Literature Review 5/20/13

Summary: Very little academic research has been done since 2005 to understand how State Business Climate Indexes (SBCI’s) relate to economic growth. The most recent study (Kolko et al 2013) cites as a 2005 write up of the rough draft Professor Orazem published through Kansas, Inc (Bittlingmayer et al 2005). Outside of that, most of the studies originate from the 1980’s (Courant and Fulton 1985, Plaut and Pluta 1983). One paper also tries to construct a more empirically, ‘economically founded’ ranking using both tax data, and an estimation techniques of the impacts of various types of government expenditures (Barnia and Stone 2008).

Much of this research finds either null or weak results, with the parameters that are significant end up being tax related parameters (Kolko 2013,…)

A secondary line of analysis exists of SBCI’s, largely published through policy Think Tanks. This includes a critique of the ALEC *Rich States, Poor States* seen in Peter Fisher’s “Grading Places, 2nd ed” (2013), and the back and forth about the Tax Foundations *State Business Tax Climate Index* that happens almost yearly (see: Tannenwald 2013).

The section on regional economics is more varied. Here there are again, two lines of research. The non-borders approach stresses geographic factors as controls for non-policy parameters. This includes factors such as climate, access to water, etc (citation???). A second approach starting with Holmes (1998) uses border matching techniques to remove a lot of these variables from the equation, allowing for a natural experiment where policy differences are the only initial differences between counties.

This has now been used extensively, including on energy prices (Kahn and Mansur 2013), minimum wages (Rohlin 2011, Dube et al 2010, Gopinath 2009), and some questionably published research by Lacombe (2004a, 2004b, 2004c). It should be noted that there seems to be two approaches to the borders technique. There is a version that does differences in differences between matched communities to remove error terms and other geographic features from the equation, and others which match up specific error terms for joint OLS style restrictions (Dube et al 2010, Dhar and Ross 2012). I am unsure if there is a strict congruence in estimates between these two forms.

Much of this research that I reviewed deals with finding ways to use structural, experimental or descriptive design to display meaningful results. This includes ‘traditional’ studies that look at adjusting for state specific variables, such as access to water, temperature, and other geographic features that draw households and firms, as well as Holmes 1998 article that looked at border effects.

Studies About SBCI’s

Kolko, Jed, Neumark, David and Cuellar Mejia, Marisol, What Do Business Climate Indexes Teach Us About State Policy and Economic Growth? (April 2011). NBER Working Paper No. w16968. Available at SSRN: <http://ssrn.com/abstract=1820080>

State business climate indexes capture state policies that might affect economic growth. State rankings in these indexes vary wildly, raising questions about what the indexes measure and which policies are important for growth. Indexes focused on productivity do not predict economic growth, while indexes emphasizing taxes and costs predict growth of employment, wages, and output. Analysis of sub-indexes of the tax-and-cost-related indexes point to two policy factors associated with faster growth: less spending on welfare and transfer payments; and more uniform and simpler corporate tax structures. But factors beyond the control of policy have a stronger relationship with economic growth.

Courant, Paul N. Fulton, George A. “What Do Business Climate Studies have to do with Business?” Institute of Public Policy Studies, Discussion Paper HD 58.C68 1985

An early analysis of SBCI’s, including an early regression analysis of how well a particular index performed in estimating its relationship to manufacturing employment, manufacturing share of state employment, and the same two regressions for durables. Generally a significant negative relationship at the 95% confidence level was found.

Homes, Thomas J. “The Effect of State Policies on the Location of manufacturing: Evidence from State Borders.” Journal of Political economy. Vol 106, No. 4 (August 1998), pp. 667-705.

This paper provides new evidence that state policies play a role in the location of industry. The paper classifies a state as probusiness if it has a right‐to‐work law and antibusiness if it does not. The paper finds that, on average, there is a large, abrupt increase in manufacturing activity when one crosses a state border from an antibusiness state into a probusiness state

Plaut, Thomas R. Pluta, Joseph E. “Business Climate, Taxes and Expenditures, and State Industrial Growth in the United States.” *Southern Economic Journal*, vol. 50, No. 1 (Jul., 1983) pp. 99-119.

“As a group, the business climate, tax, and expenditures variablexs are not strongly related to state output growth, but are significant determinants of state employment and capital stock growth. The relationship between business climate… and state employment growth is especially strong….recent data confirm that differences in overall industrial expansion across states can still be explained largely by traditional market factors. Regression including a measure of personal income potential/output potential, measures of wages, unemployment, and union activity, access to energy, climate dummies, and then business climate, taxes, and expenditures measures.

Bittlingmayer, George. Eathington, Liesl. Hall, Arthur P. Orazem, Peter F. “business climate Indexes: Which Work, Which don’t, and What can they say about the Kansas Economy?” Kansas, Inc. June 2005.

An executive summary of the June 2005 rough draft we already have.

Fisher, Peter. “grading Places: What Do the business Climate rankings Really Tell Us?” Good Jobs First. May 2013.

\*not an abstract\* This ‘paper’ reminds me why I left public policy. The author offers a rather simple critique of three different SBCI’s, using different methodologies for each that share no common thread between them. For the ALEC’s *Rich States, Poor States,* the authors offer a weak regression technique that doesn’t take into account any of the state’s geographic features as controls. The U.S. Business Policy Index is criticized for mixing independent and dependent variables, but no empirical activities are run similarly to Holmes to remove those. Finally, the Tax Foundation’s State Business Tax Climate Index is criticized for not being micro-founded, despite it’s relative similarity to the ALEC index.

Tannenwald, Robert. “Concerns about the Tax Foundations State Business Tax Climate Index,” Tax Analysts, February 25th, 2013. <http://www.taxanalysts.com/www/features.nsf/Articles/1BFD22A6F900848E85257B1D0066E112?OpenDocument>

Studies about Regional Economics

Bartik, Timothy. Boehm, Thomas P. Schlottmann, Alan M. “the perplexing Literature on Growth and Change.” *The Review of Regional Studies*, Vol. 33, No. 1, 2003, pp. 1-16.

Even a casual library search clearly indicates that empirical growth studies comprise a significant, and growing, area of interest within the academic literature. In many respects, this strand of literature has been successful in identifying the basic nature of the growth process. By contrast, attempts to provide public policy directions are much less successful. It is this perplexing dichotomy that provides both the justification and point of departure of this volume. In this introductory piece, we identify several unresolved issues in both the public policy arena and economic theory that relate to the individual papers.

Bartik, Timothy J. “evaluating the Impacts of Local economic Development Policies on Local Economic Outcomes: What Has Been Done and What is Doable?” Upjohn Institute Working paper No. 03-89. 2002.

This paper argues that more rigorous evaluations of local economic development policies are feasible. Programs that aid selected small firms can be rigorously evaluated using an experimental approach, without excluding firms from assistance, by randomly assigning some firms to receive more intense marketing efforts by the program. Programs that aid distressed local areas can be rigorously evaluated by random assignment of the program among eligible distressed areas. If an experiment cannot be done, a variety of statistical approaches can be used to compare firms or areas that use the program with comparison groups of firms or areas that do not use the program. These statistical analyses should be supplemented with surveys and focus groups with businesses that use the program, which give some insight into why the program works or doesn’t work. Evaluations should go beyond the effects of programs on business growth to effects on local fiscal health and the earnings of the unemployed. Evaluations using rigorous approaches suggest that programs providing information services to small manufacturers are frequently effective. Programs targeting distressed areas are ineffective unless great resources are used over a lengthy period.

Gopinath, Gita. “Estimating the Border Effect: Some New Evidence,” National Bureau of Economic Research, Working Paper No. 14938. April 2009.

To what extent do national borders and national currencies impose costs that segment markets across countries? To answer this question we use a dataset with product level retail prices and wholesale costs for a large grocery chain with stores in the U.S. and Canada. We develop a model of pricing by location and employ a regression discontinuity approach to estimate and interpret the border effect. We report three main facts: 1) The median absolute retail price and whole-sale cost discontinuity between adjacent stores on either side of the U.S.-Canada border is as high as 21%. In contrast, within-country border discontinuity is close to 0%; 2) The variation in the retail price gap at the border is almost entirely driven by variation in wholesale costs, not by variation in markups; 3) The border gap in prices and costs co-move almost one to one with changes in the U.S.-Canada nominal exchange rate. We show these facts suggest that the price gaps we estimate provide only a lower bound on border costs.

Huang, Rocco R. “Evaluating the Real Effect of Bank Branching Deregulation: Comparing Contiguous Counties Across US State Borders,” *Jounral of Financial Economics* Vol 87 (2009). Pp 678-705

This paper proposes a new methodology to evaluate the economic effect of state-specific policy changes, using bankbranching deregulations in the US as an example. The new method compares economic performance of pairs of contiguous counties separated by state borders, where on one side restrictions on statewide branching were removed relatively earlier, to create a natural ‘‘regression discontinuity’’ setup. The study uses a total of 285 pairs of contiguous counties along 38 segments of such regulation change borders to estimate treatment effects for 23 separate deregulation events taking place between 1975 and 1990. To distinguish real treatment effects from those created by data-snooping and spatial correlations, fictitious placebo deregulations are randomized (permutated) on another 32 segments of non-event borders to establish empirically a statistical table of critical values for the estimator. The method determines that statistically significant growth accelerations can be established at a 4 90% confidence level in five (and none prior to 1985) out of the 23 deregulation events examined. ‘‘Hinterland counties’’ within the still-regulated states, but farther away from the state borders, are used as a second control group to.

Model form: Tries to correct any bias in the point estimate of the treatment effect.

Where is the growth rate in a particular year, with pre and post denoting time periods before and after a change in regulatory regime.

Where is the manufacturing income share between two countries, and is the regional level growth rate difference between manufacturing sector and the non manufacturing sector.

Dube, Arindrajit T. Lester, William. Reich, Michael. “Minimum Wage Effects Across State Borders: Estimates Using Contiguous Counties,” ITHe Review of Economics and Statistics, November 2010, 92(4): 945-964.

We use policy discontinuities at state borders to identify the effects of minimum wages on earnings and employment in restaurants and other low-wage sectors. Our approach generalizes the case study method by considering all local differences in minimum wage policies between 1990 and 2006. We compare all contiguous county-pairs in the United States that straddle a state border and find no adverse employment effects. We show that traditional approaches that do not account for local economic conditions tend to produce spurious negative effects due to spatial heterogeneities in employment trends that are unrelated to minimum wage policies. Our findings are robust to allowing for long-term effects of minimum wage changes.

Model Form: The authors pull from Neumark and Wascher, providing some additional specifications.

Where is a dependent variable (employment or wages), is the minimum wage, and is the county’s population. represents a county fixed effect, is a time period fixed effect (assumed to be constant across counties), and is a usual time and county specific fixed effect.

Other models include replacing with a state level time trend, replacing with an MSA specific error term, adding in a set of dummy’s for the given state, or versions of the first equation but with matched pair error terms, and a match pair time trend.

**I am unsure of this model actually uses differences in differences between borders to test a border response. It is unclear in the paper, and none of the regression forms explicitly make this clear, with reported results simply following their econometric design. In fact, despite “matching” seems to still have controls that should fall out of differences in differences is used.**

Dhar, Paramita. Ross, Stephen L. “School District Quality and Property Values: Examining Differences Along School District Boundaries,” *Journal of Urban Economics*, 71 (2012) pp. 18-25.

Examining differences across school district boundaries rather than school attendance zone boundaries has several advantages. These advantages include being applicable when attendance zones are not available or less relevant to educational outcomes as arises with within district school choice and for examining the effect of factors like school spending or property taxes that do not vary within districts. However, school district boundaries have often been in place for many years allowing households to sort based on school quality and potentially creating distinct neighborhoods on either side of boundaries. We estimate models of housing prices using repeated cross-sections of housing transactions near school district boundaries in Connecticut. These models exploit changes over time to control for across boundary differences in neighborhood quality. We find significant effects of test scores on property values, but those effects are notably smaller than both OLS and traditional boundary fixed effects estimates.

Model Form:

The dependent variable is the log of the sale price of house located in school attendance zone on the boundary on the border of in time . denotes the characteristics of houses sold along the boundary, and is a boundary fixed effect that controls for neighborhood quality in a spatial area. is the fixed effect on the side of the boundary that is located in town which captures time invariant differences in neighborhood quality across the boundary.

There are other specifications to this model, including a weight by the number of transactions that occurs.

**This paper makes claim of a differences in differences estimator, but it is never clear what they are using, especially if it is between counties or just over time.**

Misc. Reports