we might expect policies to have different impacts on poverty and income inequality. In the next section we examine empirically whether various indicators of the general regional policies discussed above significantly influence state economic outcomes.

3. Empirical Implementation

In selecting the optimal empirical design, several econometric and practical data tradeoffs arise. A pooled-cross sectional empirical design would be ideal. It would control for omitted cross-sectional fixed effects that could bias the results and directly address the research question—how changes in state policies influence future economic outcomes. Yet pooled-cross sectional models have potential drawbacks. First, they require strict exogeneity of the residuals, which requires correct specification of the appropriate leads and lags of policy, and it assumes policy is exogenous to all past and future residuals. Likewise, they require a *change* in a state's

policy to identify any effect. Second, pooled-cross-sectional models are more susceptible to measurement errors that bias coefficients towards zero (Partridge, 2005). Third, the types of RTT and RTB variables we employ do not lend themselves to pooled analysis because they are often gathered from non-government sources that are not available every year.

Because pooled-cross-sectional specifications are not feasible here, we rely on cross-sectional analysis. Cross-sectional models are more susceptible to endogeneity and omitted-variable concerns, which in a poorly designed specification would only establish (partial) correlation and not causation. In our case, we seek to mitigate (though may not completely eliminate) such concerns by, when possible, lagging explanatory variables by a number of years to establish causation. Our dependent variables are measured as changes over the 2000 to 2007 period (except for the Gini, which is calculated for 1999 to 2007 due to data availability) with the explanatory variables measured as close to the initial period (2000) as possible.[4] Seven-year changes in dependent variables should be sufficiently long to identify their medium- to long-term trends, while lagging explanatory variables by seven years mitigates endogeneity concerns. Because we examine a variety of economic outcomes, we believe our results can be assessed for theoretical consistency, which would help determine their veracity. Nevertheless, because of potential concerns discussed above, the results should be interpreted with caution.

With states as the units of observation, we have a maximum sample-size of 50. Evaluation of multiple policies then makes multicollinearity a potential concern and it is impossible to consider all policies jointly because of insufficient degrees of freedom. Thus, we first include only a few key control variables across all models. Then we separately include various groupings of policy measures of RTT and RTB strategies—e.g., taxes, labor market flexibility, business incentives, and measures regarding entrepreneurship, and innovation. Consistency of results across multiple specifications over four different economic outcomes would suggest we uncovered key patterns.

[4]In some cases data availability forces us to use explanatory variables measured during the sample period—suggesting those results should be more cautiously interpreted. Nonetheless, we are picking variables that capture cross-sectional differences across states that are likely to be relatively stable over time.

Besides assessing the policy effects on overall economic activity, we also assess a two-part question regarding the distribution of income: (1) do RTT and RTB policies directly influence the distribution of income, and (2) do these policies indirectly affect income distribution by affecting economic activity. Thus, our dependent variables include measures of both income distribution and economic activity. Our first dependent variable is the 1999 to 2007 change in each state's Gini coefficient, a widely used measure of inequality (*DGINI*).[5] Second, to exclusively assess effects in the lower tail of the distribution of income, we examine the 2000-2007 change in the overall poverty rate (*DPOVERTY*). Third, to assess overall economic activity, we consider the 2000-2007 percent change in total employment (*DEMPLOY*). Partridge and Rickman (2003) argue that job growth is the single best measure of economic well-being because of its close link to both firm profitability and household well-being, which shift labor demand and supply, influencing equilibrium employment. The fourth dependent variable is the 2000-2007 percent change in per capita income (*DINCOME*). Details of these and other variables and their sources are provided in Table 1.

The respective four empirical models for state *s* are represented as:

(1) $DGINI_S = \alpha^G + \beta^G{}_1 PCTHSGRAD00_S + \beta^G{}_2 GINI99_S + \beta^G{}_3 DEMPLOY_S + \beta^G{}_4 AMENITY_S + \beta^G{}_5 PERCAP00_S + \beta^G{}_6 PERCENT\_METRO_S + \mathbf{\beta^G{}_P POLICY}_S + \varepsilon^G{}_S,$

(2) $DPOVERTY_S = \alpha^{POV} + \beta^{POV}{}_1 PCTHSGRAD00_S + \beta^{POV}{}_2 POVERTY00_S + \beta^{POV}{}_3 DEMPLOY_S + \beta^{POV}{}_4 AMENITY_S + \beta^{POV}{}_5 PERCAP00_S + \beta^G{}_6 PERCENT\_METRO_S + \mathbf{\beta^{POV}{}_P POLICY}_S + \varepsilon^{POV}{}_S,$

(3) $DEMPLOY_S = \alpha^E + \beta^E{}_1 PCTHSGRAD00_S + \beta^E{}_2 GINI99_S + \beta^E{}_3 AMENITY_S + \beta^E{}_4 PERCAP00_S + \beta^G{}_5 PERCENT\_METRO_S + \mathbf{\beta^E{}_P POLICY}_S + \varepsilon^E{}_S,$

(4) $DINCOME_S = \alpha^{INC} + \beta^{INC}{}_1 PCTHSGRAD00_S + \beta^{INC}{}_2 GINI99_S + \beta^{INC}{}_3 AMENITY_S + \beta^{INC}{}_4 PERCAP00_S + \beta^G{}_5 PERCENT\_METRO_S + \mathbf{\beta^{INC}{}_P POLICY}_S + \varepsilon^{INC}{}_S,$

where *PCTHSGRAD00* is the percent of the population with at least a high school degree, *GINI99* is the 1999 Gini coefficient (the 2000 Census provides the Gini for the immediately

[5]Note the 1999 and 2007 Gini are derived from different sources (2000 Census of Population and the American Community Survey), though both are calculated using the same techniques by the U.S. Census Bureau. Thus, there should not be any systematic measurement error.

preceding year), AMENITY is a population-weighted average of county natural amenity rankings, *PERCAP00* is 2000 per capita income level, PERCENT_METRO is the percent of the state population residing in a metropolitan area, and *POVERTY00* is the 2000 percent of the population in poverty. **POLICY** represents vectors of various RTT and RTB proxies described below and ε is a residual term.

For ease of interpretation, the base control variables are similar across specifications. These base control variables are standard in studies of economic growth, poverty, and inequality (Glaeser et al., 2001; Glaeser and Shapiro, 2003; Goetz and Hu, 1996; Ngarambe and Goetz, 1998; Partridge 2005; Partridge and Rickman 2006; Rupasingha and Goetz, 2007). Each specification includes the 2000 adult population share of high school graduates to account for the stock of basic human capital. The initial 2000 (or 1999) level of the dependent variable is included to account for any convergence or disequilibrium effects. The employment and per-capita income growth equations control for the 1999 Gini because inequality has been strongly linked to subsequent economic growth through its relationship with economic incentives (Partridge 2005, 2006; Persson and Tabellini, 1994; Ngarambe, Goetz and Debertin, 1998). *PERCENT_METRO* accounts for initial agglomeration or congestion effects in the Gini, poverty and growth equations. *PERCAP00* accounts for income effects in the Gini, poverty, and employment growth equations. For example, in the employment growth equation, high incomes are associated with high wages—which may deter hiring. AMENITY is included because areas high in natural amenities may experience greater rates of population in-migration and economic growth (Partridge et al., 2008a), which also can affect income distribution.

A key variable in the inequality and poverty equations is 2000-2007 employment growth (DEMPLOY). One of our maintained hypotheses is that stronger economic activity manifested through greater job growth disproportionately benefits lower-skilled workers and disadvantaged households because employers are forced to reach down the employment ladder in their hiring decisions (Bartik, 1994, 1996, 2001; Partridge and Rickman, 2006). This reduces both the poverty rate and income inequality. Thus regardless of the source, “successful” RTT and RTB

strategies that increase job growth would indirectly reduce inequality and poverty.[6]

There are four basic sets of RTT and RTB policies in the **POLICY** vector. As noted before, we consider each of these vectors one at a time to reduce potential multicollinearity and because of degrees of freedom constraints. The first set of variables in the **POLICY** vector consist of various RTB tax burden variables including an indicator of whether the state levied an additional estate tax in 2002 beyond the federal levy; the top corporate income tax rate; the top personal income tax rate; and 2000 state and local property taxes as a share of personal income.[7]

For the tax variables, we hypothesize that greater tax burdens are inversely associated with subsequent economic activity—all else constant. If lower taxes are associated with lower spending on education and public infrastructure, the net effect on economic activity is ambiguous (Helms, 1985). However, greater tax burdens may reduce income inequality—especially in the case of progressive income taxes or estate taxes targeted at higher income households. In addition, job growth may indirectly impact inequality and poverty—e.g., lower taxes may attract economic growth, which in turn could reduce inequality and poverty.

The second vector of RTB policy variables includes measures of economic freedom and incentives that the state offers to attract/retain new businesses. First, a dummy variable indicates status as a right-to-work state. In these states employees do not have to join unions as a condition of employment. Second, we consider the Fraser Institute's Economic Freedom Index, which is a compilation of regulatory, property rights and tax measures that influence economic incentives. For example, included in the index are measures of land use and environmental regulation.[8] A higher value of this Index is associated with more economic freedom. Third, we include the share of all possible direct financial assistance programs offered by each state (including local governments) to new or existing firms. Fourth, we include each state's share of total possible categories of tax incentives programs offered across the country.[9]

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[6]Of course, 2000-2007 job growth cannot be included in the income growth equation because it would be endogenous and jointly determined, which is why it appears only in the inequality and poverty models.
[7]We also used values for these variables measured in 1996, but the results were qualitatively unaffected.
[8]There is some overlap of the tax variables with portions of the Economic Freedom Index.
[9]We assume that greater numbers of programs are associated with greater use by states. In fact, the tax incentive and

The third set of policy variables are RTT measures of social and human capital beyond basic high school. First we consider the share of the adult population with a graduate or post-graduate degree (we consider Bachelor degrees as well).[10] Second, we add the percent of employment in science and engineering occupations and, third, the percent of employment in high-technology jobs. Fourth, we include the educational attainment of recent immigrants to assess whether the state attracts skilled immigrants and whether they have a differential effect on economic activity. Fifth, the percent of the population covered by health insurance is included. Finally, we control for social capital as measured by the Civic Life Index (Grimm et al., 2007; Goetz and Rupasingha, 2006; Rupasingha, Goetz and Freshwater, 2006).[11]

The direct effects of human capital on inequality are unclear because it may attract business activity that disproportionately benefits the highest-earning households. However, if greater human capital stimulates job creation, it would indirectly reduce poverty and inequality. Likewise, a greater share of the workforce with health insurance may improve worker productivity while also increasing quality of life, which attracts migrants. Alternatively, a greater population share with health insurance may be associated with higher labor compensation costs or greater taxes, which would reduce economic activity. Thus, the direct and indirect effects of health insurance are unclear. Finally, we expect that greater social capital increases economic activity and reduces income inequality (Rupasingha and Goetz, 2007).

A fourth set of policy variables are RTT variables measuring state climate for entrepreneurial and innovation activities.[12] The Kauffman Index of entrepreneurship (Fairlie, 2008) attempts to measure whether the state is conducive to formation of new, creative, and small businesses—i.e., a policy of "growing from within" rather than attracting firms from outside, which is the goal of tax incentives. Second, we consider venture capital as a share of

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financial assistance variables are (mildly) positively correlated (e.g., correlation coefficients between 0.1 and 0.2) with economic development spending measures used in previous studies (Goss and Phillips, 1997).

[10] An alternative analysis might consider the effect of universities on the economy and innovation (Huggins and Johnson, 2009).

[11] This index includes 12 measures of civic engagement and infrastructure as well as voter participation. The measures are from different years in the 2005-2007 period, and centered on 2006.

[12] Martinez (2009) focuses specifically on the effect of entrepreneurship policies on manufacturing in Spain.

worker earnings. A priori this has ambiguous effects on income inequality. For example, venture capital may spur job creation that benefits high-skilled workers, which would directly increase inequality. However, this could be offset by an expansion of economic activity that indirectly reduces inequality and poverty. Third, we include the number of internet domain names per firm as a measure of internet connectivity and the e-economy. Fourth, the percent of population "online" is added as a measure of connectivity and quality-of-life, which may increase economic activity. Fifth, we include a composite measure of computers and internet usage in schools that may also increase firm productivity and quality-of-life.[13] Finally, in sensitivity analysis, we consider a measure of residential and business access to broadband. Faster internet access improves both business productivity and household quality of life, increasing economic activity.

A final set of RTT policy variables includes four state expenditure variables and highway infrastructure. The first variable is expenditures on elementary and secondary education within the state as a share of personal income in 2002. The other expenditure variables are state income shares of expenditures on public safety, public health and hospitals and the environment and housing. The final variable is miles of state highways per capita.

4. Empirical Results

4.1 Overview of RTT and RTB Policy and Economic Outcomes.

Table 2 shows summary statistics for variables used in the regressions while Table 3 contains selected correlation coefficients for variables measuring RTT and RTB variables and factors thought to be associated with these variables. Notable relationships among variables are illustrated in Figures 1 through 6.[14]

Some of the correlation coefficients reported in Table 3 are consistent with prior expectations while others offer a few surprises. For example, it is unsurprising that the Gini coefficient is strongly negatively associated with the social capital measure. Conversely, the

[13] These latter variables were all obtained from the Michigan Score Card, available at http://www.sbam.org/content.php?id=914

[14] The correlation coefficients and scatter plots for amenities are for the lower 48 states containing amenity measures; all other correlations and scatter plots are for the 50 states.

negative correlation between the Gini and the percent of population on-line may be unexpected, suggesting that on-line access may be a form of economic "equalizer." Also noteworthy is the positive correlation between inequality and state tax incentive programs. Further statistical analysis is needed though to determine whether any causality is involved.

Higher stocks of social capital are associated with a greater population share that is on-line. Contrary to popular belief, therefore, greater on-line activity (or at least access) is not associated with reduced civic activity or engagement. States with higher social capital also tend to score lower on the economic freedom index. This suggests that civic activity may be crowded out by market activities, or vice versa.

Next we focus on the correlates with the employment growth rate between 2000 and 2007. The strongest correlation with job growth occurs for the state natural amenity ranking. A larger population share living in metropolitan areas is mildly positively related to employment growth. Both financial and tax assistance programs are associated with a lower rate of job growth (see also Figures 1 and 2). Because of the (overlapping) time periods in which the different variables are measured, any discussion of causation is difficult. However, states pursuing these types of RTB strategies likely do so repeatedly over the years. Furthermore, these correlation coefficients are essentially unchanged when we use 2005–2007 job growth rates instead. This further supports a claim that any possible endogeneity is *not* behind this relationship. Importantly, there is a positive association between the economic freedom index and the rate of job growth (Figure 3). State and local taxes combined are slightly negatively related to job growth (Figure 4). Also, a higher rate of employment growth is inversely related with the change in the Gini coefficient (Table 3 and Figure 5) and the poverty rate (Figure 6) over the period.

Some of the low correlations in Table 3 also are noteworthy. Although associated with faster job growth, the economic freedom index is not positively associated with the rate of income growth over the subsequent 7 year period. Economic freedom is negatively associated with the state and local tax share but not highly correlated with the use of tax incentive and financial assistance programs.

4.2 Base and General Regression Results.

Table 4 contains base model regression results for each of the four dependent variables using the sample of the lower 48 states, for which data on all variables were available. The adjusted R^2 indicates a good fit for the change in Gini model, and at the other extreme, a poorer fit for the per capita income growth model. Yet, because of regional labor mobility and household amenity differences, per capita income is not as reliable an indicator of regional economic health as of national economic health. For example, household disamenities can be associated with out-migration of labor and, in turn, rising wages and per capita income. Tables 5-9 contain the results of adding each set of policy variables to the base model.

We first discuss the base model results using a 10% or lower level of significance. Income inequality is negatively and significantly related to employment growth. Thus, factors that lead to job growth can indirectly reduce income inequality. This relationship persists with the inclusion of alternative policy variables (Tables 5, 6 and 9). Although barely insignificant in Table 4, a one percentage point greater rate of employment growth over the 2000-2007 period is associated with an approximately 0.1 percentage point lower poverty rate, while a one-standard deviation greater rate of job growth is linked to a 0.6 percentage point reduction in poverty. Employment growth is also inversely related with poverty in the Table 6 and 8 models.

Both income inequality and poverty rates converge, as the corresponding beginning period levels are associated with subsequent relative declines. Except for the Gini coefficient in Table 7, convergence is found with the addition of each set of policy variables. Yet, there is no evidence of convergence of state per capita incomes, which is consistent with regional income convergence ceasing prior to 2000 (Bernat, 2001).[15] Higher initial income inequality also is associated with subsequent relative increases in state per capita income in the base model, and in the Table 5, 7 and 9 models. The proportion of high school graduates in 2000 is inversely related to the 2000-2007 changes in the poverty rate.

[15]A regression of per capita income on the 2000 level of per capita income while omitting the other variables produces a negative and significant coefficient, which becomes insignificant with the inclusion of the variable measuring the percent of the state population residing in metropolitan areas.

Based on changes in adjusted R^2 values, the RTB regulatory/property right variables (Table 6) best explain employment growth. The RTT regional government expenditure variables best explain the change in the poverty rate and per capita income growth. The RTT social and human capital variables best explain the change in the Gini coefficient. The RTB tax climate variables have the least explanatory power for all dependent variables except income growth.

Policy Variables Group 1, RTB Tax Climate. The tax burden measures are individually statistically insignificant, while the relatively lower adjusted R^2 values indicate their lack of collective explanatory power (Table 5). We conclude that the tax climate variables are not significantly linked to either growth or the distribution of income. The lack of negative effects of taxes on the economy may be attributable to the positive spending effects derived from the taxes such as on highways and education (Helms, 1985), which are explored in Table 9. The results suggest that a low-state-and-local tax/low-state-and-local-government spending, climate does not spur economic growth. However, lower taxes obtained by increased government efficiency would be expected to have beneficial effects.

Policy Variables Group 2, RTB Regulatory/Property Rights. These measures have greater explanatory power than the direct tax variables and improve the model fit over the base model for all variables except the poverty rate, producing the best model overall for employment growth (Table 6). Yet the variables have signs which may be unexpected.

Only the right-to-work (RTW) indicator variable is statistically significant in the inequality model, with a negative sign. However, RTW also is significantly negatively related to employment and per capita income growth. Having a wider variety of financial assistance programs also depresses job growth, but enhances per capita income growth. Although tax incentive programs are negatively correlated with employment growth (Table 3 and Figure 3), the effect is insignificant in Table 6. Greater economic freedom is not significantly associated with any economic outcome.

While there are always questions about causation (e.g., slower-growing states may be more likely to launch business incentive programs), these results suggest that financial assistance

programs *may* reduce job growth. In particular, because greater financial assistance to relocating firms can force states to raise taxes on existing residents and businesses or reduce government services; any gains in attracting new firms or encouraging existing firms to expand may be more than offset through cut-backs by other firms. Moreover, through the indirect effects on inequality, these incentives also are positively linked to higher inequality.

Policy Variables Group 3, RTT Human & Social Capital. Again, except for the poverty rate, adding these variables improves the adjusted R^2 values, most notably for employment growth (Table 7). Health insurance coverage is positively and significantly related to the change in the Gini coefficient. The negative association between health insurance coverage and job growth may reflect higher labor compensation costs, which dampens labor demand. Indeed, this would explain why individual states are reluctant to require mandatory employer-provided health insurance because it puts them at a competitive disadvantage (which means a national plan may be the only way to extend health coverage).

The immigrant educational attainment and social capital measures also are negative and statistically significant in the employment equation. Social capital may displace private-private market solutions, producing little net-positive effect (Durlauf and Fafchamps, 2004). One explanation for the insignificance of the graduate degree variable is that it may take longer than seven years to affect economic activity.[16] Percent of employment in science & engineering occupations is negatively related to the change in the poverty rate and positively associated with per capita income growth.

Policy Variables Group 4, RTT Entrepreneurship and Innovation. These variables improve upon the base model fits for the change in the Gini coefficient and employment growth (Table 8). They produce the second-best fitting model for job growth.

The Kauffman Entrepreneurial Index, Internet Domain Names, Technology in School and Percent Online are all positively and significantly related to employment growth. None,

[16]However, an alternative measure, the percent of the adult population with at least a Bachelors degree was positive and statistically significant when entered in place of the graduate and professional degree share in the employment equation, but was insignificant in the other three equations.

however, are significantly related to the other dependent variables in a direct fashion. Even so, these variables all indirectly reduce poverty through their influence on employment growth.

The most significant variable (highest *t*-statistic) in the employment growth equation is Internet Domain Names. It is difficult to speculate on causality, but we do not believe this is a workforce quality effect as the human capital variables are generally statistically insignificant. There appears to be something significant about the types of firms that increase internet domain names, which is a topic that warrants further research.

Policy Variables Group 5, RTT Regional Government Expenditures. Each coefficient for a state expenditure variable is interpreted as the effect of increasing expenditures in that category holding expenditures in the other included categories constant (Table 9). With the omission of tax variables, however, their effects are not held constant. So, higher expenditures may be associated with higher taxes, producing offsetting effects on the estimated coefficients.

From Table 9, the adjusted R^2s are equal to or larger than those in Table 4 and those for the tax regressions in Table 5. Thus, the government expenditure variables have significant explanatory power, exceeding that for the tax variables. Yet, few of the variables are individually statistically significant. Education expenditures are significantly and negatively associated with income inequality. Public health expenditures are negatively and significantly associated with employment growth and positively and significantly related to the poverty rate. The negative employment relationship may reflect increased costs of poor health outcomes to households and firms. The positive relationship with the change in poverty likewise may reflect adverse effects of poor health outcomes associated with poverty on healthcare expenditures. Per capita highway miles are significantly and positively related to per capita income growth, although if per capita income growth is autoregressive, it may have influenced the development of highways.

4.3 Spatial Lag Analysis

Because there may be spatial shifts in the values of the dependent variables and spillovers between states that may be correlated with the independent variables, we re-estimate all regressions while including the spatial lag of the dependent variable. For each dependent

variable, we calculate a population-weighted average of the values for the variable in all other states within the same Census division. Interpretation of the coefficient of the spatial lag variable is problematic given the lack of singular specific theoretical motivation for the spatial effects. Thus, we simply focus on the sensitivity of the results for the other variables to the inclusion of the spatial lag variable.

In results not shown, the spatial lag variable is positive and significant in all employment growth and per capita income growth regressions (with the exception of the Table 6 specification of per capita income growth). Except for the base Gini coefficient model, the spatial lag is insignificant in all Gini coefficient and poverty regressions. Few estimated coefficients are materially affected by adding spatial lag variables, even where they are statistically significant.

The top personal income tax rate becomes negative and significant in the employment growth equation (Table 5). For the per capita income regression in Table 6, the financial assistance variable becomes insignificant, while the economic freedom variable becomes marginally (and negatively) significant. Corresponding to the employment regression in Table 7, the science and engineering variable becomes negatively significant while the social capital variable becomes insignificant. Regarding the Table 9 regressions, state education expenditures become insignificant in the Gini equation but become negatively significant in the employment growth equation. State expenditures on the environment become positive and significant in the per capita income growth equation. Overall, there is little to suggest that our basic conclusions regarding the relative effectiveness of RTT versus RTB strategies are substantively affected by the omission of spatial effects.

4.4 Potential Nonlinearities

Also in results not shown, we allow for nonlinearities in the RTB and RTT effects by adding quadratic terms for the policy indicators (except for the dummy variables) in each regression. The addition of quadratic terms improves the adjusted R^2s in 10 of the 20 regressions. However, the improvements only occur in 2 of the 8 RTB regressions (Tables 5 and 6), in which the improvements occur in 8 of the 12 RTT regressions (Tables 7-9). The results should be

interpreted with caution as the addition of quadratic terms likely increases multicollinearity and the degrees of freedom are also reduced.

With few exceptions most of the previous RTB results still hold. The property tax rate (Table 5) is now positive and significantly related to the poverty rate, but at a decreasing rate. Tax incentives (Table 6) negatively and significantly affect per capita income but the quadratic term is positive. Both financial incentives and the economic freedom index negatively and significantly affect job growth but also with positive quadratic terms. Overall, there is little to suggest that RTB policies have more beneficial effects when allowing for nonlinearities.

The following was found in the RTT equations for which the adjusted R^2 improved. For Table 7, both immigrant knowledge and social capital are significant and positively related to the change in the Gini coefficient, but at a decreasing rate. Graduate/Professional share negatively and significantly affected per capita income growth but at a decreasing rate. Health insurance is significant and positively associated to per capita income growth, but at a decreasing rate. For Table 8, the technology in schools term is positive and significant in the Gini coefficient model, but the quadratic term is negative. In the employment growth equation, all previously significant variables become insignificant, while venture capital becomes positive and significant with a significantly negative quadratic term. For Table 9, education expenditures become insignificant in the Gini equation, while public safety expenditures become positive and significant with a significantly negative quadratic term. Public safety expenditures also become positive and significant in the poverty equation with a significantly negative quadratic term. The natural environment expenditure share becomes negative and significant with a positive and significant quadratic term in the per capita income growth regression.

5. Conclusion

This study has explored the relationship between various economic indicators of economic well-being and an extensive array of measures relating to alternative economic development strategies. The strategies were generally classified as either consistent with a race to the bottom (RTB) among states or a race to the top (RTT). The underlying theoretical framework

suggests that a wide variety of policies can potentially affect state economic growth and the distribution of income through several channels of influence.

Among the control variables, amenity attractiveness of the state was strongly related to growth in employment. The percent of the population which completed high school was associated with lower poverty (either as greater reductions or lower increases). Employment growth significantly reduced income inequality and poverty. Thus, policies which stimulate employment growth indirectly reduced income inequality and poverty.

There was no evidence to suggest that states should enact broadly lower taxes to stimulate growth. The likely reason for the result is that although taxes may directly increase firm costs or reduce household utility, they indirectly provide for government expenditures on valued services such as education and highways. In fact, evidence was found for positive growth effects of educational attainment and highway infrastructure. This suggests that state and local governments need to look more at increasing government efficiency, getting the maximum delivery of services per dollar of taxes, rather than simple reduction in taxes and the size of state and local government at the expense of valued services.

Correspondingly, the use of tax incentives and financial assistance programs to attract firms was negatively correlated with employment growth, in which the correlation for financial assistance programs held up with the inclusion of other control variables. This can occur if the incentives and programs provided did not alter firm location at the margin and the opportunity cost of the funds were borne by *other* firms or households (through higher taxes or fewer government services). Because of the significant poverty and income inequality reducing influences of job growth, financial assistance programs then indirectly increase income inequality and poverty.

Right-to-work (RTW) states had lower income inequality (lower increases or greater reductions) over the period. Yet, RTW was negatively associated with growth in employment and per capita income. Greater general economic freedom was not significantly related to any of the economic indicators. Overall, there is little evidence to suggest that business-friendly

regulatory policies and greater use of incentives positively influenced economic activity.

Among measures considered to represent RTT attempts, entrepreneurship, and measures of computing at home, in the classroom, and in the workplace, positively influenced employment growth, and hence indirectly reduced poverty. However, knowledge among recent immigrants, health insurance coverage, and social capital were negatively associated with employment growth. Employment in science and engineering occupations was associated with lower poverty, likely because of income spillover effects on the overall economy.

In summary, although our results are primarily suggestive, they indicate that lower taxes across the broad economy and the use of tax incentives and financial assistance programs do not stimulate state economies. There is consistent support for stronger employment growth as a means to reduce poverty and income inequality. There is some evidence supporting entrepreneurship as a means to stimulate employment growth. Likewise, computer use appears to be associated with stronger job growth. The estimated negative effects of health insurance coverage among the general population support the need for a greater role by the federal government, lest a RTB in health care coverage occurs. We argue there is a need for states and localities to redirect their focus from traditional tax reduction and smokestack-chasing policies to finding ways of improving government efficiency and increasing competitiveness.

References

Ashby, Nathan J., 2007. "Economic Freedom and Migration Flows between U.S. States," *Southern Economic Journal* 73(3), 677-97.

Ashby, Nathan J. and Russell S. Sobel, 2008. "Income Inequality and Economic Freedom in the U.S. States," *Public Choice* 134(3-4), 329-46.

Bailey, Michael A., Mark Carl Rom and Matthew M. Taylor, 2004. "State Competition in Higher Education: A Race to the Top, or a Race to the Bottom?" *Economics of Governance*, 5(1), 53-75.

Bartik, Timothy J., 1991. *Who Benefits from State and Local Economic Development Policies?* Kalamazoo, MI: W.E. Upjohn Institute for Employment Research.

---------. 1994. "The Effects of Metropolitan Job Growth on the Size Distribution of Family Income." *Journal of Regional Science* 34: 483-502.

---------. 1996. "The Distributional Effects of Local Labor Demand and Industrial Mix: Estimates Using Individual Panel Data." *Journal of Urban Economics* 40: 150-78.

---------. 2001. *Jobs for the Poor: Can Labor Demand Policies Help?* New York: Russell Sage Foundation.

Bernat, Andrew, 2001. "Convergence in State Per Capita Personal Income, 1959-1999," *Survey of Current Business* 81(6), 36-48.

Berner, Maureen, 2005. "A Race to the Bottom? Exploring County Spending Shortfalls under Welfare Reform in North Carolina," *Public Budgeting and Finance* 25(4), 86-104.

Boadway, Robin, Katherine Cuff and Nicolas Marceau, 2002. "Inter-jurisdictional Competition for Firms," *International Economic Review* 43(3), 761-82.

Brennan, Geoffrey and James Buchanan, 1980. *The Power to Tax: Analytical Foundations of a Fiscal Constitution*. Cambridge University Press, Cambridge.

Brown, S.P.A., K.J. Hayes, and L.L. Taylor, 2003. "State and Local Policy: Factor Markets and Regional Growth," *The Review of Regional Studies* 33(1), 40-60.

Bruce, Donald, Deborah Carroll, John A. Deskins and Jonathan C. Rork, 2007. "Road to Ruin? A Spatial Analysis of State Highway Spending," *Public Budgeting and Finance* 27(4), 66-85.

Brueckner, Jan K., 2000. "Welfare Reform and the Race to the Bottom: Theory and Evidence," *Southern Economic Journal* 66(3), 505-25.

Bucovetsky, Sam, John D. Wilson, 1991. "Tax Competition with Two Tax Instruments," *Regional Science and Urban Economics* 21(3), pp. 333-50.

Champlin, Dell P. and Janet T. Knoedler, 2008. "American Prosperity and the 'Race to the Bottom': Why Won't the Media Ask the Right Questions?" *Journal of Economic Issues* 42(1), 133-51.

Chirinko, Robert S. and Daniel J. Wilson, 2008. "State Investment Tax Incentives: A Zero-Sum Game? *Journal of Public Economics* 92(1), 2362-84.

Chittenden, F. and M. Derregia, 2009. "The Role of Tax Incentives in Capital Investment and R&D Decisions," *Environment and Planning C* available on-line; doi:10.1068/c0708b.

Comunian C., Faggian A. and Li Q.C. (2010) "Unrewarded careers in the creative class: the strange case of Bohemian graduates." *Papers in Regional Science* 89(2): 389-410.

Craw, Michael, 2006. "Overcoming City Limits: Vertical and Horizontal Models of Local Redistributive Policy Making," *Social Science Quarterly* 87(2), 361-79.

Crescenzi, Riccardo and Andrés Rodriguez-Pose. 2008. "Infrastructure Endowment and Investment as Determinants of Regional Growth in the European Union." *European Investment Bank Papers.* 13: 62-101.

Dalenberg, D. and M.D. Partridge, 1997. "Public Infrastructure and Wages: Public Capital's Role as a Productive Input and Household Amenity," *Land Economics* 73, 268-284.

Davies, Ronald B., 2005. "State Tax Competition for Foreign Direct Investment: A Winnable War?" *Journal of International Economics* 67(2), 498-512.

Durlauf, Steven N. and Marcel Fafchamps. 2004. "Social Capital" *NBER Working Paper Series* 10485: Cambridge, MA.

Every Child Matters Education Fund, 2008. "Geography Matters: Child Well-Being in the States," last accessed at http://www.everychildmatters.org/images/stories/geomatters.pdf on July 24, 2009.

Fairlie, Robert. 2008. "The Kauffman Index of Entrepreneurial Activity." Kauffman Foundation, Kansas City, MO.

Figlio, David N. and Bruce Blonigen, 2000. "The Effects of Foreign Direct Investment on Local Communities," *Journal of Urban Economics* 48, 338– 363.

Fisher, Peter, 2007. "The Fiscal Consequences of Competition for Capital," in *Reining in the Competition for Capital*, Ann Markusen (ed.), 57-85, W.E. Upjohn Institute for Employment Research: Kalamazoo, MI.

Florida, Richard (2003) *The Rise of the Creative Class.* New York: Basic Books.

Glaeser, Edward L., 2001. "The Economics of Location-Based Tax Incentives," Discussion Paper No. 1932. Cambridge, MA: Harvard Institute of Economic Research.

Glaeser, Edward L., Jed Kolko and Albert Saiz. 2001. "Consumer City". *Journal of Economic Geography*, 1, 27-50.

Glaeser, Edward L. and Jesse M. Shapiro. 2003. "Urban Growth in the 1990s: Is City Living Back?" *Journal of Regional Science,* 43, 139-165.

Goetz, Stephan J. and Dayuan Hu. 1996. "Economic Growth and Human Capital Accumulation: Simultaneity and Expanded Convergence Tests." *Economics Letters,* 51, 355-362.

Goetz, Stephan J. and Anil Rupasingha. 2006. "Wal-Mart and Social Capital." *American Journal of Agricultural Economics*, 88, 1304-1310.

Goss, Ernest P. and Joseph M. Phillips, 1997. "The Effect of State Economic Development

Agency Spending on State Income and Employment Growth," *Economic Development Quarterly* 11(1), 88-96.

Greenstone, Michael and Enrico Moretti, 2004. "Bidding for Industrial Plants: Does Winning a 'Million Dollar Plant' Increase Welfare? National Bureau of Economic Research, Inc, NBER Working Papers: 9844.

Grimm, Robert. 2007. *Volunteering in America:* 2007 *State Trends and Rankings in Civil Life*. Corporation for National and Community Service, 148*pp*. Available at: www.nationalservice.gov/pdf/VIA/VIA_fullreport.pdf. Accessed June 05 2009.

Gyourko J. and J. Tracy, 1989. "The Importance of Local Fiscal Conditions in Analyzing Local Labor Markets," *Journal of Political Economy* 97, 1208-1231.

Hansen, Susan B., Carolyn Ban and Leonard Huggins, 2003. "Explaining the "Brain Drain" from Older Industrial Cities: The Pittsburgh Region," *Economic Development Quarterly* 17(2), 132-47.

Head, Keith C., John C. Ries, Deborah L. Swenson, 1995. "Agglomeration Benefits and Location Choice: Evidence from Japanese Manufacturing Investments in the United States," *Journal of International Economics* 38, 223–247.

Helms, L. Jay, 1985. "The Effect of State and Local Taxes on Economic Growth: A Time Series-Cross-Section Approach," *Review of Economics and Statistics* 67(4), 574-82.

Holmes, Thomas J., 1998. "The Effect of State Policies on the Location of Manufacturing: Evidence from State Borders," *Journal of Political Economy* 106(4), 667-705.

Hoyt, William H. and Richard A. Jensen, 2001. "Product Differentiation and Public Education," *Journal of Public Economic Theory* 3(1), 69-93.

Huggins, R. and A. Johnston, 2009. "The Economic and Innovation Contribution of Universities: A Regional Perspective," *Environment and Planning C*, 27: 1088-1106.

Johnson, Ben, 2009. "Better than OK," *National Real Estate Investor* July 1.

Karabegovic, Amela, Dexter Samida, Chris M. Schlegel and Fred McMahon, 2003. "North American Economic Freedom: An Index of 10 Canadian Provinces and 50 US States," *European Journal of Political Economy* 19, 431–452.

Keating, Raymond J., 1996. *Small Business Survival Index: Ranking the Environment for Entrepreneurship across the Nation*, Small Business Survival Foundation: Washington D.C.

_____, 2002. "Small Business Survival Index 2002: Ranking the Policy Environment for Entrepreneurship across the Nation," last accessed at http://www.leadercorporation.com/PDF%20Documents/SBSI2002A.pdf on July 21, 2009.

Khasru, B Z, 2009. "Incentives keep Pepsi Bottling in Somers," *Westchester County Business Journal*, March 5th.

Krogstrup, Signe, 2008. "Standard Tax Competition and Increasing Returns," *Journal of Public Economic Theory* 10(4), 547-61.

List, John A. and Shelby Gerking, 2001. "Regulatory Federalism and Environmental Protection

in the United States," *Journal of Regional Science* 40(3), 451-73.

Markusen A. (2006) "Urban Development and the Politics of a Creative Class: Evidence from the case Study of Artists." *Environment and Planning A* 38: 1921 – 1940.

Martinez, J.A.B., 2009. "Entrepreneurship Policies and New Business Performance and Growth: An Empirical Analysis Based on Manufacturing Industries," *Environment and Planning C* 27: 195-215.

Millimet, Daniel L. and John A. List, 2003. "A Natural Experiment on the 'Race to the Bottom' Hypothesis: Testing for Stochastic Dominance in Temporal Pollution Trends," *Oxford Bulletin of Economics and Statistics*, 65(4), 395-420.

Ngarambe, Octavian, and Stephan J. Goetz. 1998. "Determinants of Regional Income Distribution in the U.S. South: Roles of Net Migration and Human Capital Accumulation." *Review of Black Political Economy*, 26, 23-35.

Ngarambe, Octavian, Stephan J. Goetz and David L. Debertin. 1998. "Regional Economic Growth and Income Distribution: County-Level Evidence from the U.S. South." *Journal of Agricultural and Applied Economics*, 30, 325-337.

Parry, Ian W. H., 2003. "How Large Are the Welfare Costs of Tax Competition?" *Journal of Urban Economics* 54(1), pp. 39-60.

Partridge, Mark D. 2005. "Does Income Distribution Affect U.S. State Economic Growth?" *Journal of Regional Science* 45: 363-394.

Partridge, Mark D. 2006. "The Relationship between Inequality and Labor Market Performance: Evidence From U.S. States." *Journal of Labor Research* 27 (Winter): 1-20.

Partridge, Mark D. and Dan S. Rickman. 2003. "Do We Know Economic Development When We See It?" *Review of Regional Studies* 33: 17-39.

_____. 2005."Persistent High-Poverty in Nonmetropolitan America: Can Economic Development Help?" *International Regional Science Review* 28, 415-440.

_____. 2006. *The Geography of American Poverty: Is there a Role for Place-Based Policies?*, Kalamazoo, MI: W.E. Upjohn Institute for Employment Research.

Partridge, Mark D., Dan S. Rickman, Kamar Ali and M. Rose Olfert, 2008a. "The Geographic Diversity of U.S. Nonmetropolitan Growth Dynamics: A Geographically Weighted Regression Approach," *Land Economics*, *84* (2), 241-266.

_____, 2008b. "Lost in Space: Population Growth in the American Hinterlands and Small Cities," *Journal of Economic Geography* 8 (6), 727-757.

Persky**,** Joseph, Daniel Felsenstein and Virginia Carlson, 2004. *Does 'Trickle Down' Work? Economic Development Strategies and Job Chains in Local Labor Markets,* W. E. Upjohn Institute for Employment Research, Kalamazoo, MI.

Persson, Torsten and Guido Tabellini. 1994. "Is Inequality Harmful for Growth?" *American Economic Review,* 84, 600–621.

Rodriguez-Pose, Andrés and Glauco Arbiz. 2001. "Strategies of Waste: Bidding Wars in the

Brazialian Automobile Sector." *International Journal of Urban and Regional Research*. 25: 134-154.

Rupasingha, Anil and Stephan J. Goetz. 2007. "Social and Political Forces as Determinants of Poverty." *Journal of Socio-Economics*, 36, 650-671.

Rupasingha, Anil, Stephan J. Goetz and David Freshwater. 2007. "The Production of Social Capital in US Counties." *Journal of Socio-Economics*, 35, 83-101.

Site Selection, 2000. U.S. state incentive programs. Site Selection November, pp. 1002– 1005.

Tiebout, Charles M., 1956. "A Pure Theory of Local Expenditures," *Journal of Political Economy* 64(1), 416-24.

Tullock, Gordon, 1971. "Public Expenditures as Public Goods," *Journal of Political Economy* 79(5), 913-8.

Wasylenko, Michael, 1997. "Taxation and Economic Development: The State of the Economic Literature," *New England Economic Review* (March/April), 37–52.

Wildasin, David E., 1988. "Nash Equilibria in Models of Fiscal Competition," *Journal of Public Economics* 35, 229-240.

Wilson, John D., 1986. "A Theory of Interregional Tax Competition," *Journal of Urban Economics* 19, 296–315.

Wilson, John D. and David E. Wildasin, 2004. "Capital Tax Competition: Bane or Boon?" *Journal of Public Economics* 88(6), 1065-91.

Zodrow, G. R., and Peter Mieszkowski, 1986. "Pigou, Tiebout, Property Taxation, and the Underprovision of Local Public Goods, *Journal of Urban Economics* 19, 356–370.

Table 1: Variable Descriptions and Sources[a]

Variable Names	Definition	Source
Dependent Variables		
DGINI	The 1999-2007 change in the Gini coefficient of family inequality.	2000 Census, 2007 ACS, www.census.gov
DPOVERTY	2000-2007 Change in Poverty Rate for people	U.S. Census Bureau, www.census.gov
DEMPLOY	2000-2007 Percent change in total nonfarm employment	U.S. Department of Labor, Bureau of Labor Statistics, www.bls.gov
DINCOME	2000-2007 Percent change in per-capita personal income	U.S. Bureau of Economic Analysis, www.bea.gov
Base Explanatory Variables		
PCTHSGRAD00	2000 Percent of the adult population over 25 years of age with at least a high school degree	2000 Census, www.census.gov
GINI99	1999 Gini coefficient of family income	2000 Census, www.census.gov
POVERTY00	2000 Poverty rate for people	U.S. Census Bureau, www.census.gov
DEMPLOY00-07	2000-2007 percent change in nonfarm employment	U.S. Department of Labor, Bureau of Labor Statistics, www.bls.gov
PERCAP00	2000 Per-capita Income	U.S. Bureau of Economic Analysis, www.bea.gov
Amenity	Population-weighted average of county natural amenity rankings, scale 1-7, 7 is highest ranking	Economic Research Service of U.S. Department of Agriculture, http://www.ers.usda.gov/data/naturalamenities/
Percent_Metro	Percent of the population in the state living in a metropolitan area in 1998	U.S. Census 2000; http://www.allcountries.org/uscensus/33_metropolitan_and_nonmetropolitan_area_population_by.html
Policy Set Number #1 RTB Taxes		
State estate tax	A dummy indicator denoting whether the state levied an estate tax in 1996/ 2002 that exceeded the federal tax credit.	Keating, 1996; 2002
Income Tax Share	1996, 2002 top personal income tax rates	Keating, 1996; 2002
Top corporate income tax rate	1996, 2002 top corporate income tax rate	Keating, 1996; 2002
Property tax share	2000 state and local property taxes as a share of personal income	U.S. Census Bureau, www.census.gov
Policy Set Number #2 RTB Regulatory/tax incentives		
Right-to-work	A dummy variable indicating whether the state is a right-to-work state.	SBSCI
Economic Freedom Index	The Fraser Institute's Economic Freedom Index; a compilation of regulatory, property-rights, and tax measures on economic behavior. A greater value means more economic freedom.	Fraser Institute, Simon Fraser University
Financial Assistance Incentives	Direct financial assistance programs to new or existing firms; share of total programs used by all other states.	*Site Selection Magazine,* www.siteselection.com/portal/
Tax incentives	Tax incentive programs to new or existing firms; share of total programs used by all other states.	*Site Selection Magazine,* www.siteselection.com/portal/
Policy Set Number #3 RTT Social & human		

capital		
Graduate or professional degree	Share of the adult population with at least a graduate or professional degree, 2000.	U.S. Census Bureau, www.census.gov
Science & engineering share	Percent of employment that is in science & engineering occupations, 2004.	ITIF: www.itif.org The Information Technology and Innovation Foundation
High-Tech Employment share	Percent of employment in high-technology jobs, 2004.	ITIF: Innovation Capacity
Immigrant Education	Educational attainment of recent foreign immigrants, 2004.	ITIF: Knowledge jobs
Health Insurance Share	The percent of the population that is **covered** by health insurance, 2002	U.S. Census Bureau, www.census.gov
Social Capital	The state's overall social capital, which is a composite of 12 indicators, 2006.	Grimm et al. (2007) and Corporation for National and Community Service.
Policy Set Number #4 RTT Entrepreneurial & Innovation		
Kauffman Entre. Index	2000 index of entrepreneurship, defined as the percent of individuals who started a new business during the last month.	Kauffman Foundation, www.kauffman.org/ ; original data source in the annual CPS
Venture Capital	Amount of venture capital as a share of worker earnings, 2004.	ITIF
Internet Domain Names	Number of internet domain names per firm, 2004.	ITIF: The Digital Economy
Percent Online	Percent of the population "online," 2004.	ITIF: The Digital Economy
Technology in Schools	A composite measure of computers and internet usage in schools, 2004.	ITIF: The Digital Economy
Broadband Accessibility	Residential and business accessibility to broadband internet, 2004.	ITIF: The Digital Economy
Policy Set Number #5 RTT Public Expenditures		
Education Exp.	State education expenditures as a share of state personal income in 2002.	U.S. Census of Government
Public Safety Exp.	State public safety expenditures as a share of state personal income in 2002.	U.S. Census of Government
Health Exp.	State health related expenditures as a share of state personal income in 2002.	U.S. Census of Government
Environment Exp.	State expenditures on natural resources, parks and recreation, sewerage, and solid waste management as a share of personal income in 2002.	U.S. Census of Government
Per Capita Hwy Miles	Per capita highway miles, 2000	U.S. Statistical Abstract & Population Census

a. The abbreviations used in the sources are CoP is the Census of Population (www.Census.gov); ACS is the American Community Survey (www.census.gov); ITIF: www.itif.org The Information Technology and Innovation Foundation.

Table 2: Descriptive Statistics for Variables Included in the Regression

	N	Minimum	Maximum	Mean	Std. Deviation
DGINI	50	.01	.06	.0364	.00991
DPOVERTY	50	-3.50	7.70	.8980	1.94112
DEMPLOY	50	-.04	.27	.0663	.05948
DINCOME	50	.16	.65	.3191	.08358
*PCTHSGRAD*OO	50	.73	.88	.8176	.03951
GINI99	50	.372	.472	.41346	.024023
PERCAP00	50	21.01	41.49	28.3352	4.41288
POVERTY00	50	4.5	17.5	10.780	2.9164
Amenities	48	2.16	6.56	3.74	1.02
Percent Metro	50	28	100	73.13	18.80
Top corporate income tax rate	50	0	12	6.81	2.747
Estate state tax	50	0	1	.42	.499
Property tax share	50	.01	.05	.0293	.00919
Income Tax Share	50	.00	.04	.0230	.01252
Corporate Income Tax Share	50	.00	.02	.0041	.00349
Right-to-work state	50	0	1	.56	.501
Economic Freedom Index	50	5.5	8.3	7.010	.6917
Tax incentive programs	50	.3333	1.0	.77067	.14264
Financial Assistance Incentives	50	.2778	1.0	.74111	.18498
Immigrant Knowledge Workers	50	12.0	15.3	13.590	.7080
Scientist and Engineering Share	50	.0016	.0098	.003996	.0017555
Graduate or Professional Degree	50	.04669	.12149	.07357	.018555
Health Insurance Share	50	76.30	92.90	87.5520	3.87094
Social Capital	50	86.3	126.0	104.882	9.7585
KI Entrepreneurship Index	50	.13923%	.65789%	.29758%	.10452%
Venture Capital	50	.0000	.0136	.001852	.0027546
Internet Domain Names	50	.91	7.15	2.5070	1.11612
Technology in Schools	50	2.68	7.43	5.0760	.96149
Percent Online	50	.426	.716	.60118	.060551
Education Expenditures	50	.037	.056	.046	.005
Public Safety Expenditures	48	.011	.024	.016	.003
Health Expenditures	48	.003	.015	.008	.003
Environmental Expenditures	48	.006	.016	.009	.002
Highway Miles Per Capita	48	.0005	.0164	.0035	.0035

Table 3: Selected Correlation Coefficients

	GINI99	SocCap	Online POP	Percent Metro	DEMPLOY	Financial Asst
GINI99	1	-.712	-.650	0.446	0.029	0.077
Social Capital	-.712	1	.586	-0.607	-0.2	0.096
Percent Online	-.650	.586	1	-0.012	0.078	-0.057
Percent Metro	0.446	-0.607	-0.012	1	0.143	0.019
DEMPLOY	0.029	-0.2	0.078	0.143	1	-.534
Financial Assistance Incentives	0.077	0.096	-0.057	0.019	-.534	1
Tax Incentive Programs	.379	-0.171	-.438	0.227	-.430	0.274
Amenity	0.290	-0.203	0.019	0.236	0.693	-0.262
Economic Freedom Index	0.114	-.305	-0.029	0.240	.423	-0.155
State and Local Gov Tax Share	-0.093	0.134	0.093	-0.112	-0.277	0.072
DGINI	-.597	.469	.321	-0.362	-.424	0.156
DINCOME	0.032	0.069	-0.08	-.388	-0.254	0.202

	Incentive	Amen.	EcFree Indx00	Taxslg SHARE	DGINI	DINC
GINI99	.379	0.290	0.114	-0.093	-.597	0.032
Social Capital	-0.171	-0.203	-.305	0.134	.469	0.069
Percent Online	-.438	0.019	-0.029	0.093	.321	-0.08
Percent Metro	0.227	0.236	0.240	-0.112	-0.362	-0.388
DEMPLOY	-.430	0.693	.423	-0.277	-.424	-0.254
Financial Assistance Incentives	0.274	-0.262	-0.155	0.072	0.156	0.202
Tax Incentive Programs	1	-0.382	-0.056	0.003	0.032	-0.051
Amenity	-0.382	1	0.054	-0.112	-0.576	0.084
Economic Freedom Index	-0.056	0.054	1	-.759	-0.068	-0.17
State and Local Gov Tax Share	0.039	-0.112	-.759	1	0.028	0.161
DGINI	0.032	-0.576	-0.068	0.028	1	0.042
DINCOME	-0.051	0.084	-0.17	0.161	0.042	1

Table 4. Benchmark Regressions (basic models without policy shifters)

	Change in GINI		Change in PovRate		Employment Growth		Income per capita Growth	
Variable	Coeff.	*t*-stat	Coeff.	*t*-stat	Coeff.	*t*-stat	Coeff.	*t*-stat
(Constant)	.135	2.24**	43.60	3.69***	.054	0.11	-.899	1.12
PCTHSGRAD00	.002	0.03	-39.68	3.20***	.113	0.27	.785	1.21
GINI99	-.227	3.18***			-.498	0.83	1.892	1.86*
POVERTY00			-.688	5.10***				
DEMPLOY00-07	-.044	1.93*	-9.72	1.61				
PERCAP00/10^3	.359	0.91	-53.08	0.72	-2.959	1.11	-2.789	0.41
AMENITY	-.002	1.15	.273	0.75	.042	4.42***	.009	0.53
PERC_METRO/10^3	-.067	0.78	-22.99	1.05	.671	1.58	-.002	1.32
Adjusted R^2	0.60		0.39		0.48		0.16	

t-statistics are absolute values; changes in GINI and Pov are simple differences; employment and income per capita growth are rates of change. The Gini is calculated over 1999-2007 and the other three are calculated over the years 2000 to 2007. Significance levels: *=10%, **=5% or lower, ***=1% or lower (two-tailed tests).

Table 5. Policy Set Number 1 RTB Regressions (Taxes)

	Change in GINI		Change in PovRate		Employment Growth		Income per capita Growth	
Variable	Coeff.	*t*-stat	Coeff.	*t*-stat	Coeff.	*t*-stat	Coeff.	*t*-stat
(Constant)	.131	1.92*	43.09	3.11***	-.021	0.04	-1.132	1.19
PCTHSGRAD00	.003	0.06	-39.03	2.79**	.213	0.53	1.009	1.32
GINI99	-.221	2.69**			-.406	0.73	2.228	1.90*
POVERTY00			-.685	4.61***				
DEMPLOY00-07	-.04	1.86*	-9.667	1.46				
PERCAP00/10^3	.342	0.80	-40.90	0.44	-2.857	0.97	-3.781	0.54
AMENITY	-.002	1.04	.271	0.70	.040	3.75***	.003	0.61
PERC_METRO/10^3	-.062	0.70	-24.51	1.01	.574	1.11	-2.140	1.24
Top corp. income rate	-.000	0.37	-.029	0.24	.001	0.30	-.005	0.65
State estate tax	.001	0.58	.112	0.20	-0.014	1.17	.010	0.32
Property tax share	.000	0.16	-0.07	0.21	-.004	0.73	-.000	0.01
Top pers. income rate	.000	0.35	.018	0.16	-0.004	1.44	-.004	0.27
Adjusted R^2	0.58		0.32		0.47		0.14	

See definitions above (table 4)

Table 6. Policy Set Number 2 RTB Regressions (Regulatory/Tax incentives)

	Change in GINI		Change in PovRate		Employment Growth		Income per capita Growth	
Variable	Coeff.	*t*-stat	Coeff.	*t*-stat	Coeff.	*t*-stat	Coeff.	*t*-stat
(Constant)	.173	2.25**	38.34	2.79***	-.451	1.00	-.689	0.70
PCTHSGRAD00	-.018	0.30	-36.45	2.82***	.482	1.39	.763	1.05
GINI99	-.299	3.53***			.198	0.36	1.393	1.03
POVERTY00			-.646	4.37***				
DEMPLOY00-07	-.055	2.41**	-13.01	1.79*				
PERCAP00/10^3	.868	1.94*	-53.70	0.67	-3.02	1.11	2.060	0.30
AMENITY	-.001	0.35	.371	0.98	.031	4.19***	0.017	1.05
PERC_METRO/10^3	-.087	1.03	-23.83	1.061	.759	1.74*	-1.974	1.49
Right-to-Work	-.006	2.63**	.031	0.05	-.030	1.89*	-.096	3.44***
Econ. freedom index	-.002	1.18	.352	0.72	.009	1.04	-.033	1.68
Tax Incentives	.013	1.32	.345	0.17	-.049	1.03	.028	0.22
Fin. Asst. Incentives	.000	0.01	-0.922	0.51	-.076	2.60**	.158	2.17**
Adjusted R^2	0.63		0.34		0.73		0.33	

See definitions above (table 4)

Table 7. Policy Set Number 3 RTT Regressions (Social and Human Capital)

	Change in GINI		Change in PovRate		Employment Growth		Income per capita Growth	
Variable	Coeff.	*t*-stat	Coeff.	*t*-stat	Coeff.	*t*-stat	Coeff.	*t*-stat
(Constant)	-.001	0.02	44.01	2.47**	.489	1.08	-2.140	1.68
PCTHSGRAD00	.072	1.01	-36.04	1.84*	.793	1.76*	2.288	1.82*
GINI99	-.109	1.06			-.620	1.29	3.286	2.26**
POVERTY00			-.670	4.02***				
DEMPLOY00-07	-.012	0.42	-11.04	1.31				
PERCAP00/10^3	.688	1.27	-132.20	1.02	-7.131	2.13**	-1.259	0.18
AMENITY	-.002	1.19	.364	1.02	.029	3.89***	.002	0.13
PERC_METRO/10^3	-.087	1.08	-18.04	0.77	.213	0.52	-2.1819	1.95*
Immigrant Know.	.003	1.28	-.428	0.91	-.030	3.99**	.010	0.50
Science&Eng.	.468	0.55	-349.86	1.88*	-3.96	0.85	27.61	2.32**
Graduate/Prof. Share	-.257	1.68	46.31	1.44	1.466	1.55	-3.875	1.82*
Health Insur. /10^3	.155	2.76***	9.355	0.35	-1.061	2.10**	-.243	0.26
Social Capital/10^3	-.155	0.67	8.476	0.17	-3.035	2.40**	-4.570	1.36
Adjusted R^2	0.65		0.35		0.68		0.22	

t-statistics are absolute values; changes in GINI and Pov are simple differences; employment and income per capita growth are rates of change. The Gini is calculated over 1999-2007 and the other three are calculated over the years 2000 to 2007. Significance levels: *=10%, **=5% or lower, ***=1% or lower (two-tailed tests).

Table 8. Policy Set Number 4 RTT Regressions (Entrepreneurial and Innovation)

	Change in GINI		Change in PovRate		Employment Growth		Income per capita Growth	
Variable	Coeff.	*t*-stat	Coeff.	*t*-stat	Coeff.	*t*-stat	Coeff.	*t*-stat
(Constant)	.139	2.21**	-46.18	3.43***	-.015	0.04	-.628	0.63
PCTHSGRAD00	.039	0.55	-37.84	2.40**	-.349	1.03	.431	0.43
GINI99	-.277	4.08***			-.085	0.20	1.42	1.02
POVERTY00			-.802	4.02***				
DEMPLOY00-07	-.019	0.66	-13.87	1.80*				
PERCAP00/10^3	.882	2.17**	-58.74	0.67	-3.689	1.80*	-.0197	0.00
AMENITY	-.001	0.42	.144	0.36	.021	3.33***	0.019	0.66
PERC_METRO/10^3	-.009	0.13	-26.56	1.19	.046	0.11	-1.560	1.19
Kauffman Entre. Index	.045	0.03	522.69	1.26	11.79	2.33**	9.287	0.68
Venture Capital	-.522	1.20	63.87	0.47	-1.93	0.76	-2.38	0.55
Internet Domain Names	-.002	1.66	.431	0.92	0.036	6.30***	-.011	0.61
Technology in Schools	.000	0.05	.081	0.25	0.013	1.81*	.010	0.60
Percent Online	-.057	1.66	-7.98	0.59	0.400	2.61**	-.000	0.00
Adjusted R^2	0.62		0.36		0.71		0.09	

t-statistics are absolute values; changes in GINI and Pov are simple differences; employment and income per capita growth are rates of change. The Gini is calculated over 1999-2007 and the other three are calculated over the years 2000 to 2007. Significance levels: *=10%, **=5% or lower, ***=1% or lower (two-tailed tests).

Table 9. Policy Set Number 5 RTT Regressions (Regional Government Expenditures)

	Change in GINI		Change in PovRate		Employment Growth		Income per capita Growth	
Variable	Coeff.	*t*-stat	Coeff.	*t*-stat	Coeff.	*t*-stat	Coeff.	*t*-stat
(Constant)	.136	1.943*	46.165	4.130***	-.483	1.017	-1.016	1.435
PCTHSGRAD00	.008	0.142	-38.816	3.558***	.508	1.315	.557	0.987
GINI99	-.221	2.644**			.360	0.624	2.094	2.151**
POVERTY00			-.742	5.316***				
DEMPLOY00-07	-.052	1.927*	-2.383	0.344				
PERCAP00/10^3	.304	0.755	-48.629	0.620	-4.358	1.761*	-1.513	0.298
AMENITY	-.003	1.451	-.174	-0.462	.032	3.858***	-.007	0.507
PERC_METRO/10^3	-.046	0.431	-60.081	2.018*	1.038	1.659	-.383	0.370
Education Expend.	-.329	1.738*	-26.748	-0.535	-2.253	1.618	-.561	0.270
Public Safety Expend.	.483	1.018	130.222	1.016	3.567	1.066	3.001	0.742
Public Health Expend.	.229	0.587	221.936	2.798***	-7.155	3.033***	-3.839	1.25
Environment Expend.	-.268	0.575	-135.827	0.896	-.299	0.077	7.443	1.132
Highway Miles/Pop.	.575	0.881	-108.716	1.209	4.303	1.511	14.434	3.486***
Adjusted R^2	0.60		0.45		0.59		0.42	

t-statistics are absolute values; changes in GINI and Pov are simple differences; employment and income per capita growth are rates of change. The Gini is calculated over 1999-2007 and the other three are calculated over the years 2000 to 2007. Significance levels: *=10%, **=5% or lower, ***=1% or lower (two-tailed tests).

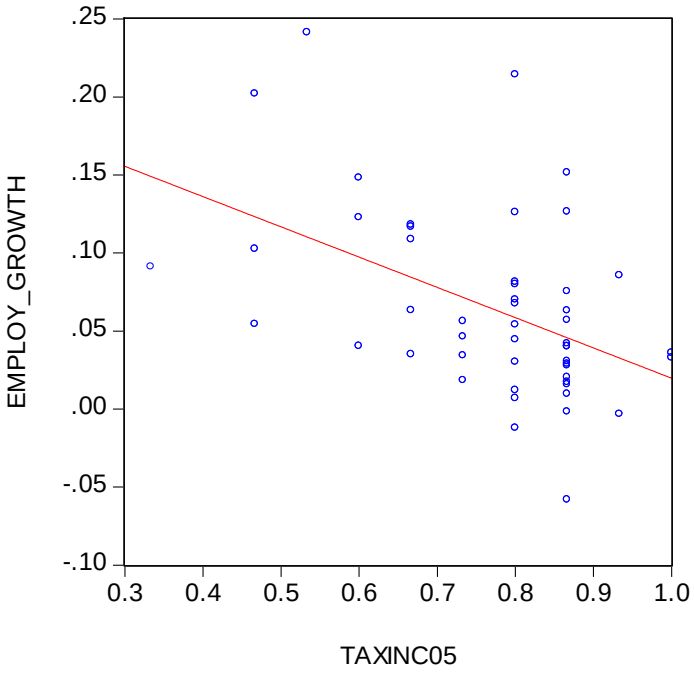

Figure 1: Employment Growth and Tax Incentives

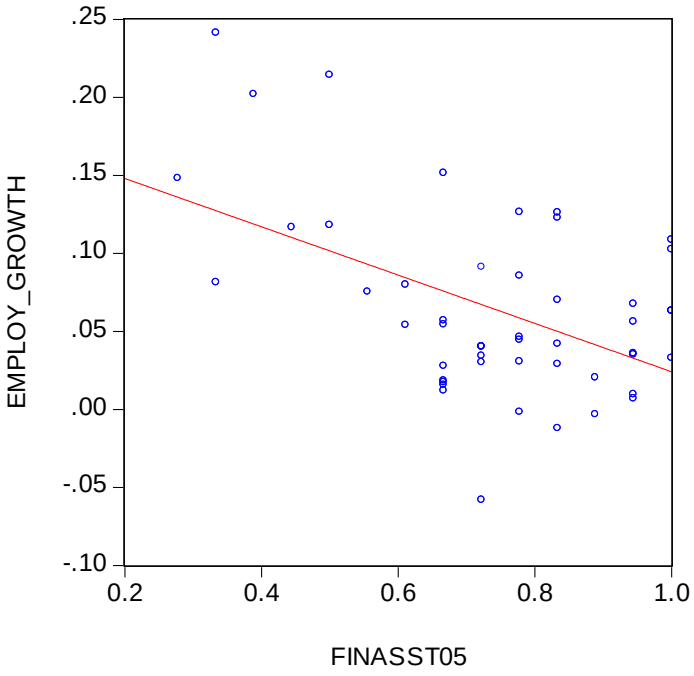

Figure 2: Employment Growth and Financial Incentives

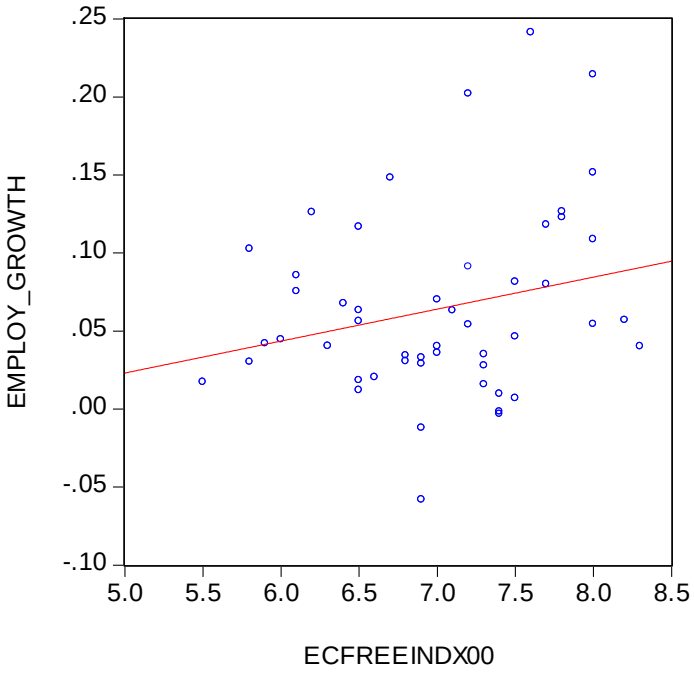

Figure 3: Employment Growth and Economic Freedom Index

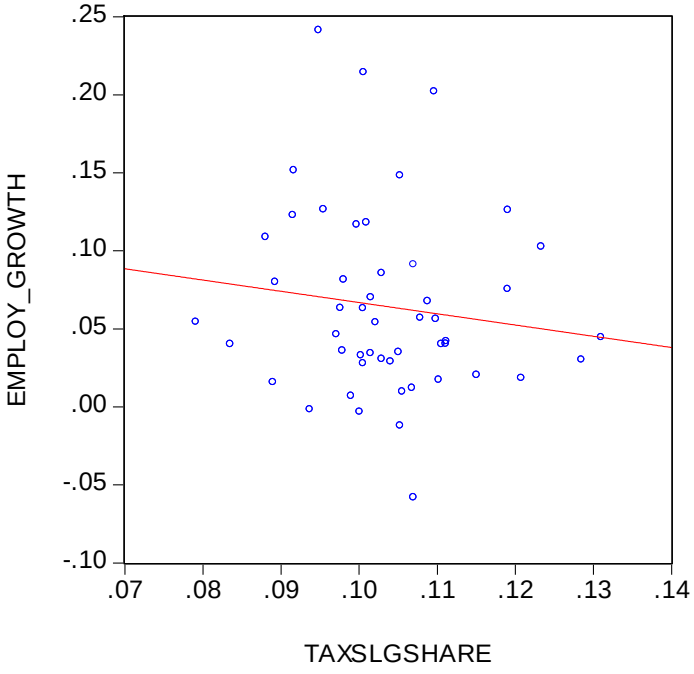

Figure 4: Employment Growth and State and Local Tax Share

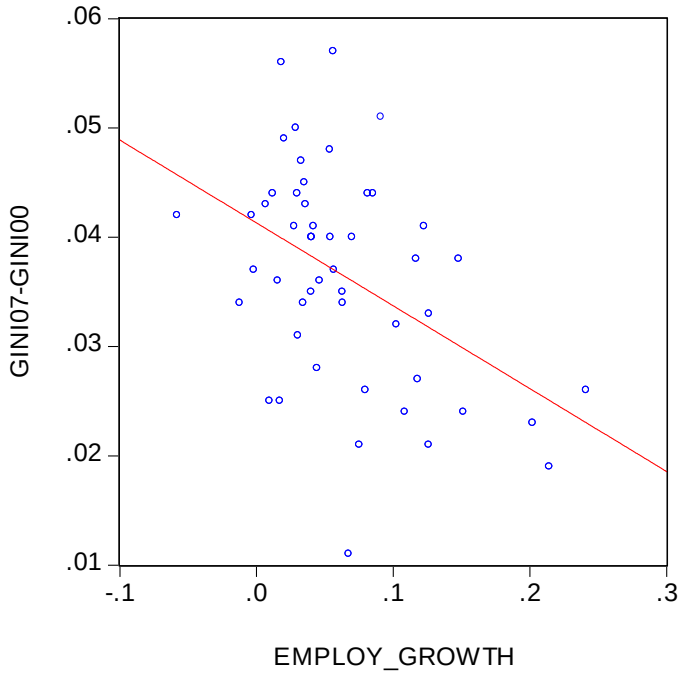

Figure 5: Change in Income Inequality and Employment Growth

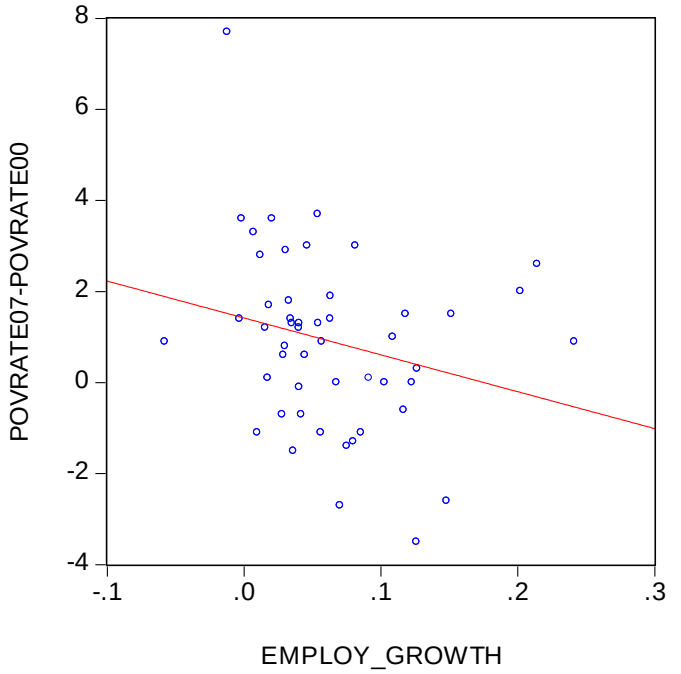

Figure 6: Change in Poverty Rate and Employment Growth