Does Fiscal Decentralization Result in a Better Business Climate?

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Does Fiscal Decentralization Result in a Better Business Climate?

Abstract

Previous literature generally finds that greater fiscal decentralization is associated with faster economic growth, improved government performance, and stronger constraints on the Leviathan behavior of governments. Because economic growth critically depends on the presence of good government policies and institutions, the likely but untested link between these strands of literature is that greater decentralization probably improves growth because it results in government policies more conducive to entrepreneurship and business success. We test (and confirm) this hypothesis using several business climate measures for the U.S. states.

Keywords: Decentralization; Fiscal Federalism; Business Climate; Growth
JEL Classification: H2; H7; O1
I. Introduction

The literature on the benefits of fiscal decentralization (‘fiscal federalism’) is founded in the idea that the greater intergovernmental competition present at lower levels of government, due to “voting with your feet” (Tiebout, 1956) behavior, results in better government policy than when government activities are centralized. The empirical literature generally, but not unanimously\(^1\), finds that greater decentralization is associated with greater economic growth (see Stansel, 2005; Desai, Freinkman, and Goldberg, 2005). Another strand of literature finds (though again not unanimously\(^2\)), that greater decentralization results in stronger tax competition, more constrained (smaller) government, and more efficient government policies (see, for instance, Shadbegian, 1999; Nelson, 1987). Regardless of the impact of decentralization on the overall size of government, evidence suggests that greater decentralization results in more citizen-friendly government policies and tax structures that are less distortionary to economic activity [see Faguet, 2004; Tiebout, 1956].

The literature on economic growth has recently focused on the impact of government policies (or ‘institutions’) on economic growth and development.\(^3\) It is interesting to bridge these different strands of literature and investigate whether fiscal decentralization leads to growth because it results in better government policies, specifically meaning policy structures more conducive to entrepreneurial activity and wealth creation.\(^4\) So if decentralized government

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\(^1\) Studies like Thornton (2007), Davoodi and Zou (1998) and others failed to find such a connection.

\(^2\) Some studies that find no impact are Oates (1989) and Anderson and van den Berg (1998).


\(^4\) It is important to note that bad government policy may actually encourage unproductive entrepreneurial activities [see Baumol (1990), Murphy, Shleifer, and Vishny (1991), Boettke and Coyne (2003), and Sobel (2008), to mention a few].
results in policies that better promote entrepreneurial activity, this can help to explain the link between decentralization and growth.\footnote{For evidence that entrepreneurship is a key determinant of economic growth see Audretsch, Keilbach, and Lehmann (2006), Harper (2003), and Holcombe (1998).}

In this paper we examine several proxies of the business climates of the 50 U.S. states, and attempt to uncover whether there is a relationship between these measures and the degree of fiscal decentralization. While identifying the exact policies that create a better environment for growth is outside the scope of the paper, based on previous literature we would expect these to be those policies consistent with low, predictable, and fair levels of taxation and regulation, as well as policies that may promote the development of necessary infrastructure (transportation, education, communications, courts enforcing rights and contracts, and venture capital markets). We employ several indices of state business climates to ensure our results are not dependent on any single methodology. We find that fiscal decentralization is indeed strongly correlated with a better business climate in a state.

II. Data

The standard measure of fiscal decentralization is the percentage of state and local government spending that is undertaken at the local level. We construct this variable for each U.S. state for the year 2000 using data from the U.S. Census Bureau’s \textit{Government Finance Statistics}. Appendix 1B shows that 51.1 percent of spending in the average state is undertaken at the local level. A higher value of this variable indicates greater decentralization.

As measures of the state business climate we examine the Milken Institute’s \textit{National State Technology & Science Index}, the Tax Foundation’s \textit{State Business Tax Climate Index}, the Progressive Policy Institute’s (PPI) \textit{New Economy Index}, the Beacon Hill Institute’s \textit{State
Competitiveness Report index, the Institute for Legal Reform (ILR) / Harris State Liability Systems Ranking Study index, the Fraser Institute’s Economic Freedom of North America index, the Small Business & Entrepreneurship Council’s Small Business Survival Index, and the Corporation for Enterprise Development’s (CFED) Development Capacity Index.

In our regressions we employ the underlying scores (we discuss the ranking implications of our estimates later). For the first six of our eight measures, the numerical scales run such that higher underlying scores correspond to a better business climate (a rank of 1 is the best) and for the last two, lower underlying scores correspond to a better business climate (a rank of 1 is the worst).

Bittlingmayer, et. al. (2005) argue that a good business climate index is one which is significantly correlated with measures of economic growth, but that the different existing indices do indeed measure different aspects of state policy. Here we make no a priori judgment about which of the measures is best, and employ them all. While some of these indices are annual, many of these indices are only available for a single year, or sporadically through time. We searched for the single year, which is 2002, for which the largest number of these indices were available. Our choice of year 2000 data for the decentralization measure (and all of the other control variables) helps to ensure that issues of endogeneity are minimized. Our choice of controls closely follows the entrepreneurship literature (see Sobel, Dutta and Roy, 2010).

III. Empirical Analysis

Our empirical model is:

\[
State \ Business \ Climate_i = \beta_0 + \beta_1 * Decentralization_i + \beta_2 * X_i + \varepsilon_i
\]

(1)

---

6 The only exception is the Tax Foundation’s measure, for which we choose 2003.
where $X_i$ reflects our set of control variables, and $\epsilon_i$ is the random error term. For six of our eight indicators\(^7\), we should expect $\beta_1 > 0$, and for the other two indicators\(^8\), $\beta_1$ should be $< 0$.

A simple bivariate analysis finds the expected sign on every business climate measure, implying that greater fiscal decentralization is indeed associated with a better business climate. Table 1 presents the results from our model that adds control variables. Our results remain robust.

[Insert Table 1 about here.]

To ensure that our results are not being driven by a few outliers, we perform quantile regressions. We choose quantile techniques over robust regressions because the latter may not generate efficient estimators in the presence of outliers [see Koenker and Bassett (1978)].\(^9\) The model is estimated based on the quantile’s asymmetrically weighted absolute residuals of the median rather than the mean of the distribution. The results, presented in Table 2, remain identical to those in Table 1.

[Insert Table 2 about here.]

As an additional robustness check, we control for the corruption level of public officials in each state in the regressions. A large number of studies have explored the association between decentralization and corruption (see, Lessmann and Markwardt (2007); Arikan (2004)). Since corruption and decentralization can be related to each other, we consider a lagged value for the year 1999.\(^10\) The corruption data is from the Department of Justice’s Report to Congress on the Activities and Operations of the Public Integrity Section.\(^11\) We divide annual corruption-related

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\(^7\) Higher scores represent a better business climate. See data section and Appendix 1A.

\(^8\) Higher scores denote a worse climate

\(^9\) However, we did also try robust regressions and the results remain robust.

\(^10\) To ensure any differences in the estimates from this model are not caused by also using a different year for the decentralization figures (1999 rather than 2000), we also ran our basic specification excluding corruption with the 1999 decentralization values and the results are identical to those presented using 2000 values.

\(^11\) For description of the corruption variable, see Appendix 1B.
crime convictions in each state by the state population in that year to derive the annual corruption-related crime convictions per 100,000 residents. After including this variable our results remain robust.

IV. Implications and Economic Significance

The interesting question is whether changes in decentralization produce meaningful changes in the rankings of states within these business climate rankings. With each index having its own scale, the magnitude of the impact of decentralization is hard to compare simply by examining the raw coefficient estimates on the underlying scores. To aid in interpretation we use our estimated coefficients to simulate the effect on the middle-ranked state of a one standard deviation increase in decentralization on their underlying index score, and convert this to the change in the final one to fifty ranking.

[Insert Table 3 about here.]

Table 3 shows the change in the ranking that would occur for the 25th ranked state in each index, if that state were to unilaterally increase its decentralization by an amount equal to one standard deviation12. For example, using Model 1, the 25th ranked state in the Milken Institute’s National State Technology & Science Index (which turns out to be Wisconsin), would move up 7 places (to a new ranking of 18th) if it were to increase fiscal decentralization by one standard deviation (from 0.5738 to 0.6647 for Wisconsin). Since the 25th ranked state, Wisconsin, had an underlying score of 53.74 in this index, this score would rise to 58.72, which in that year would have resulted in the state alternatively having a rank of 18th place, which is 7 places (or spots) higher.

Examining Table 3 shows that by increasing decentralizing by one standard deviation, the average state would move up somewhere between 5 and 8 spots in the Milken Institute’s Index.

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12 See Appendix 2 for details regarding the procedures employed in making these calculations.
Given the magnitude of the estimated increase in ranking, this result appears to be a meaningful and economically significant impact as well. Continuing, for the PPI Index, the average state would climb 3 spots in the ranking in all specifications, and for the Fraser Institute’s Index, the average state would jump a meaningful 6 spots. In the Small Business Survival Index, the average state would jump a whopping 9 or 10 spots in the ranking. Finally, CFED Index, the average state would rise only 2 spots in the ranking. The results suggest that the impact of fiscal decentralization on a state’s business climate is both statistically and economically significant for most of the popular state business climate rankings.

V. Conclusion

There is ample research showing that fiscal decentralization is associated with faster economic growth and ‘better’ government policy. We test the link between these two effects of decentralization by asking whether the ‘better’ government policies are indeed those that are more business friendly, and thus produce economic growth through promoting private sector wealth creation and entrepreneurship.

Using nine popular state business climate rankings we estimate the relationship between fiscal decentralization and states’ underlying scores in these rankings. Our results indeed show that decentralization is associated with a better business climate. The economic significance of the results are also computed by estimating the change in the ranking of the average state if it were to increase fiscal decentralization by one standard deviation (which is equivalent to about a 9 percent increase in local share of state and local spending). Our results make it clear that greater fiscal decentralization results in economic growth because it results in policies that are more conducive to entrepreneurship.
References


Table 1: The Impact of Decentralization on State Business Climate – With Controls

<table>
<thead>
<tr>
<th>Dependent Variable: Business Climate Measure</th>
<th>Milken Institute’s National State Technology &amp; Science Index</th>
<th>Tax Foundation’s State Business Tax Climate Index</th>
<th>Progressive Policy Institute’s New Economy Index</th>
<th>Beacon Hill Institute’s State Competitiveness Report Index</th>
<th>Institute for Legal Reform (ILR) / Harris State Liability Systems Ranking Study Index</th>
<th>Fraser Institute’s Economic Freedom of North America index</th>
<th>Small Business &amp; Entrepreneurship Council’s Small Business Survival Index</th>
<th>Corporation for Enterprise Development’s Development Capacity Index</th>
</tr>
</thead>
<tbody>
<tr>
<td>Decentralization</td>
<td>46.16*** (12.52)</td>
<td>0.96 (1.32)</td>
<td>29.08*** (9.42)</td>
<td>0.27 (1.82)</td>
<td>15.01 (15.19)</td>
<td>2.57** (1.09)</td>
<td>-33.18*** (10.36)</td>
<td>-417.37*** (150.43)</td>
</tr>
<tr>
<td>Median age</td>
<td>-1.59*** (0.48)</td>
<td>0.047 (0.0586)</td>
<td>-0.64 (0.39)</td>
<td>0.047 (0.06)</td>
<td>0.67 (0.81)</td>
<td>-0.08** (0.03)</td>
<td>0.002 (0.49)</td>
<td>-1.93 (10.95)</td>
</tr>
<tr>
<td>Males (per 100 females)</td>
<td>-1.02*** (0.29)</td>
<td>0.162*** (0.04)</td>
<td>-0.23 (0.28)</td>
<td>0.03 (0.05)</td>
<td>0.66 (0.46)</td>
<td>-0.0001 (0.03)</td>
<td>-0.43 (0.33)</td>
<td>5.25 (5.26)</td>
</tr>
<tr>
<td>Median Income (in hundreds USD)</td>
<td>0.03 (0.02)</td>
<td>0.001 (0.002)</td>
<td>0.03 (0.02)</td>
<td>0.0001 (0.003)</td>
<td>0.03 (0.02)</td>
<td>0.01*** (0.002)</td>
<td>-0.02 (0.02)</td>
<td>-0.01*** (0.003)</td>
</tr>
<tr>
<td>Schooling</td>
<td>2.57 *** (0.38)</td>
<td>-0.04 (0.03)</td>
<td>1.95*** (0.31)</td>
<td>0.16*** (0.04)</td>
<td>0.58 (0.37)</td>
<td>-0.02 (0.03)</td>
<td>0.66** (0.32)</td>
<td>-17.77*** (4.22)</td>
</tr>
<tr>
<td>Constant</td>
<td>108.8*** (40.35)</td>
<td>-12.01** (5.31)</td>
<td>31.42 (36.88)</td>
<td>-3.22 (6.02)</td>
<td>-65.99 (69.12)</td>
<td>6.23 (3.81)</td>
<td>92.74** (45.45)</td>
<td>1,384.84* (821.28)</td>
</tr>
<tr>
<td>Observations</td>
<td>50</td>
<td>50</td>
<td>50</td>
<td>50</td>
<td>50</td>
<td>50</td>
<td>50</td>
<td>50</td>
</tr>
<tr>
<td>R-squared</td>
<td>0.82</td>
<td>0.30</td>
<td>0.76</td>
<td>0.48</td>
<td>0.30</td>
<td>0.43</td>
<td>0.23</td>
<td>0.72</td>
</tr>
</tbody>
</table>

Notes:
Robust standard errors in parentheses. Significance levels indicated by: *** p<0.01, ** p<0.05, * p<0.1. Unlike the first six indices, the two indices presented in the last two columns have scores that are lower when the business climate is better, thus the expected sign on decentralization is positive for the first six regressions, and negative in the final two regressions.
<table>
<thead>
<tr>
<th></th>
<th>Milken Institute’s National State Technology &amp; Science Index</th>
<th>Tax Foundation’s State Business Tax Climate Index</th>
<th>Progressive Policy Institute’s (PPI) New Economy Index</th>
<th>Beacon Hill Institute’s State Competitiveness Report Index</th>
<th>Institute for Legal Reform (ILR) / Harris State Liability Systems Ranking Study Index</th>
<th>Fraser Institute’s Economic Freedom of North America Index</th>
<th>Small Business &amp; Entrepreneurship Council’s Small Business Survival Index</th>
<th>Corporation for Enterprise Development’s (CFED) Development Capacity Index</th>
</tr>
</thead>
<tbody>
<tr>
<td>Decentralization</td>
<td>58.14*** (18.75)</td>
<td>2.53 (1.93)</td>
<td>31.80** (13.28)</td>
<td>0.22 (2.64)</td>
<td>17.28 (19.83)</td>
<td>2.99*** (1.02)</td>
<td>-44.92*** (14.25)</td>
<td>-367.76** (184.48)</td>
</tr>
<tr>
<td>Median age</td>
<td>-1.66** (0.81)</td>
<td>0.01 (0.09)</td>
<td>-0.78 (0.56)</td>
<td>0.08 (0.13)</td>
<td>0.29 (0.63)</td>
<td>-0.08* (0.05)</td>
<td>-0.01 (0.65)</td>
<td>-2.002 (9.84)</td>
</tr>
<tr>
<td>Males (per 100 females)</td>
<td>-0.19** (0.56)</td>
<td>0.14* (0.07)</td>
<td>-0.36 (0.41)</td>
<td>0.05 (0.09)</td>
<td>0.63 (0.62)</td>
<td>0.003 (0.04)</td>
<td>0.09 (0.52)</td>
<td>0.082 (5.87)</td>
</tr>
<tr>
<td>Median Income (in hundreds USD)</td>
<td>0.01 (0.04)</td>
<td>0.002 (0.02)</td>
<td>0.02 (0.02)</td>
<td>0.001 (0.01)</td>
<td>0.02 (0.04)</td>
<td>0.004* (0.002)</td>
<td>-0.02 (0.03)</td>
<td>-0.011*** (0.004)</td>
</tr>
<tr>
<td>Schooling</td>
<td>2.73*** (0.63)</td>
<td>-0.04 (0.08)</td>
<td>1.86*** (0.47)</td>
<td>0.15 (0.09)</td>
<td>0.64 (0.71)</td>
<td>-0.03 (0.04)</td>
<td>0.47 (0.53)</td>
<td>-10.08* (5.64)</td>
</tr>
<tr>
<td>Constant</td>
<td>124.83 (75.45)</td>
<td>-9.22 (9.21)</td>
<td>50.20 (55.90)</td>
<td>-6.64 (11.93)</td>
<td>-37.32 (86.74)</td>
<td>6.22 (4.64)</td>
<td>53.35 (67.02)</td>
<td>1839.26** (811.64)</td>
</tr>
<tr>
<td>Observations</td>
<td>50</td>
<td>50</td>
<td>50</td>
<td>50</td>
<td>50</td>
<td>50</td>
<td>50</td>
<td>50</td>
</tr>
<tr>
<td>Pseudo R-squared</td>
<td>0.62</td>
<td>0.11</td>
<td>0.54</td>
<td>0.29</td>
<td>0.15</td>
<td>0.29</td>
<td>0.15</td>
<td>0.52</td>
</tr>
</tbody>
</table>

Notes:
Robust standard errors in parentheses. Significance levels indicated by: *** p<0.01, ** p<0.05, * p<0.1. Unlike the first six indices, the two indices presented in the last two columns have scores that are lower when the business climate is better, thus the expected sign on decentralization is positive for the first six regressions, and negative in the final two regressions.
Table 3: How a One Standard Deviation Increase in Fiscal Decentralization would Change the Business Climate Ranking of the 25th Ranked State

<table>
<thead>
<tr>
<th>Model 1 (using estimated coefficients from Table 1)</th>
<th>Milken Institute’s National State Technology &amp; Science Index</th>
<th>Tax Foundation’s State Business Tax Climate Index</th>
<th>Progressive Policy Institute’s (PPI) New Economy Index</th>
<th>Beacon Hill Institute’s State Competitiveness Report Index</th>
<th>Institute for Legal Reform (ILR) / Harris State Liability Systems Ranking Study index</th>
<th>Fraser Institute’s Economic Freedom of North America Index</th>
<th>Small Business &amp; Entrepreneurship Council’s Small Business Survival Index</th>
<th>Corporation for Enterprise Development’s (CFED) Development Capacity Index</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model 2 (using estimated coefficients from Table 2)</td>
<td>+5</td>
<td>+1</td>
<td>+3</td>
<td>+1</td>
<td>+5</td>
<td>+6</td>
<td>+9</td>
<td>+2</td>
</tr>
<tr>
<td>For Reference: Was Coefficient Statistically Significant?</td>
<td>Yes (in all)</td>
<td>No (in all)</td>
<td>Yes (in all)</td>
<td>No (in all)</td>
<td>No (in all)</td>
<td>Yes (in all)</td>
<td>Yes (in all)</td>
<td>Yes (in all)</td>
</tr>
</tbody>
</table>

Notes:
The numbers in the table show how many places upward in ranking the 25th ranked state would move if it was to increase fiscal decentralization by one standard deviation (approximately a 9 percent increase in the local share of state and local spending). As an example of interpretation, using Model 1, the 25th ranked state in the Milken Institute’s National State Technology & Science Index (which turns out to be Wisconsin), would move up 7 places (to a new ranking of 18th) if it were to increase fiscal decentralization by one standard deviation (from 0.5738 to 0.6647 for Wisconsin). These are calculated by first by simulating the change in the underlying score on which the index is based using the estimated coefficients from Tables 1 through 4, then re-ranking the states. The final row states whether coefficient of decentralization was significant or not for all the different measures.
## Appendix 1A: Business Climate measures and their sources

<table>
<thead>
<tr>
<th>Business Climate Measure</th>
<th>Description and Summary statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Milken Institute’s National State Technology &amp; Science Index</td>
<td>Based on 77 variables categorized into five major component areas: human capital investment, research and development inputs, risk capital and entrepreneurial infrastructure, technology and science workforce, and technology concentration and dynamism. For this index, higher scores indicate a better business climate, and actual scores in our sample range from a minimum of 22.8 to a maximum of 84.9. Mean = 52.2; S.D. = 15.3</td>
</tr>
<tr>
<td>The Tax Foundation’s State Business Tax Climate Index</td>
<td>Constructed using five tax policy related variables that reflect a state’s corporate income tax, individual income tax, general sales tax, unemployment insurance tax, and property tax structures. For this index, higher scores imply a better business climate, and actual scores in our sample range from a minimum of 3.53 to a maximum of 7.58. Mean = 5.4; S.D. = 0.88</td>
</tr>
<tr>
<td>The Progressive Policy Institute’s (PPI) New Economy Index</td>
<td>Constructed using 21 indicators in five categories: knowledge jobs, globalization, economic dynamism and competition, transformation to a digital economy, and technological innovation capacity. In this index as well, higher scores imply a better business climate, and actual scores in our sample range from a minimum of 40.7 to a maximum of 90.0. Mean = 60.32; S.D. = 0.11.96</td>
</tr>
<tr>
<td>The Beacon Hill Institute’s State Competitiveness Report index</td>
<td>Based on nine sub-indices constructed using variables measuring government and fiscal policy, security, infrastructure, human resources, technology, financing and costs, openness, domestic competition and environmental policy. In this index, higher scores indicate a better business environment, and actual scores in our sample range from a minimum of 2.94 to a maximum of 7.37. Mean = 5.0; S.D. = 1.0</td>
</tr>
<tr>
<td>The Institute for Legal Reform (ILR) / Harris State Liability Systems Ranking Study index</td>
<td>Published by the U.S. Chamber of Commerce. This index captures the business litigation environment of the states and is based on a survey of 1,500 in-house general counsel, senior litigators or attorneys, and other senior executives at companies with at least $100 million in annual revenues. For this index, higher scores reflect a better business legal climate, and actual scores in our sample range from a minimum of 28.4 to a maximum of 78.6. Mean = 57.2; S.D. = 8.80</td>
</tr>
<tr>
<td>The Fraser Institute’s Economic Freedom of North America index</td>
<td>Based on ten components in three areas: size of government, takings and discriminatory taxation, and labor market freedom. In this index, higher scores imply more economic freedom and thus a better business climate, and actual scores in our sample range from a minimum of 5.1 to a maximum of 8.5. Mean = 6.7; S.D. = 0.62</td>
</tr>
<tr>
<td>The Small Business Survival Index</td>
<td>Published by the Small Business &amp; Entrepreneurship Council’s Small Business Survival Committee and is based on thirty-four government imposed or related costs ranging from various types of taxes to health insurance costs, utility costs, crime rates, and state minimum wage rates. The index is computed by equally weighting the thirty-four variables. The way the index is constructed lower values of this index indicate a better business climate, and actual scores in our sample range from a minimum of 21.08 to a maximum of 54.72. Mean = 41.6; S.D. = 8.14</td>
</tr>
<tr>
<td>The Corporation for Enterprise Development’s (CFED) Development Capacity Index</td>
<td>One of the indices used by CFED to do their annual “Development Report Card” for the states. It is composed of five sub-indices in the areas of human resources, financial resources, infrastructure, amenity resources and natural capital, and innovation assets. In this index too, lower scores indicate a better business climate, and actual scores in our sample range from a minimum of 383 to a maximum of 1110. Mean = 760.92; S.D. = 161.6</td>
</tr>
</tbody>
</table>
Appendix 1B: Other variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>S.D.</th>
<th>Max</th>
<th>Min</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corruption</td>
<td>0.33</td>
<td>0.33</td>
<td>2.3</td>
<td>0</td>
</tr>
<tr>
<td>Decentralization</td>
<td>0.51</td>
<td>0.09</td>
<td>0.66</td>
<td>0.66</td>
</tr>
<tr>
<td>Males per 100 females</td>
<td>96.8</td>
<td>3.1</td>
<td>107</td>
<td>92</td>
</tr>
<tr>
<td>Median Age</td>
<td>35.5</td>
<td>1.9</td>
<td>38.9</td>
<td>27.1</td>
</tr>
<tr>
<td>Median Income</td>
<td>49241.52</td>
<td>7108.45</td>
<td>65521</td>
<td>36484</td>
</tr>
</tbody>
</table>

Note: Corruption-related crimes include those such as: theft from the government, embezzlement, or other abuse of government resources by a public official; bribery of or by a public official; extortion or other ‘political shakedowns’ by a public official and so on.

Appendix 2: Change in the ranking, based on the estimates – Calculation

The procedure for arriving at these estimates is as follows. We first calculate the standard deviation of fiscal decentralization, which is 0.0909 (and for reference the mean was 0.5114). This variable is in decimal form so the proper interpretation is that the standard deviation of decentralization is roughly 9 percent. We then use the coefficient estimates on the decentralization variable to calculate how much the underlying index score, for each index, would change if a state decentralized by one standard deviation (for example, if Oregon’s local share of government spending went from its current level of 50.8 percent to 59.8 percent, to where it would be roughly tied with Pennsylvania). With knowledge of how much the underlying index scores change, we can then re-rank the states and see how many spots in the rankings the average state would move up if it were to decentralize by one standard deviation. Here, for the “average” state we use the 25th ranked state in each index.