

***Business Climate Indexes:  
Which Work, Which Don't, and What Can They  
Say About the Kansas Economy?***

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## **Abstract**

Numerous institutions produce rankings of state business climates. The rankings rarely agree on what is important to a business climate or where various states rank. This study examines the most prominent business climate indexes for their consistency over time, their consistency with one another, and their ability to explain relative state economic growth. We make use of a novel approach—examining whether differences in state business climate can explain relative growth of counties at state borders. Results indicate that any individual business climate index can explain at most 5% of the variation in border county relative economic growth, but that they can explain up to 13.6% of the variation as a group. Some indexes consistently can explain relative growth while others are uncorrelated or even negatively correlated with growth. Among the indexes we rate as reliable, Kansas ranks highly on some and poorly on others. The latter indexes may provide mechanisms by which Kansas can improve her business climate in the future.

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**Business Climate Indexes:  
Which work, which don't, and what can they say about the Kansas Economy?**

Business climate is a commonly used term understood as the local economic conditions that foster or retard the birth and growth of firms. Numerous organizations rank states on the basis of their business climates. These rankings are widely discussed in the media and are cited by elected officials, business associations and consultants in discussions of state and local government tax, expenditure, and regulatory policies. However, the rankings often conflict and there is little guidance as to which rankings are valid or invalid.

Kansas generally does well on some of the valid indexes – those that generally predict good economic performance - and poorly on others. It appears that the area where Kansas lags is in tax policies while performing better in terms of regulatory environments. Further investigation will be needed to assess what specific policies in the valid business climate indexes are ones that Kansas might wish to consider in improving her business climate.

This study will review the most prominent business climate indexes released over the past 30 years for content and ability to predict local economic growth. An index is considered valid if it can be shown to be significantly correlated with various measures of economic growth. Our presumption is that differences in state business climate should be most important at the borders. Therefore, we examine the extent to which each business climate index can explain differences in economic growth of neighboring counties on opposite sides of state borders. We further differentiate between indexes on the basis of whether they have independent information that can explain growth that is not contained in other indexes. We also propose an improved index that is a weighted average of the various individual indexes where the weights are based on the relative ability of each index to explain relative growth across the states. Finally, we evaluate

how the various indexes and the improved index evaluate the Kansas economy and that of her neighbors.

We find that different business climate indexes do not replicate one another. Not only are many only weakly correlated with one another, some are negatively correlated. Repeated installments of the same index are highly correlated over time, although their near-time correlations are higher than are installments that are temporally more distant. There are large differences in the ability of the various indexes to predict economic growth. Some are positively correlated with growth, but others are uncorrelated with relative growth and some are even negatively correlated with relative economic performance. Finally, none of the indexes can explain a large fraction of the relative economic performance of counties at state borders, suggesting that luck, local factors such as county- and city-level policies, or more difficult-to-measure state-level policies may also affect economic progress.

### **A Brief History of Business Climate Rankings**

In 1975, the Fantus Corporation prepared a one-time ranking of state business climates for the Illinois Manufacturers' Association. The report was based on Fantus' subjective assessment of 33 different indicators that were believed to affect manufacturing locations. That study was followed in 1979 by the first of a series of annual reports by Grant Thornton that used a weighted aggregation of 18-22 factors with the weights determined by a survey of representatives of various manufacturers' associations. Both studies represented attempts to characterize a state's overall environment for business success, including tax policy, regulatory structure, labor force quality, and quality of life.

Both of these early business climate indexes were the subject of independent analyses conducted by academics.<sup>1</sup> That has not been true of the most recent indexes. Since Grant Thornton discontinued its index in 1989, its successors have not been subject to academic scrutiny. However, there has been broad interest in these indexes in the nonacademic media. A Google search under the key phrase “business climate index” yielded over 11,000 hits. As public interest in the indexes increased, their number expanded. The Corporation for Enterprise Development was the only prominent index for several years after the Grant Thornton index was discontinued, but the number and variety of indexes has increased since 1999. Eight of the ten business climate indexes evaluated in this study had at least one version released since 2000. In contrast, only two issued indexes in the 1980s and only one in the 1970s.

In part, the growth in business climate indexes is attributable to advances in information technology that have lowered index production costs. Comparative information on states is now accessible electronically through web pages, and modern statistical packages allow more rapid analysis of that information. Even more importantly, information technologies are responsible for the rapid dissemination of the results at low cost through other web delivery. This dissemination can be through formal news channels, but it can also be informal through Emails and individual web pages of individuals who believe the index conforms to their own agendas.

Consequently, a second related reason for the expansion of these indexes is that they can influence public opinion regarding policy. The first indexes were sponsored by manufacturers’ associations interested in improving the tax and regulatory climate for their constituents as well as to make their constituents aware of the climate for expansion in other states. Contemporary business climate indexes are also frequently underwritten by groups with legislative agendas,

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<sup>1</sup> See Plaut and Pluta (1983) and Lane et al (1989) for generally favorable studies. An unpublished paper by Courant and Fulton (1985) concluded that the Grant Thornton index had weak predictive power except in recessions.

ranging from liberal to conservative. For a state to gain in rank, it would have to adjust policies in ways that meet the objectives of the sponsoring group. As a consequence, actions that would raise a state's ranking according to one index could lower its ranking in another.

Table 1 contains a listing of the business climate indexes evaluated in this study. The list is not exhaustive, but all of the included indexes are or were nationally prominent. Our criteria for inclusion in this study also required that the authors of the index provide sufficient detail for us to evaluate how the index was generated. That allowed us to determine that the index was based on structural measures (e.g. tax policies, factor endowments, or environmental amenities) as opposed to performance measures (e.g. the level or growth of production). Performance measures are viewed as reflective of the outcomes of, rather than the inputs to the business climate.

For example, we exclude the *Inc.* magazine ranking of state economies published annually in its October edition through the 1980s. That ranking was heavily based on growth outcomes such as job growth, business starts, and the percent of fast-growing companies, measures that are clearly an outcome rather than a cause of economic growth.

The indexes are reported in two ways. Some release explicit scores so that one can assess the magnitude of the business climate gap between states. Others just report a ranking. The indexes do not consider the same factors. While all consider various aspects of quality of life, quality of labor or capital inputs, and quality of state or local fiscal and regulatory policies, all also include idiosyncratic factors not considered by other indexes and all place their own explicit or implicit weights on these factors. As information technologies have improved, the indexes have become more complex, both in the number and variety of variables considered and in the statistical mechanisms used to aggregate these variables into a single index.

The indexes clearly view themselves as in competition with one another. The Corporation for Enterprise Development (CFED, 1986) stated that, “the Grant Thornton index does not measure the factors important to business success in today’s economy. The index and the traditional business climate definition it perpetuates are relics from another time, another economy—an economy based on routine mass production where cheap, low skilled labor is the key to success.” In contrast, the CFED (1987) asserted that its index, “provides a more accurate and more comprehensive picture of how state economies are doing in today’s economy.” Twelve years later, the Progressive Policy Index justified its creation of the State New Economy Index on similar grounds: that earlier indexes were not suited to assess business climates in the “new economy”.

The business climate indexes break down into three types. The earliest and most common indexes deal with a relatively small number of factors focusing on tax , regulatory and fiscal policies that might affect the cost of doing business. Those include Fantus (FT), Grant Thornton (GT), the Small Business Survival Index (SB), the CFED policy index (CEDpi), and the Tax Foundation State Business Tax Climate Index (TF). Another set concentrate on economic freedom, including the Fraser Economic Freedom indexes ( FrN, FrS) and the Clemson-Pacific Research Institute Economic Freedom Index (PRI). These also depend on taxes but place greater emphasis on regulatory restrictions on individual decisions. The third set are more comprehensive measures that add consideration of infrastructure that may affect input quality. These indexes may also incorporate policies such as government industrial policies aimed at stimulating business. This set includes the Beacon Hill Metro and State Competitiveness Report (BH), the New Economy Index (NE), and the remaining two CFED indexes on economic development policies (CEDdp) and economic capacity (CEDc).

**Question 1: Do repeated updates provide new information relative to earlier releases of the same index?**

A simple way to assess the extent to which these indexes measure the same or different aspects of the business climate over time is to compute their intertemporal correlations. Table 2 reports these correlations. The Grant Thornton and the Corporation for Enterprise Development indexes show surprisingly small correlations between adjacent periods. This happens in part because the variables making up the index change, but also because the weights attached to those variables change. None of the correlations are equal to one, so the updated indexes do contain new information relative to older installments. However, the overall pattern is one of relative stability. Of 5 indexes that we observe with a 4 year gap or more, the smallest intertemporal correlation is 0.71.

We conclude that as measured by a specific index, business climates do not change dramatically over time.

**Question 2: To what extent do different indexes contain the same information regarding business climate?**

Table 3 reports the cross-correlations between indexes. For indexes with repeated installments, we pick a year in the middle of the sample as the Table 2 results suggest that the midpoint index values would be reasonably highly correlated with index values in earlier and later years. To make the correlations easier to interpret, indexes for which smaller numbers imply better climates were multiplied by -1.

Some of the inferences that can be drawn from Table 3 include:

1) Some of the indexes are very highly correlated, even though they are based on data that are decades apart. For example, the Grant Thornton index from 1981 is highly correlated with the

1975 Fantus index, but it is also highly correlated with the 1999 Clemson-Pacific Research Index. The cross-correlation between GT81 and PRI99 is actually higher than the intertemporal correlation between GT81 and GT86. Curiously, if the PRI99 index correlates with contemporaneous economic performance, then GT81 may also be able to explain relative economic performance in the latter part of the 1990s. If indexes retain explanatory power for 20 years, then business climate must be extremely persistent.

2) Most of the indexes are not highly correlated and clearly measure different things. Not only are many indexes only weakly correlated, 41 of 66 cross-correlations are negative. Even indexes that were released at nearly the same time turn out to be negatively correlated. Half of the positively correlated indexes had cross-correlations smaller than 0.5. Clearly different indexes measure different things.

**Question 3: To what extent do the indexes correlate with economic growth?**

In the end, business climate indexes can only be valid if they can explain relative economic performance between states. The gap in business climate should be most important at the borders. Communities in the middle of the state will be partially insulated by distance from any competitive disadvantage with neighboring states. Communities at the border are not insulated from competition from neighboring states. Consequently, if relative business climate matters for business success, it should be most apparent at the borders.

We identified all counties in the U.S. that border another state, comprising a total of 107 state borders. We then estimated the extent to which relative economic growth between bordering counties can be explained by each relative state business climate using a weighted

least squares regression framework.<sup>2</sup> An index is considered valid if it can significantly explain at least some of the variation in relative economic growth between border counties.

We use four different measures of growth, all available from the Bureau of Economic Analysis' Regional Economic Accounts.<sup>3</sup> The use of multiple growth measures will help bypass concerns that different business climate indexes might be focusing on different aspects of business success. The four measures are growth in the county-level wage bill, population, employment, and the number of nonfarm proprietors.

The county wage bill is the sum of all wages and salaries paid to employees plus the cost of employer provision of benefits such as pensions and insurance, plus the cost of the federally mandated social insurance programs. At the state level, the wage bill is the largest component of gross state product, representing about 60% of the total output in the state. There is no satisfactory counterpart to gross state product at the county level because of difficulties in apportioning indirect business taxes and profits to specific counties. Consequently, growth in the wage bill is the closest approximation to growth in gross county product, but is more accurately interpretable as the growth in county output attributable to labor. Note that the wage bill locates earnings by place of work and not by place of residence. If workers cross state lines to work, it is the county in which the establishment is located that is credited with the workers compensation (and output) rather than the residential county.

Employment and population growth are alternate measures of the ability of the local economy to support growth in jobs. Population growth is the more comprehensive indicator of local growth. It should reflect the extent to which the business climate affects not just the profitability of businesses but the quality of life more generally. It is conceivable that some

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<sup>2</sup> Details on the estimation are available in Bittlingmayer et al (2005).

<sup>3</sup> Data descriptions and county-level data can be downloaded from <http://www.bea.gov/bea/regional/data.htm>

factors that might make a county more profitable for production activities (such as lax environmental or zoning regulations) might also make the county less attractive for residential purposes. On the other hand, many areas, particularly rural areas, focus more intensively on job creation as opposed to output as the primary growth objective. It is conceivable that a business climate index could successfully explain employment growth but not growth in earnings per job.

Finally, numerous communities and regions have concentrated on attracting employers from other areas, either to relocate or to open new plants. Particularly in the technology sector, areas have tried to foster entrepreneurial activity. It is conceivable that business climate would foster new firm creation, which we proxy by the net change in nonfarm proprietorships.

We examined how the various business climate indexes listed in Table 1 affected these four measures of economic growth in the 1970s, 1980s, and the 1990s as well as for the 10 year period from 1992-2002. It might seem that we should only examine the contemporaneous relationship between a business climate index and economic growth. However, our findings in Tables 2-3 suggest that business climate may persist over time, so it is conceivable that an index could predict growth over an extended period.

A summary of the weighted least squares regressions is reported in Table 4. The dependent variable is a ratio of economic growth in one county relative to its neighbor across the state border. The reported coefficient estimates are the estimated effect on relative growth of the ratio of the business climate in the county relative to its neighbor across the border. A positive and significant coefficient is consistent with our maintained hypothesis that a valid business climate index should be able to explain at least some of the relative growth across border counties. The t-statistic on the coefficient measures whether the coefficient estimate is significantly different from zero. We highlight in bold the positive and significant coefficient

estimates. A maximum of 16 coefficients (four time periods times four growth measures) can be positive and significant. The greater the number of bolded coefficients out of 16 possible, the greater the faith we have that the index can actually predict relative growth across states. We also report the  $R^2$  statistic from each regression. The  $R^2$  indicates the fraction of the variance in relative growth across counties that can be explained by relative business climate. Two specifications are reported. In columns headed by '1', we report the simple regression of relative growth on relative business climate. The columns headed by '2' also includes the start-of-period relative level of the growth measure. Those coefficients should correct for the possibility that a business climate index may merely indicate which counties had the largest population, employment, wage bill or number of proprietors rather than being able to predict the growth in these measures. It turns out that the two sets of results are nearly identical, so business climate indexes do not just highlight which counties have grown most recently.

Table 4 reveals several facts about business climate indexes:

1) None of the business climate indexes can explain a large proportion of the variation in growth across counties. The best performing business climate indexes explained at most 5% of the variation in relative growth at the borders, suggesting that most of the variation in economic performance is due to factors not captured by state-level business climate measures. This would seem to suggest that business climate is unimportant in driving relative growth among the states. We conclude that the majority of the variation in growth is due to local business factors that affect comparative advantage, local policies, or state policies not reflected in the indexes . Undoubtedly, some of the variation in border county growth is also attributable to luck.

Arguably then, state policies may have only a marginal ability to influence growth, even in the border counties that should be most susceptible to competition based on state policies.

That the scope for business climate to affect growth is limited does not mean that the business climate is unimportant—just that a state with fundamental weaknesses in its economy cannot expect that the right mix of policies will suddenly turn it into an economic juggernaut. In addition, as we will see later, the combined ability of the different indexes to explain relative growth is much greater than the explanatory power of ability of each index in isolation.

2) Some indexes can consistently explain growth over an extended period of time.

The two oldest indexes, Fantus (FT) and Grant Thornton (GT), are able to explain a significant, albeit small, fraction of the relative wage bill growth of bordering counties through all three decades. Their ability to explain relative economic performance 30 years after the date of the data underlying their index values suggests that some of the relative growth is attributable to persistence in economic institutions. Three other indexes, the Clemson-Pacific Research Institute Index (PRI), the Small Business Survival Index (SB) and the Tax Foundation index (TF) also retained strong explanatory power outside the time frame underlying their data. Four of these five indexes placed 70-100% of their weight on tax burden, regulatory burden and government size. The exception, GT, placed 33% of its weight on these variables. Of the others, only the Fraser index placed a weight above 33% on these factors.

3) Some indexes can only explain contemporaneous growth.

The Corporation for Enterprise Development Capacity Index (CEDc), and the New Economy Index (NE) could explain relative growth in periods contemporaneous with their data bases but had no power out of sample. Beacon Hill (BH) also was able to explain relative growth in some but not all growth measures. At least part of the problem with these three indexes is that all are of relatively recent vintage and it may not be reasonable to expect them to explain growth 20

years prior to their inception. This is particularly true of the NE index which heavily waits access and use of technologies that did not even exist 20 years earlier.

4) Some indexes cannot explain growth at all.

The remaining indexes from the Fraser Institute (FrN, FrS) and from the Corporation for Enterprise Development (CEDdp, CEDpi) are particularly curious in that they have ability to explain relative growth, but in the direction opposite to their expectations. The more highly ranked CED and Fr states seem to perform consistently poorly in terms of wage bill growth across all decades.

We had expected that there would be differential ranking of indexes depending on the growth indicator used, as different indexes might target different aspects of growth. In fact, that does not seem to be the case. Indexes that could explain one growth measure tended to explain all. Those that performed poorly in one performed poorly in all. In the case of population growth, the Fr indexes could explain the most variation, but in the wrong direction. The FT, GT, PRI, SB and TF indexes continue to explain growth consistently across all decades. The same five indexes also performed best in explaining relative employment growth. Relative growth in net proprietorships proved the most difficult to predict. Only the GT and PRI indexes consistently and significantly explained growth in all decades, whereas the BH, CEDdp, CEDpi, FrN, and FrS failed to be significantly positively related to relative growth in any decade. The poor performance of the CED indexes is particularly interesting. The GT index performed consistently well even after it was discontinued, whereas the CED index created because of the supposed inadequacies of the GT index never performed particularly well.

The general findings from these tests include:

- 5) Relative tax competitiveness seems to matter at the borders. Indexes that place relatively high weight on tax policies had the most consistent positive effects on relative growth.
- 6) Indexes that weight industrial policies most highly have no ability to explain relative growth with the possible exception of the New Economy index that can explain growth in sample.
- 7) The only Freedom Index that works is the PRI that also emphasizes taxes.
- 8) More comprehensive business climate indexes explain less variation in relative border economic growth.

**Question 4: Can business climate indexes explain growth as a group, even if they cannot individually explain much?**

The results of the previous section suggest that the GT, PRI and SB indexes and to a lesser extent, the FT and TF indexes consistently explain a small fraction of the relative growth of bordering counties. However, these indexes tended to be relatively highly positively inter-correlated in Table 3, so it is possible that they are measuring the same things. On the other hand, it may be that the various indexes can explain a greater share of the variation in growth as a group. To test these questions, we regressed relative county growth on all of the business climate indexes. The results are reported in table 5. As a group, the business climate indexes can explain almost 14% of the relative population growth across borders, about 8% of proprietor growth, and between 5-6% of employment and wage bill growth. This is substantially better than any individual index could do, although it does leave the great majority of the variation in growth still unexplained.

The coefficients tell us how each index individually contributes to the explanation of relative growth, holding all the other indexes fixed. Two stand out as providing consistent,

positive and unique power to explain growth, the GT index and the CEDc. The PRI index also has consistently positive weights, but the coefficients are not always significant. It is notable that these span our three types of indexes, emphasizing tax burden (GT, PRI), economic freedom (PRI) and infrastructure (CEDc).

One or both of the Fraser indexes is always significant, but the coefficients are often but not always negative. Consequently, the Fraser index seems to be able to predict growth in the presence of competing indexes, but not for the reasons its designers think. The rest of the indexes have mixed signs and significance, depending on the growth measure, suggesting they don't provide consistent and unique perspectives on growth. The BH, SB and TF indexes only have a significant effect when they enter with a negative weight. The New Economy index is the only index that never has a significant coefficient, suggesting that it provides no unique information that is correlated with any growth measure.

### **Growth Gaps at the Border**

Because the business climate indexes as a group can explain more of the relative growth at the borders than can any individual index, we created four composite indexes, one each for the business climate fostering growth in the population, employment, proprietorships and the wage bill. Each composite index is a weighted sum of the individual indexes, using the coefficient estimates in Table 5 as weights. For example, the composite index explaining relative population growth uses the coefficients from the first column as weights. These composite indexes are used to measure the relative business climate at the borders. Figures 1-4 present U.S. maps with relative composite state business climates indicated. There is a great deal of consistency, regardless of how growth is measured. States that dominate their neighbors in one

index generally dominate in all indexes. Kansas shows up nearly even with all her neighbors except Colorado. However, the gaps in Kansas are not among the largest found in the U.S..

Because the composite indexes are so consistent with one another, we took the simple average of the four as our composite business climate index. The four composite indexes were highly correlated with our average composite index (0.84 to 0.92), and we do not get large differences when we use one of these series rather than the averaged composite index. Table 6 lists the borders that generated the largest gaps in predicted growth on the basis of our average composite index. Eleven states appear as leading states among the 21 biggest gaps, with Virginia and Delaware showing up three times and Colorado, Georgia, Nevada, New Hampshire and Texas showing up twice. Delaware is particularly remarkable in that it only borders on three states and dominates all three in business climate. There is more diverse representation among the lagging states with 18 showing up in the list of 21 biggest laggards at the border. Kentucky and Maryland are the only states that show up more than once among the worst laggards.

Our average composite business climate index is reasonably closely tied to relative growth. The simple correlations between differences in our averaged composite business climate across states and cross-state differences in border county growth are reasonably high: 0.37 (wage bill growth); 0.41 (proprietor growth); 0.34 (employment growth) and 0.42 (population growth). In general, states with larger advantages in business climate as measured by our average composite index also have large advantages in economic growth relative to their neighbors. Returning to Table 6, only in one state pair (Ohio-Michigan) does the state with the more favorable business climate consistently lag its neighbor across all four growth outcomes. In nine of the state pairs, the leading state has a better outcome in all four growth measures and in six other state pairs, the leading state has higher growth in three of the four measures. On average,

the lead state grew between 0.6% and 1.1% per year faster than the lagging state depending on the growth measure. The most consistent pattern was in the growth of proprietorships: 18 of 21 lead states in terms of our average composite business climate also had faster growth in proprietorships.

Table 7 lists the relative business climate in Kansas versus her neighbors. For the most part, Kansas is on par with Missouri, Nebraska and Oklahoma, with Kansas having a slight edge on some growth measures and a slight disadvantage in others. However, Kansas always lags Colorado in business climate, regardless of whether the composite business climate index is oriented to explain growth in the wage bill, employment, population or proprietorships. The gap in business climate is consistent with a gap in observed county growth rates along the Colorado-Kansas border. On the surface, there is little that would distinguish eastern Colorado from western Kansas, and so the gap in business climate merits study as a factor hampering Kansas' relative growth along that border.

The bottom of Table 7 provides the detail on how Kansas performed in the various indexes. Kansas had a mixed performance in the indexes that proved able to explain relative border county economic growth. Kansas shows up as the top state in the PRI index and is in the top 10 in the final Grant Thornton index. However, Kansas performed below average on the valid indexes that were most heavily weighted toward tax policies. That provides a clue as to where policy-makers might want to go for ideas on how to improve the business climate in Kansas.

## **Conclusion**

Business climate indexes have been gaining in numbers and public attention in recent years, but have not undergone academic scrutiny. This study shows that the various indexes measure different aspects of the business climate and are not perfect substitutes for one another. We evaluate their quality by assessing the extent to which the index can explain relative economic growth of border counties in the United States. The indexes can explain only a small fraction of the variation in relative growth and several either explain none of the variation or are negatively correlated with growth. However those that are positively correlated with growth tend to continue to explain relative economic performance over two or three decades, suggesting that business climate is a very persistent phenomenon. In addition, bordering states that vary greatly in business climate tend to have large differences in growth for their border counties. Consequently, relative business climate does appear to matter in explaining relative growth of border counties in employment, wage bill, population and proprietorships. The most important elements of business climate appear to be tax and regulatory burdens imposed on firms.

Kansas generally does well on some of the valid indexes and poorly on others. It appears that the area where Kansas lags is in tax policies while performing better on regulatory environments. Further investigation will be needed to assess what specific policies in the valid business climate indexes are ones that Kansas might wish to consider in improving her business climate.

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**Table 1: Overview of Business Climate Indexes Used in this Study**

Index	Comments
Fantus Company (1975)  Symbol: FT	<ul style="list-style-type: none"> <li>• Commissioned by the Illinois Manufacturers' Association.</li> <li>• 15 measures that primarily related to the cost of doing business.</li> <li>• Measures appeared to be equally weighted.</li> <li>• To the authors' knowledge, there are no surviving copies of the original report, only cursory discussions in secondary sources.</li> </ul>
Grant Thornton (1979-1989)  Symbol: GT	<ul style="list-style-type: none"> <li>• 1979 study commissioned by the Council of State Manufacturers' Associations (COSMA). Thereafter, COSMA members participated, but COSMA did not financially sponsor the annual study.</li> <li>• 18-22 measures primarily associated with the cost of doing business, with a few demographic and performance measures.</li> <li>• Measures are weighted based on survey responses regarding measures' importance to COSMA membership.</li> <li>• Only the 48 contiguous states</li> </ul>
Small Business Survival Index (2000-2004)  Symbol: SB	<ul style="list-style-type: none"> <li>• Product of the Small Business and Entrepreneurship Council (formerly known as the Small Business Survival Council). <a href="http://www.sbosc.org/">http://www.sbosc.org/</a></li> <li>• 15-21 measures primarily associated with the costs of doing business. Heavily weighted toward tax policy measures. Small index values indicate a "better" business climate.</li> <li>• All measures equally weighted.</li> <li>• The index dates back to the mid-1990s, but earlier versions were unavailable.</li> </ul>
Metro Area and State Competitiveness Report (2001-2004)  Symbol: BH	<ul style="list-style-type: none"> <li>• Product of the Beacon Hill Institute at Suffolk University. <a href="http://www.beaconhill.org/">http://www.beaconhill.org/</a></li> <li>• Approximately 40 measures categorized into 5 subindexes: Policy, Security, Infrastructure, Human Resources, Technology, and Finance.</li> <li>• Each measure is equally weighted within each subindex. Each subindex is equally weighted in the aggregate index.</li> </ul>
The State New Economy Index (1999 & 2002)  Symbol: NE	<ul style="list-style-type: none"> <li>• Product of the Progressive Policy Institute. <a href="http://www.neweconomyindex.org/states/2002/">http://www.neweconomyindex.org/states/2002/</a></li> <li>• 23 measures categorized into 5 categories: Knowledge Jobs, Globalization, Economic Dynamism, Digital Economy, and Innovation Capacity. Measures focus on technology-related areas.</li> <li>• Weights applied to each measure to mitigate the influence of closely correlated measures.</li> </ul>

Index	Comments
<p>Economic Freedom Index 2004</p> <p>Symbol: FrN (All gov't)</p> <p>Symbol: FrS (S&amp;L gov't)</p>	<ul style="list-style-type: none"> <li>• Product of the Fraser Institute and the National Center for Policy Analysis. <a href="http://www.fraserinstitute.ca/">http://www.fraserinstitute.ca/</a> <a href="http://www.ncpa.org/">http://www.ncpa.org/</a></li> <li>• The methodology was applied to both U.S. and Canadian data at both the national and subnational levels of government. The index is reported at both levels of aggregation.</li> <li>• 10 measures related to the size of government and the regulation of markets in three categories: Size of Government, Takings and Discriminatory Taxation, and Labor Market Freedom.</li> <li>• Each measure is equally weighted within each subindex. Each subindex is equally weighted in the aggregate index.</li> </ul>
<p>The U.S. Economic Freedom Index (2004)</p> <p>Economic Freedom in America's 50 States (1999)</p> <p>Symbol: PRI</p>	<ul style="list-style-type: none"> <li>• The 2004 index is a product of the Pacific Research Institute (in association with Forbes Magazine). The 1999 index is a product of the work of three Clemson University economics professors. <a href="http://www.pacificresearch.org/">http://www.pacificresearch.org/</a> <a href="http://freedom.clemson.edu/">http://freedom.clemson.edu/</a></li> <li>• The 1999 Clemson index (used in the present analysis) is the intellectual forerunner of the 2004 PRI report.</li> <li>• Dozens of metrics categorized into five categories: Fiscal Sector, Regulatory Sector, Judicial Sector, Size of Government, and Welfare Spending.</li> <li>• Lower index scores means greater economic freedom.</li> <li>• The 1999 Index has a two-part weighting procedure. Individual measures within each category are given decile-based scores, and the decile score of the various measures within each category are averaged to produce a category score. In 1999, the category scores were aggregated into a single index using weights from principle components analysis. In 2004, the aggregation used weights from regression coefficients relating the categories to interstate migration between 1995-2000.</li> </ul>
<p>Development Report Card of the States—Policy Index (1987-1992)</p> <p>Symbol: CEDdp</p>	<ul style="list-style-type: none"> <li>• Product of the Corporation for Enterprise Development <a href="http://drc.cfed.org/">http://drc.cfed.org/</a></li> <li>• Dozens of measures separated in to eight subindexes.</li> <li>• Each measure equally weighted in each subindex. Each subindex equally weighted in the aggregate Policy index.</li> <li>• Measures focus on the existence of government-based economic development programs.</li> </ul>

Index	Comments
<p>Development Report Card of the States—Capacity Index (1987-2004)</p> <p>Symbol: CEDc</p>	<ul style="list-style-type: none"> <li>• Product of the Corporation for Enterprise Development <a href="http://drc.cfed.org/">http://drc.cfed.org/</a></li> <li>• 26-30 measures separated into five subindexes: Human Resources, Technology, Finance, Infrastructure, and Amenities.</li> <li>• Each measure equally weighted in each subindex. Each subindex equally weighted in aggregate Capacity index.</li> </ul>
<p>Development Report Card of the States—Fiscal Policy Index (1988-1998)</p> <p>Symbol: CEDpi</p>	<ul style="list-style-type: none"> <li>• Product of the Corporation for Enterprise Development <a href="http://drc.cfed.org/">http://drc.cfed.org/</a></li> <li>• 16-18 measures separated into three subindexes: Fiscal Stability and Balance, Tax Fairness, and Fiscal Equalization.</li> <li>• Separate reporting of this index began with the 1988 report (but was part of the 1987 Policy Index).</li> <li>• Each measure equally weighted in each subindex. Each subindex equally weighted in aggregate Capacity index.</li> </ul>
<p>State Business Tax Climate Index (2003-2004)</p> <p>Symbol: TF</p>	<ul style="list-style-type: none"> <li>• Product of the Tax Foundation <a href="http://www.taxfoundation.org/">http://www.taxfoundation.org/</a></li> <li>• The 2003 index was comprised of 5 major indexes: Corporate Income Tax, Individual Income Tax, Sales and Gross Receipts Tax, Fiscal Balance, Tax Base Conformity. The major indexes contain 18 subindexes and 32 measures.</li> <li>• Each major index is weighted equally to form the aggregate index. Each sub-index is weighted equally within the major indexes. In many instances, a measure equals a sub-index (e.g., tax rates)</li> <li>• The 2004 index replaces adds the Conformity index variables into the other major indexes and adds an Unemployment Tax index. It also expands the number of sub-indexes and measures, and alters the weighting scheme to diminish the weights of “yes-or-no” variables.</li> </ul>

**Table 2: Intertemporal correlations for repeated business climate indexes, various years**

	<i>GT80</i>	<i>SB00</i>	<i>NE99</i>	<i>BH01</i>	<i>PRI99</i>	<i>CEDdp87</i>	<i>CEDc87</i>	<i>CEDpi88</i>	<i>TF03</i>
X(T+1)	0.81	0.97		0.97		0.84	0.85	0.75	0.99
X(T+2)	0.81	0.96		0.96		0.84	0.83	0.74	
X(T+3)	0.81	0.92	0.96	0.84		0.68	0.79	0.74	
X(T+4)	0.76					0.71	0.72	0.71	
X(T+5)	0.72				0.86		0.73	0.61	
X(T+6)	0.62						0.73	0.61	
X(T+7)							0.74	0.61	
X(T+8)							0.73	0.58	
X(T+9)							0.68		

Correlations represent the earliest available index X at time T with values of the same index taken at time T+t, t=1, 2, 9.

**Table 3: Correlations across Business Climate Indexes, Various Years**

	<i>GT81</i>	<i>FT75</i>	<i>SB00</i>	<i>BH01</i>	<i>NE99</i>	<i>FrNG04</i>	<i>FrSG04</i>	<i>PRI99</i>	<i>CEDdp89</i>	<i>CEDc92</i>	<i>CEDpi92</i>	<i>TF03</i>
GT81	1											
FT75	0.711154	1										
SB00	0.385796	0.355782	1									
BH01	-0.12256	-0.3489	-0.0464	1								
NE99	-0.12145	-0.44894	-0.12337	0.630362	1							
FrNG04	-0.36427	-0.11534	-0.45391	-0.20306	-0.2366	1						
FrSG04	-0.46206	-0.28383	-0.58423	-0.12025	-0.16813	0.902236	1					
PRI99	0.686979	0.713692	0.469445	-0.0481	-0.33626	-0.34513	-0.42337	1				
CEDdp89	-0.60443	-0.57837	-0.5149	0.187674	0.346836	0.412677	0.455464	-0.6716	1			
CEDc92	-0.31442	-0.48416	-0.19037	0.623941	0.810727	-0.11458	-0.03902	-0.39358	0.510096	1		
CEDpi92	-0.2331	-0.26864	-0.53509	0.071043	0.072906	0.338762	0.501358	-0.2099	-0.4564	-0.11554	1	
TF03	0.502221	0.349987	0.751595	0.103621	0.072544	-0.5192	-0.6116	0.442743	-0.52009	-0.03559	-0.63419	1

GT81	Grant Thornton
FT75	(-1)* Fantus
SB00	(-1)*Small Business Survival Index
BH01	Beacon Hill
NE99	New Economy Index
FrNG04	Fraser Institute/NCPA Economic Freedom Index: All government
FrSG04	Fraser Institute/NCPA Economic Freedom Index: State and Local government
PRI99	(-1)*Clemson/Pacific Research Institute
CEDdp89	(-1) Corporation for Enterprise Development: economic development policy ranking
CEDc92	(-1) Corporation for Enterprise Development: capacity ranking
CEDpi92	Corporation for Enterprise Development: fiscal policy index
TF03	Tax Foundation

**Table 4: Selected results from Weighted Least Squares Regressions of Relative Border County Growth on Relative Business Climate Indicators**

**Beacon Hill Competitiveness Report [BH]: 2001**

Dependent Variable	1970-1980		1980-1990		1990-2000		1992-2002	
	1	2	1	2	1	2	1	2
Wage Bill Growth	-0.031 (0.77) [0.001]	-0.025 (0.63) [0.001]	-0.03 (0.82) [0.001]	-0.031 (0.84) [0.001]	<b>0.096</b> (2.65) [0.01]	<b>0.098</b> (2.69) [0.006]	<b>0.141</b> (4.4) [0.016]	<b>0.139</b> (4.32) [0.017]
Population Growth	-0.013 (0.68) [0.00]	-0.01 (0.48) [0.005]	-0.094 (5.35) [0.024]	-0.099 (5.68) [0.036]	0.01 (0.59) [0.00]	0.009 (0.52) [0.001]	0.03 (1.71) [0.002]	0.028 (1.58) [0.005]
Employment Growth	-0.036 (1.14) [0.001]	-0.034 (1.07) [0.002]	-0.046 (1.59) [0.002]	-0.05 (1.73) [0.006]	0.051 (1.82) [0.00]	0.048 (1.7) [0.005]	<b>0.107</b> (4.1) [0.014]	<b>0.102</b> (3.89) [0.02]
Proprietorship Growth	0.048 (1.45) [0.002]	0.043 (1.28) [0.004]	-0.061 (1.75) [0.003]	-0.056 (1.6) [0.004]	0.052 (1.42) [0.002]	0.062 (1.7) [0.007]	0.043 (1.17) [0.001]	0.054 (1.47) [0.007]

**Corporation for Enterprise Development-Capacity Index [CEDc]: 1992**

Dependent Variable	1970-1980		1980-1990		1990-2000		1992-2002	
	1	2	1	2	1	2	1	2
Wage Bill Growth	-0.03 (3.85) [0.012]	-0.03 (3.85) [0.017]	0.001 (0.08) [0.00]	0.001 (0.08) [0.00]	<b>0.018</b> (2.48) [0.005]	<b>0.018</b> (2.48) [0.005]	<b>0.017</b> (2.61) [0.006]	<b>0.017</b> (2.62) [0.007]
Population Growth	-0.014 (3.67) [0.010]	-0.014 (3.58) [0.015]	-0.011 (3.2) [0.009]	-0.011 (3.3) [0.019]	0.006 (1.71) [0.002]	0.006 (1.68) [0.003]	<b>0.008</b> (2.22) [0.004]	<b>0.008</b> (2.18) [0.006]
Employment Growth	-0.023 (3.71) [0.012]	-0.023 (3.7) [0.012]	-0.006 (1.03) [0.001]	-0.006 (1.02) [0.004]	0.01 (1.85) [0.003]	0.01 (1.86) [0.005]	<b>0.016</b> (3.09) [0.008]	<b>0.016</b> (3.11) [0.016]
Proprietorship Growth	-0.018 (2.74) [0.006]	-0.018 (2.82) [0.009]	0 (0.05) [0.00]	0.001 (0.08) [0.002]	0.012 (1.69) [0.002]	0.013 (1.78) [0.007]	<b>0.018</b> (2.56) [0.006]	<b>0.019</b> (2.64) [0.011]

**Corporation for Enterprise Development-development Policy Index [CEDdp]: 1989**

Dependent Variable	1970-1980		1980-1990		1990-2000		1992-2002	
	1	2	1	2	1	2	1	2
Wage Bill Growth	-0.037 (4.17) [0.014]	-0.037 (4.2) [0.019]	-0.04 (4.86) [0.02]	-0.04 (4.85) [0.02]	-0.035 (4.39) [0.016]	-0.035 (4.40) [0.016]	-0.027 (3.76) [0.012]	-0.027 (3.73) [0.013]
Population Growth	-0.027 (6.27) [0.032]	-0.027 (6.2) [0.036]	-0.021 (5.22) [0.023]	-0.021 (5.29) [0.033]	-0.03 (7.94) [0.050]	-0.03 (7.98) [0.051]	-0.027 (7.12) [0.041]	-0.027 (7.18) [0.044]
Employment Growth	-0.02 (2.77) [0.006]	-0.02 (2.78) [0.007]	-0.043 (6.82) [0.38]	-0.043 (6.77) [0.04]	-0.022 (3.46) [0.010]	-0.021 (3.42) [0.012]	-0.015 (2.62) [0.006]	-0.015 (2.55) [0.013]
Proprietorship Growth	-0.056 (7.69) [0.048]	-0.057 (7.79) [0.051]	-0.03 (3.9) [0.013]	-0.03 (3.91) [0.015]	-0.007 (0.90) [0.001]	-0.007 (0.87) [0.005]	0.002 (0.24) [0.00]	0.002 (0.27) [0.005]

t-statistics in parentheses and in brackets. All regressions also included a constant and those in columns labeled 2 included start of period values of the growth measure. Positive coefficients significant at the .05 level are in bold.

### Corporation for Enterprise Development: Fiscal Policy Index [CEDpi] 1992

Dependent Variable	1970-1980		1980-1990		1990-2000		1992-2002	
	1	2	1	2	1	2	1	2
Wage Bill Growth	0.070 (2.89) [0.007]	0.069 (2.84) [0.012]	-0.141 (6.36) [0.033]	-0.14 (6.35) [0.033]	-0.060 (2.71) [0.006]	-0.061 (2.72) [0.006]	-0.015 (0.75) [0.001]	-0.014 (0.72) [0.002]
Population Growth	-0.014 (1.13) [0.001]	-0.014 (1.15) [0.006]	-0.047 (4.41) [0.016]	-0.047 (4.39) [0.026]	-0.045 (4.23) [0.015]	-0.044 (4.22) [0.016]	-0.041 (3.85) [0.012]	-0.041 (3.83) [0.015]
Employment Growth	0.081 (4.20) [0.015]	0.08 (4.18) [0.015]	-0.109 (6.29) [0.032]	-0.109 (6.29) [0.035]	-0.019 (1.13) [0.001]	-0.019 (1.09) [0.003]	-0.001 (0.04) [0.00]	0.001 (0.03) [0.008]
Proprietorship Growth	-0.010 (0.51) [0.000]	-0.01 (0.5) [0.003]	-0.084 (3.99) [0.013]	-0.084 (4.0) [0.015]	0.028 (1.24) [0.001]	0.027 (1.20) [0.006]	0.019 (0.83) [0.001]	0.018 (0.79) [0.006]

### Fantus Corporation [FT]: 1975

Dependent Variable	1970-1980		1980-1990		1990-2000		1992-2002	
	1	2	1	2	1	2	1	2
Wage Bill Growth	<b>0.019</b> (2.00) [0.003]	0.018 (1.91) [0.008]	<b>0.025</b> (2.98) [0.003]	<b>0.026</b> (2.98) [0.008]	<b>0.039</b> (4.680) [0.018]	<b>0.039</b> (4.67) [0.018]	0.012 (1.56) [0.002]	0.012 (1.58) [0.003]
Population Growth	<b>0.010</b> (2.17) [0.004]	<b>0.009</b> (2.04) [0.008]	<b>0.010</b> (2.53) [0.005]	<b>0.011</b> (2.72) [0.016]	<b>0.021</b> (5.35) [0.024]	<b>0.022</b> (5.42) [0.025]	<b>0.010</b> (5.04) [0.019]	<b>0.010</b> (5.04) [0.043]
Employment Growth	0.001 (0.19) [0.000]	0.001 (0.17) [0.001]	<b>0.020</b> (3.03) [0.008]	<b>0.021</b> (3.09) [0.011]	<b>0.019</b> (2.94) [0.007]	<b>0.020</b> (2.99) [0.01]	0.006 (1.05) [0.001]	0.007 (1.12) [0.009]
Proprietorship Growth	0.014 (1.75) [0.003]	0.014 (1.85) [0.005]	<b>0.028</b> (3.44) [0.01]	<b>0.027</b> (3.38) [0.011]	<b>0.019</b> (2.18) [0.004]	<b>0.018</b> (2.09) [0.008]	0.004 (0.58) [0.00]	0.004 (0.58) [0.00]

### Fraser Institute/NCPA Economic All Government Freedom Index [FrN]: 2004

Dependent Variable	1970-1980		1980-1990		1990-2000		1992-2002	
	1	2	1	2	1	2	1	2
Wage Bill Growth	-0.060 (1.59) [0.002]	-0.07 (1.85) [0.008]	-0.272 (7.92) [0.05]	-0.275 (7.94) [0.051]	-0.204 (5.92) [0.029]	-0.211 (6.05) [0.03]	-0.179 (5.85) [0.028]	-0.177 (5.73) [0.028]
Population Growth	-0.057 (3.04) [0.008]	-0.061 (3.27) [0.014]	-0.161 (9.93) [0.077]	-0.157 (9.65) [0.082]	-0.143 (8.90) [0.062]	-0.144 (8.85) [0.062]	-0.133 (8.13) [0.053]	-0.131 (7.97) [0.053]
Employment Growth	-0.024 (0.80) [0.001]	-0.027 (0.9) [0.001]	-0.247 (9.27) [0.068]	-0.244 (9.11) [0.068]	-0.127 (4.70) [0.018]	-0.123 (4.53) [0.019]	-0.123 (4.93) [0.02]	-0.115 (4.56) [0.025]
Proprietorship Growth	-0.089 (2.81) [0.005]	-0.085 (2.67) [0.009]	-0.167 (5.11) [0.022]	-0.174 (5.29) [0.025]	-0.121 (3.47) [0.010]	-0.132 (3.78) [0.016]	-0.145 (4.17) [0.014]	-0.156 (4.49) [0.022]

t-statistics in parentheses and in brackets. All regressions also included a constant and those in columns labeled 2 included start of period values of the growth measure. Positive coefficients significant at the .05 level are in bold.

### Fraser Institute/NCPA Economic Subnational Government Freedom Index [FrS]: 2004

Dependent Variable	1970-1980		1980-1990		1990-2000		1992-2002	
	1	2	1	2	1	2	1	2
Wage Bill Growth	-0.041 (1.00) [0.001]	-0.051 (1.25) [0.006]	-0.279 (7.53) [0.046]	-0.281 (7.54) [0.046]	-0.200 (5.37) [0.024]	-0.205 (5.47) [0.025]	-0.156 (4.72) [0.018]	-0.153 (4.59) [0.019]
Population Growth	-0.071 (3.51) [0.010]	-0.076 (3.76) [0.017]	-0.15 (8.49) [0.057]	-0.145 (8.19) [0.063]	-0.157 (9.09) [0.065]	-0.158 (9.04) [0.065]	-0.149 (8.51) [0.057]	-0.148 (8.36) [0.058]
Employment Growth	0.006 (0.18) [0.000]	0.003 (0.08) [0.001]	-0.241 (8.35) [0.056]	-0.238 (8.19) [0.056]	-0.108 (3.72) [0.012]	-0.104 (3.55) [0.013]	-0.106 (3.93) [0.013]	-0.097 (3.58) [0.018]
Proprietorship Growth	-0.071 (2.07) [0.003]	-0.065 (1.91) [0.006]	-0.181 (5.13) [0.022]	-0.189 (5.33) [0.025]	-0.084 (2.24) [0.004]	-0.096 (2.55) [0.01]	-0.128 (3.43) [0.01]	-0.141 (3.75) [0.017]

### Grant Thornton Business Climate Score [GT]: 1983

Dependent Variable	1970-1980		1980-1990		1990-2000		1992-2002	
	1	2	1	2	1	2	1	2
Wage Bill Growth	<b>0.097</b> (4.17) [0.015]	<b>0.093</b> (3.97) [0.018]	<b>0.089</b> (4.17) [0.015]	<b>0.09</b> (4.2) [0.015]	<b>0.093</b> (4.37) [0.016]	<b>0.093</b> (4.35) [0.016]	<b>0.06</b> (3.19) [0.009]	<b>0.062</b> (3.26) [0.01]
Population Growth	<b>0.067</b> (3.60) [0.011]	<b>0.066</b> (3.54) [0.011]	<b>0.072</b> (4.31) [0.015]	<b>0.075</b> (4.46) [0.02]	<b>0.065</b> (3.96) [0.013]	<b>0.067</b> (4.07) [0.016]	<b>0.047</b> (3.02) [0.008]	<b>0.049</b> (3.21) [0.016]
Employment Growth	<b>0.067</b> (3.60) [0.011]	<b>0.066</b> (3.54) [0.011]	<b>0.072</b> (4.31) [0.015]	<b>0.075</b> (4.46) [0.02]	<b>0.065</b> (3.96) [0.013]	<b>0.067</b> (4.07) [0.016]	<b>0.047</b> (3.02) [0.008]	<b>0.049</b> (3.21) [0.016]
Proprietorship Growth	<b>0.051</b> (2.64) [0.006]	<b>0.058</b> (2.94) [0.01]	<b>0.12</b> (6.00) [0.03]	<b>0.118</b> (5.86) [0.03]	<b>0.088</b> (4.15) [0.014]	<b>0.084</b> (3.93) [0.017]	<b>0.09</b> (4.25) [0.015]	<b>0.086</b> (4.03) [0.018]

### New Economy Index [NE]: 1999

Dependent Variable	1970-1980		1980-1990		1990-2000		1992-2002	
	1	2	1	2	1	2	1	2
Wage Bill Growth	-0.092 (3.21) [0.009]	-0.09 (3.16) [0.013]	0.023 (0.89) [0.001]	<b>0.023</b> (0.88) [0.001]	<b>0.068</b> (2.59) [0.006]	<b>0.068</b> (2.60) [0.006]	<b>0.087</b> (3.76) [0.012]	<b>0.087</b> (3.74) [0.013]
Population Growth	-0.049 (2.16) [0.004]	-0.049 (2.13) [0.004]	-0.013 (0.65) [0.00]	-0.014 (0.68) [0.003]	0.034 (1.64) [0.002]	0.033 (1.60) [0.004]	<b>0.071</b> (3.76) [0.012]	<b>0.07</b> (3.71) [0.019]
Employment Growth	-0.049 (2.16) [0.004]	-0.049 (2.13) [0.004]	-0.013 (0.65) [0.00]	-0.014 (0.68) [0.003]	0.034 (1.64) [0.002]	0.033 (1.60) [0.004]	<b>0.071</b> (3.76) [0.012]	<b>0.07</b> (3.71) [0.019]
Proprietorship Growth	-0.025 (1.05) [0.001]	-0.028 (1.17) [0.004]	0.006 (0.24) [0.00]	0.008 (0.33) [0.002]	0.019 (0.74) [0.001]	0.024 (0.91) [0.005]	<b>0.073</b> (2.81) [0.007]	<b>0.078</b> (2.99) [0.012]

t-statistics in parentheses and in brackets. All regressions also included a constant and those in columns labeled 2 included start of period values of the growth measure. Positive coefficients significant at the .05 level are in bold.

**Clemson-Pacific Research Institute Freedom Index [PRI]: 1999**

Dependent Variable	1970-1980		1980-1990		1990-2000		1992-2002	
	1	2	1	2	1	2	1	2
Wage Bill Growth	<b>0.282</b> (5.02) [0.021]	<b>0.275</b> (4.91) [0.025]	0.094 (1.8) [0.003]	0.095 (1.8) [0.003]	<b>0.259</b> (5.04) [0.020]	<b>0.259</b> (5.03) [0.02]	<b>0.188</b> (4.12) [0.014]	<b>0.190</b> (4.15) [0.016]
Population Growth	<b>0.136</b> (4.90) [0.020]	<b>0.132</b> (4.74) [0.023]	<b>0.055</b> (2.21) [0.004]	<b>0.061</b> (2.42) [0.015]	<b>0.163</b> (6.74) [0.037]	<b>0.166</b> (6.82) [0.038]	<b>0.170</b> (6.98) [0.039]	<b>0.174</b> (7.12) [0.043]
Employment Growth	<b>0.121</b> (2.68) [0.007]	<b>0.120</b> (2.65) [0.021]	<b>0.139</b> (3.41) [0.01]	<b>0.141</b> (3.46) [0.013]	<b>0.168</b> (4.21) [0.015]	<b>0.170</b> (4.25) [0.017]	<b>0.136</b> (3.65) [0.011]	<b>0.139</b> (3.73) [0.019]
Proprietorship Growth	<b>0.171</b> (3.64) [0.011]	<b>0.180</b> (3.81) [0.015]	<b>0.191</b> (3.91) [0.013]	<b>0.187</b> (3.82) [0.014]	<b>0.320</b> (6.26) [0.032]	<b>0.315</b> (6.15) [0.035]	<b>0.298</b> (5.82) [0.028]	<b>0.291</b> (5.69) [0.031]

**Small Business Survival Index [SB]: 2000**

Dependent Variable	1970-1980		1980-1990		1990-2000		1992-2002	
	1	2	1	2	1	2	1	2
Wage Bill Growth	<b>0.110</b> (3.31) [0.009]	<b>0.123</b> (3.69) [0.016]	<b>0.204</b> (6.74) [0.037]	<b>0.208</b> (6.79) [0.038]	<b>0.104</b> (3.42) [0.010]	<b>0.110</b> (3.54) [0.011]	<b>0.061</b> (2.26) [0.004]	<b>0.057</b> (2.07) [0.005]
Population Growth	<b>0.106</b> (6.52) [0.035]	<b>0.111</b> (6.82) [0.042]	<b>0.153</b> (10.9) [0.09]	<b>0.149</b> (10.5) [0.094]	<b>0.060</b> (4.12) [0.014]	<b>0.059</b> (4.03) [0.014]	<b>0.048</b> (3.28) [0.009]	<b>0.045</b> (3.07) [0.01]
Employment Growth	0.044 (1.67) [0.002]	0.048 (1.8) [0.002]	<b>0.183</b> (7.75) [0.048]	<b>0.179</b> (7.55) [0.049]	<b>0.063</b> (2.66) [0.006]	<b>0.059</b> (2.44) [0.007]	0.041 (1.88) [0.003]	0.032 (1.42) [0.009]
Proprietorship Growth	<b>0.161</b> (5.88) [0.028]	<b>0.158</b> (5.75) [0.03]	<b>0.186</b> (6.54) [0.035]	<b>0.194</b> (6.78) [0.039]	-0.022 (0.71) [0.000]	-0.012 (0.39) [0.005]	0.018 (0.58) [0.00]	0.028 (0.91) [0.006]

**Tax Foundation Index [TF], 2003**

Dependent Variable	1970-1980		1980-1990		1990-2000		1992-2002	
	1	2	1	2	1	2	1	2
Wage Bill Growth	0.019 (0.44) [0.000]	0.034 (0.79) [0.005]	<b>0.224</b> (5.71) [0.027]	<b>0.227</b> (5.73) [0.027]	<b>0.177</b> (4.54) [0.017]	<b>0.184</b> (4.66) [0.018]	<b>0.106</b> (3.05) [0.008]	<b>0.101</b> (2.89) [0.008]
Population Growth	<b>0.089</b> (4.21) [0.045]	<b>0.096</b> (4.55) [0.022]	<b>0.149</b> (8.01) [0.051]	<b>0.143</b> (7.61) [0.056]	<b>0.084</b> (4.53) [0.017]	<b>0.083</b> (4.44) [0.017]	<b>0.076</b> (4.04) [0.014]	<b>0.073</b> (3.84) [0.015]
Employment Growth	-0.009 (0.26) [0.000]	-0.005 (0.14) [0.00]	<b>0.208</b> (6.8) [0.038]	<b>0.203</b> (6.6) [0.038]	<b>0.107</b> (3.53) [0.010]	<b>0.103</b> (3.33) [0.011]	<b>0.067</b> (2.37) [0.005]	0.056 (1.95) [0.011]
Proprietorship Growth	<b>0.078</b> (2.17) [0.004]	<b>0.071</b> (1.97) [0.006]	<b>0.326</b> (9.01) [0.064]	<b>0.339</b> (9.32) [0.07]	-0.047 (1.20) [0.001]	-0.033 (0.84) [0.005]	0.056 (1.42) [0.002]	0.072 (1.82) [0.008]

t-statistics in parentheses and in brackets. All regressions also included a constant and those in columns labeled 2 included start of period values of the growth measure. Positive coefficients significant at the .05 level are in bold.

**Table 5: Regressions Explaining Relative County Growth Across State Borders, 1992-2002**

	Population Growth		Employment Growth		Proprietor Growth		Wage Bill Growth	
	1	2	1	2	1	2	1	2
Population <sub>0</sub>	0.008 (2.58)	0.007 (2.37)						
Employment <sub>0</sub>			0.011 (2.71)	0.011 (2.65)				
Proprietor <sub>0</sub>					-0.011 (1.65)	-0.012 (1.77)		
Wage Bill <sub>0</sub>							(0.003) 0.73	(0.003) 0.69
BH	-0.1 (4.01)	-0.098 (3.87)	-0.014 (0.35)	-0.013 (0.34)	-0.233 (4.33)	-0.247 (4.55)	0.009 (0.19)	0.01 (0.21)
CEDc	<b>0.035</b> (5.67)	<b>0.025</b> (4.27)	<b>0.03</b> (3.04)	<b>0.021</b> (2.27)	0.021 (1.57)	<b>0.035</b> (2.76)	<b>0.032</b> (2.69)	0.019 (1.68)
CEDdp	-0.026 (4.42)		-0.021 (2.3)		<b>0.051</b> (4.04)		-0.033 (2.93)	
CEDpi		-0.001 (0.05)		0.007 (0.3)		<b>0.074</b> (2.23)		0.006 (0.2)
F	0.009 (1.84)	<b>0.012</b> (2.33)	-0.006 (0.74)	-0.003 (0.33)	0.001 (0.13)	0.002 (0.22)	-0.003 (0.28)	0.002 (0.17)
FrN	-0.025 (0.65)	-0.039 (0.98)	-0.162 (2.63)	-0.17 (2.7)	-0.187 (2.22)	-0.125 (1.46)	-0.257 (3.4)	-0.271 (3.53)
FrS	-0.145 (2.95)	-0.169 (3.17)	0.137 (1.77)	0.107 (1.28)	0.015 (0.14)	-0.033 (0.29)	<b>0.202</b> (2.13)	0.162 (1.58)
GT	<b>0.036</b> (2.79)	<b>0.038</b> (2.83)	<b>0.057</b> (2.8)	<b>0.057</b> (2.7)	<b>0.05</b> (2.08)	0.037 (1.3)	<b>0.076</b> (3.06)	<b>0.077</b> (2.99)
NE	-0.034 (1.33)	-0.042 (1.63)	0 (0.01)	-0.005 (0.12)	0.048 (0.88)	0.074 (1.36)	-0.005 (0.09)	-0.013 (0.27)
PRI	<b>0.085</b> (2.26)	<b>0.135</b> (3.7)	0.065 (1.09)	0.104 (1.82)	<b>0.525</b> (6.48)	<b>0.406</b> (5.18)	0.018 (0.25)	0.081 (1.15)
SB	-0.038 (1.63)	-0.056 (2.39)	0.025 (0.68)	0.009 (0.25)	-0.114 (2.26)	-0.088 (1.76)	0.026 (0.58)	0.003 (0.06)
TF	-0.098 (2.98)	-0.076 (2.21)	-0.068 (1.32)	-0.045 (0.83)	0.02 (0.28)	0.027 (0.36)	-0.075 (1.19)	-0.043 (0.65)
Constant	-0.015 (3.62)	-0.017 (3.79)	-0.014 (2.06)	-0.015 (2.23)	-0.025 (2.72)	-0.027 (2.85)	-0.016 (1.96)	-0.018 (2.15)
N	1192	1192	1192	1192	1192	1192	1192	1192
R <sup>2</sup>	0.136	0.122	0.054	0.05	0.084	0.075	0.059	0.052

t-statistics in parentheses. Positive coefficients significant at the .05 level are in bold. The two CED policy indexes were entered separately.

**Table 6: Highest quintile of border differences in composite business climate, 1992-2002**

Leading State	Lagging State	Climate Gap	Observed Weighted Border County Gap in Growth from 1992-2002			
			Wage Bill	Proprietors	Employment	Population
Delaware	Pennsylvania	11.8%	-2.0%	4.3%	-2.8%	1.8%
Georgia	Alabama	11.5%	11.7%	10.1%	10.0%	2.0%
Georgia	Florida	11.3%	17.7%	29.5%	13.9%	-1.3%
New Hampshire	Maine	11.0%	10.3%	1.6%	3.9%	-1.5%
Virginia	West Virginia	10.2%	-4.7%	13.1%	-4.9%	6.2%
Delaware	New Jersey	10.0%	30.3%	17.2%	15.0%	8.5%
Virginia	Kentucky	9.7%	5.2%	51.0%	-3.4%	0.1%
New Hampshire	Massachusetts	9.2%	6.6%	3.2%	8.9%	5.5%
Delaware	Maryland	8.9%	7.9%	1.3%	2.9%	7.6%
Nevada	California	8.8%	-13.8%	21.2%	-12.8%	11.8%
Virginia	Maryland	8.7%	37.5%	20.9%	26.0%	29.7%
Nevada	Oregon	8.7%	-5.2%	26.6%	-4.5%	4.7%
Colorado	Wyoming	8.5%	20.4%	24.3%	15.0%	21.3%
Idaho	Washington	8.5%	1.2%	14.1%	3.5%	6.2%
Texas	Arkansas	8.3%	12.4%	-23.9%	12.4%	5.5%
Tennessee	Kentucky	7.2%	-3.0%	19.9%	-5.1%	9.4%
Vermont	New York	7.2%	19.2%	2.3%	16.1%	8.6%
Texas	Oklahoma	6.9%	9.0%	-6.0%	3.4%	5.7%
Ohio	Michigan	6.8%	-6.6%	-9.4%	-5.2%	-4.2%
Colorado	Nebraska	6.8%	22.8%	5.7%	21.6%	17.3%
Ohio	Kentucky	6.8%	6.6%	12.9%	9.4%	-1.6%
Average		8.9%	8.7%	11.4%	5.9%	6.8%

Notes: Lead and lag states are determined by the gap in the composite business climate index, taken as the average of the Predicted values of relative wage bill, population, employment and proprietorship growth attributable to the various business Climate measures using the estimates in Table 6. The composite index is highly correlated with the individual indexes. The simple correlations are 0.92 (wage bill growth); 0.90 (proprietor growth); 0.91 (employment growth); and 0.84 (population growth). Simple correlations between the composite climate gap and observed differences in county growth are 0.37 (wage bill growth); 0.41 (proprietor growth); 0.34 (employment growth) and 0.42 (population growth).

**Table 7a: Kansas Composite Business Climate for Selected Economic Growth Measures relative to neighboring States, 1992-2003**

	<b>Oklahoma</b>	<b>Missouri</b>	<b>Nebraska</b>	<b>Colorado</b>
Population Growth	-1.7%	-0.7%	-0.4%	-4.6%
Employment Growth	0.4%	0.3%	1%	-3.4%
Proprietor Growth	-2.5%	1.5%	4.9%	-0.6%
Wage Growth	1.1%	1.8%	1.1%	-4.6%

**Table 7b: Kansas' Ranking by Various Business Climate Indexes, by Index Validity**

Generally Reliable

Fantus	Kansas Rank (year)
Grant Thornton	20 (1975)
Clemson/Pacific Research Institute	13 (1980); 8 (1986)
Small Business Survival Index	10 (1999); 1 (2004)
Tax Foundation	36 (2000); 31(2004)
	32 (2004)

Mixed Quality

Corporation for Enterprise Development: capacity ranking	19 (1987); 12(2004)
New Economy Index	27 (1999); 29 (2002)

Unreliable

Beacon Hill	23 (2001); 10 (2004)
Corporation for Enterprise Development: economic development policy ranking	30 (1987); 20 (1991)
Corporation for Enterprise Development: fiscal policy index	38 (1998); 14 (1996)
Fraser Institute/NCPA Economic Freedom Index: All government	28 (2004)
Fraser Institute/NCPA Economic Freedom Index: State and Local government	26 (2004)

Figure 1: Relative Business Climate for Wage Bill Growth, 1992-2002

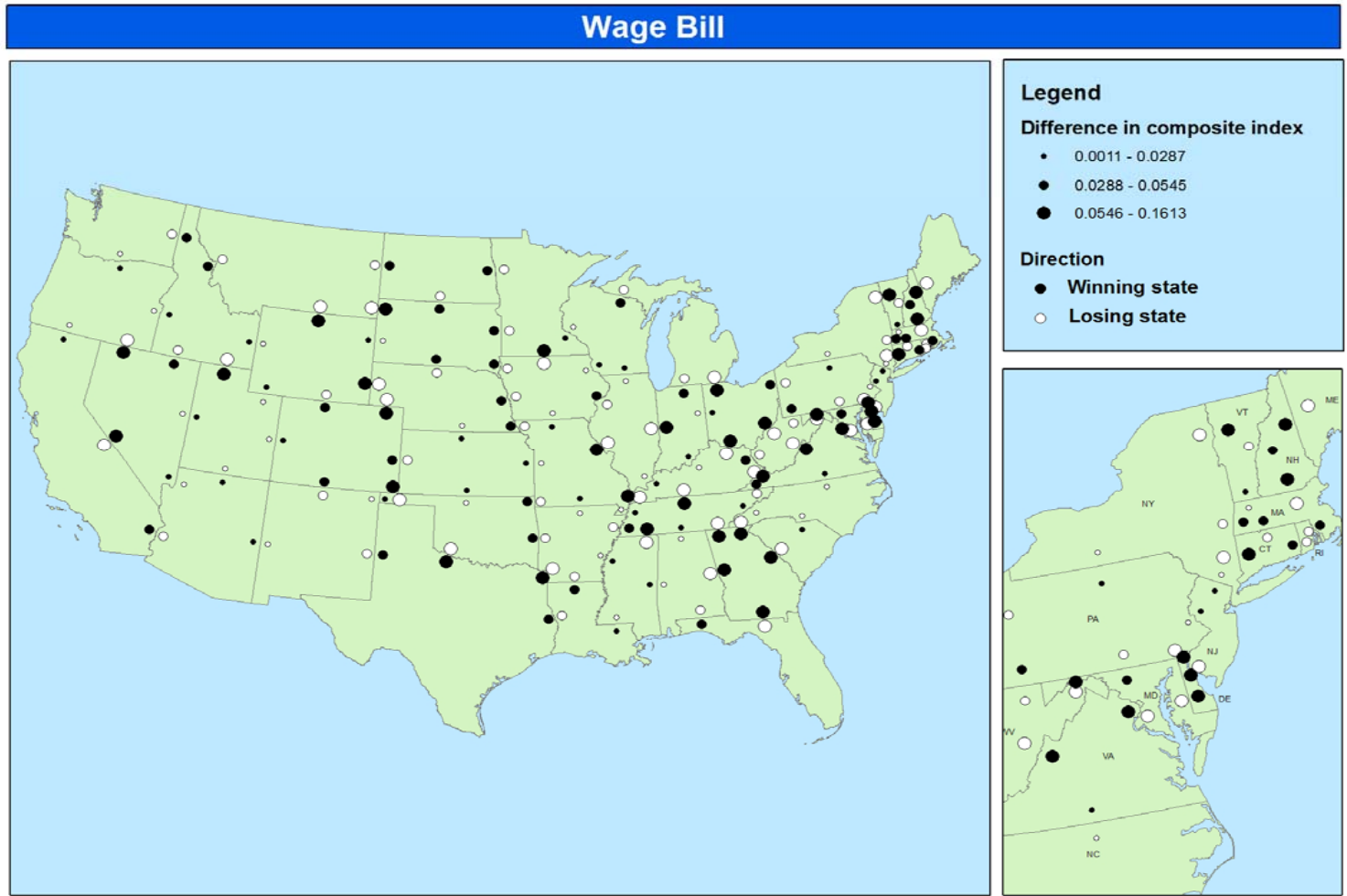


Figure 2: Relative Business Climate for Proprietor Growth, 1992-2002

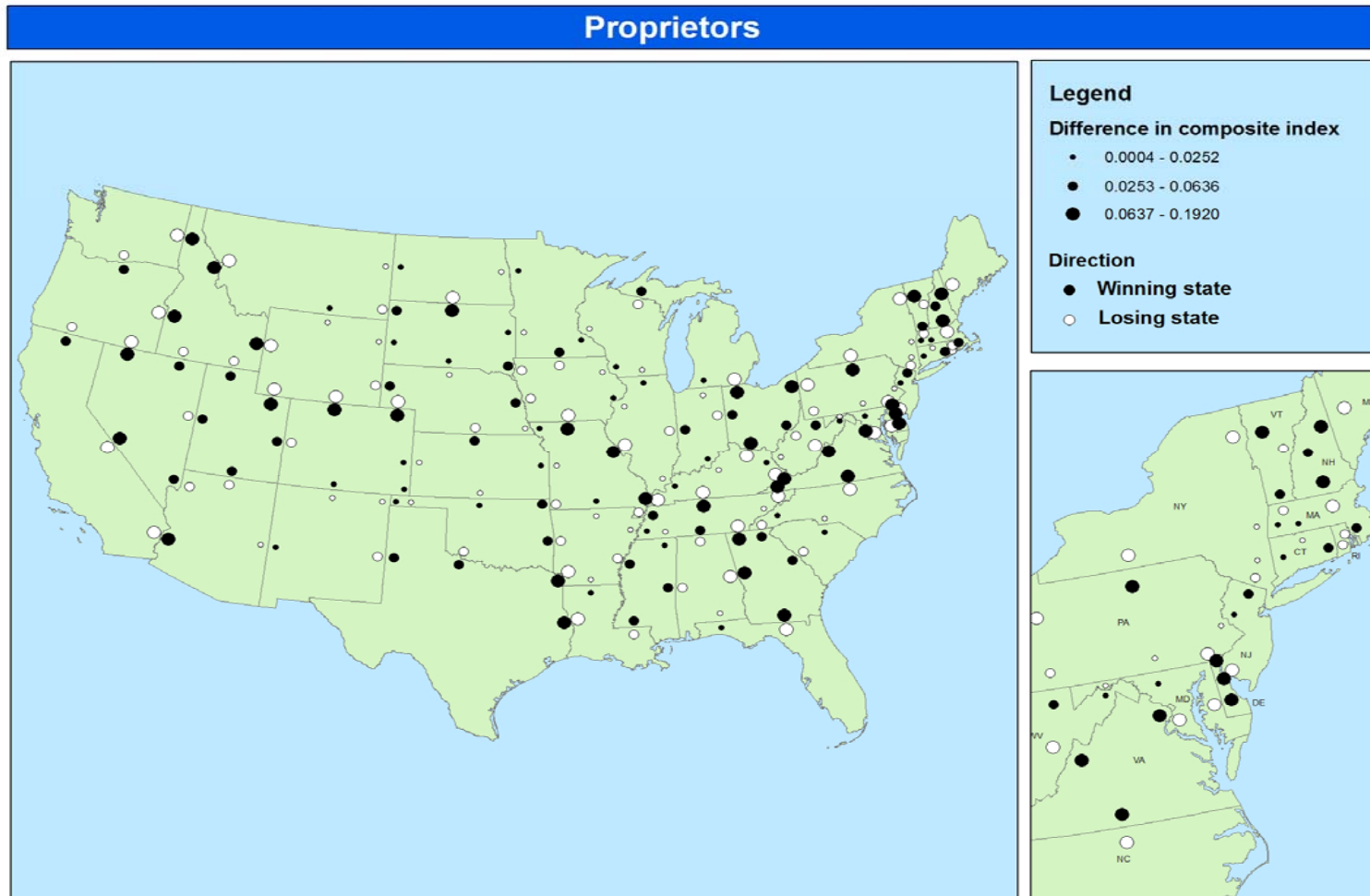
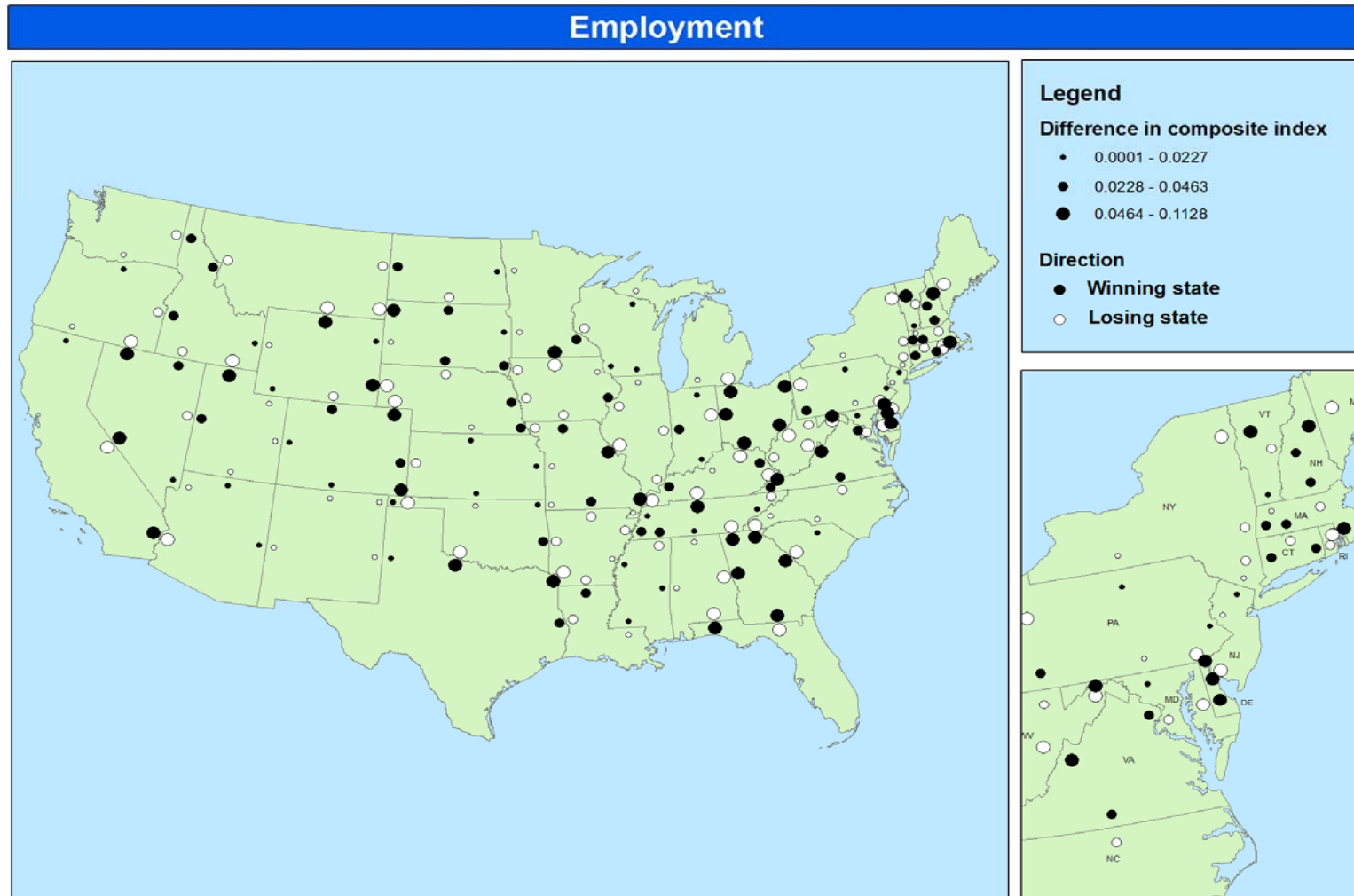
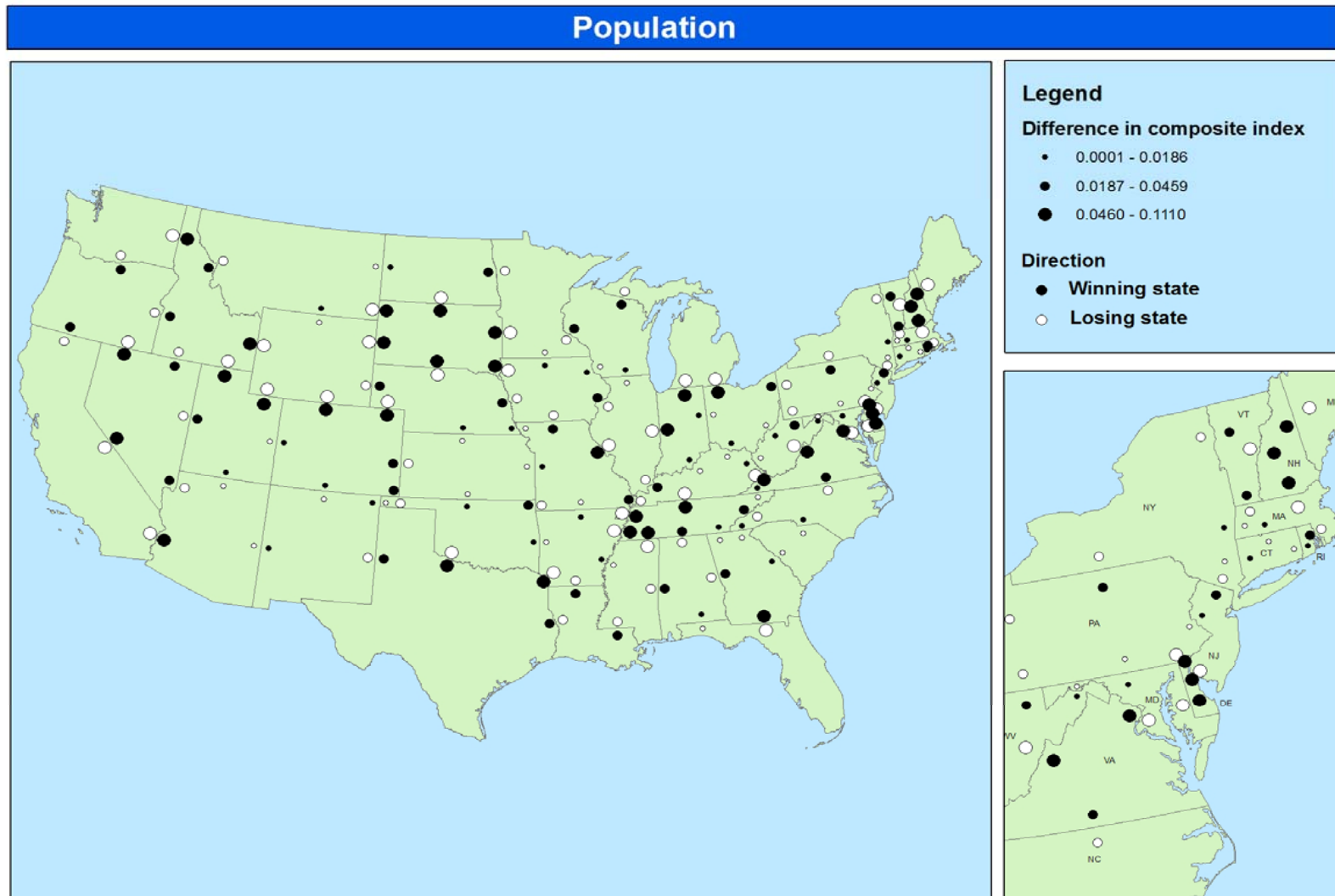


Figure 3: Relative Business Climate for Employment Growth, 1992-2002



**Figure 4: Relative Business Climate for Population Growth, 1992-2002**



# KANSAS, INC.

Created by the 1986 Legislature, Kansas, Inc. is an independent, objective, and non-partisan agency designed to conduct economic development research and analysis with a goal of crafting policies and recommendations to insure the state's ongoing competitiveness for economic growth. This is achieved through these primary activities: 1) developing and implementing a proactive and aggressive research agenda; 2) identifying and promoting strategies and policies from the research; 3) conducting evaluation reviews and oversight of programs; and, 4) collaboration with economic development entities and outreach to potential partners. Kansas, Inc. is designed to be a public private partnership with expectations that state investments are leveraged with other funds to maintain a strong research portfolio.

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