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The Work Environment Index: Technical Background Paper

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WORK ENVIRONMENT INDEX TECHNICAL BACKGROUND PAPER

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I. Introduction

The vast majority of Americans work for a living. The track record of different states varies widely when it comes to providing decent opportunities for working people. The Work Environment Index (WEI) captures these differences and provides a basis for evaluating how well each state does in creating an economy that supports its working population. The purpose of this article is to detail the construction of the WEI and to explain the design of the Index. This paper serves as a technical companion to the report *Decent Work in America: The 2005 Work Environment Index*.

Many factors contribute to a good environment for working people: quality jobs, adequate opportunities for employment, basic social protections, and being treated fairly. The WEI is a composite measure of these different dimensions and provides a basis for comparing the quality of the work environment in all 50 states and the District of Columbia. The WEI has multiple objectives:

- to capture and quantify the various dimensions of the work environment on a state-by-state basis.
- to provide a direct, relatively transparent, and easy-to-understand measurement that is firmly rooted in publicly available data sources.
- to provide a basis for making comparisons between the states that are fair and objective.
- to create a tool for analyzing other socio-economic issues at the state level: e.g. poverty rate differentials, job quality and quantity trade-offs, and patterns of economic growth.

II. Overview

To construct the Index at the state level, we measured the quality of the work environment along three dimensions:

- (1) job quality,
- (2) job opportunities, and
- (3) workplace fairness.

Each state, and the District of Columbia, received a score from 0 to 100 in each of the three areas. We discuss the variables that were used to calculate the scores of each individual component in subsequent sections of this report. The Work Environment Index, also ranging from 0 to 100, is simply the average of these components. Table 1

shows the scores for the WEI and the three components along with the overall rank for each of the states. All data used to construct the 2005 WEI was collected in 2004. Therefore, the components of the WEI reflect measurements of the quality of the work environment during the previous year.

III. Components of the Work Environment Index

The following sections describe and discuss the data and sources used to construct each of the components of the Work Environment Index. Specific indicators were identified for each of the three components. For example, the median wage is one of the indicators of job quality and the state unemployment rate is an indicator of job opportunities. The variables used to construct the WEI are measured in different units and have different ranges – e.g. average wages are measured differently from unemployment rates. Therefore, the indicators must be standardized before being combined into a single component of the WEI. We standardized each indicator on a scale of 0 to 10, with 0 indicating the worst score in terms of the overall work environment and 10 indicating the best score.

For variables like the median wage, in which a higher value indicates a better work environment, the following formula was used to convert the indicator to a scale of 0 to 10:

$$I_i = \frac{X_i - \min\{X\}}{\max\{X\} - \min\{X\}} \times S$$

in which I_i represents the value of the standardized indicator for state i , X_i is the actual value of the relevant variable for state i , $\min\{X\}$ is the minimum value of the variable across all states, $\max\{X\}$ is the maximum value of the variable across all states, and S is the maximum value of the range for the standardized indicator (in this case, 10).

For variables like the unemployment rate, in which a higher value indicates a worse work environment, the following formula was used to convert the indicator to a scale of 0 to 10:

$$I_i = \frac{\max\{X\} - X_i}{\max\{X\} - \min\{X\}} \times S$$

The score for each of the three components of the WEI was calculated from the simple arithmetic average of all the standardized indicators associated with that component. The same methodology used to standardize the indicator variables was applied to this average, but in this case the overall score of the component was converted to a scale of 0 to 100 (in the above formulas, S would equal 100). In this way, all three components of the WEI received a score scaled along the same range. This standardization is necessary to prevent one component from dominating the calculation of the WEI due to the units of analysis or the scale of the component indicators.

The sections that follow describe the details of the data and indicators used to construct the WEI. The tables that accompany this discussion (Tables 2-5b) show the values of the indicators used, the standardized values of these variables, and the overall component scores. By following the calculation of the WEI's component parts through these tables, the technique used to construct the WEI becomes clearer.

COMPONENT 1: JOB QUALITY

Three indicators are used to score the job quality component of the WEI: (1) average hourly wages, (2) the percent of employed people in jobs with job-related health insurance benefits; and (3) the percent of employed people in jobs with job-related retirement benefits.

Average hourly wages (with a state-level cost-of-living adjustment) – Average wages were calculated from the out-going rotation groups of the 2004 Current Population Survey (CPS), jointly administered by the Census Department and the Bureau of Labor Statistics. The sample was restricted to employed individuals, 25 to 64 years old. Because Federal and military employees are subject to federal employment regulations and thus less likely to reflect state-level labor market conditions, these individuals were excluded. All wage data are weighted by the CPS-provided out-going rotation sampling weight.

Workers under 25 years of age were excluded from these estimates in order to avoid problems of interpretation associated with youth employment and the employment of students. Young people tend to have higher unemployment rates and lower wages than older workers. However, many, but certainly not all, young people engage in the labor market differently than do adults. Often young workers receive income transfers, housing, food, payment for college fees and tuition, or other forms of support from their families. In addition, many young workers are covered through their parent's health insurance programs. Therefore, young workers may be willing to work at lower wages or endure longer periods of unemployment than older adults. Of course, some workers aged 16 to 24 do support families of their own with little help in terms of family transfers. However, separating these individuals from other young workers would add a layer of complexity to the estimates and make the WEI less transparent. Moreover, indicators for young workers (e.g. youth unemployment) are highly correlated with the same indicators for older adult workers, suggesting that little information is lost by restricting the age range in the construction of the WEI.

In most cases, the reported hourly wage rate for individuals was used. When weekly earnings were reported for an individual instead of hourly wages, the hourly rate was calculated by dividing earnings by the usual number of hours worked. Among the workers for whom we calculated an hourly rate, a relatively small number of cases reported usual hours as varying or zero (3.1 percent). In those cases, hours worked the previous week were used instead as long as the response was consistent with an individual's reported usual full-time or part-time status. A very small number of observations (0.8 percent) were excluded because there was not sufficient data to make these calculations.

Median wages were calculated for employed persons with at least a high school diploma and no more than a four-year degree. There are two dominant reasons for using median wages instead of the mean. First, because wage distributions are typically skewed, mean wages are less representative of the average worker than are median wages. Second, using median wages allows us to avoid any bias that may be introduced by CPS's topcoding procedures (i.e. assigning a maximum value to the wage variable in surveys).

Restricting the sample by educational attainment provides a simple control for differences in educational composition across states. This group of workers captures the large majority of workers (79 percent) of all U.S. workers between the ages of 25 and 64 years old.

Because the composition of educational attainment varies across states, we performed a simple test to see whether compositional differences in educational attainment by state drive the state differences in median wages. To do this, we examined median wages while controlling for educational attainment. Specifically, we estimated median wages by state for the following three groups of workers: (1) workers with a high school diploma and no more, (2) workers with a high school diploma and some tertiary education, and (3) workers with a B.A. degree and no more. We then estimated the national proportions of workers in each educational attainment category: 30 percent, 28 percent, and 21 percent, respectively. These proportions, scaled to sum to one, were then used to weight the state median wages by educational category. The resulting state median wages reflect differences in wage levels while controlling for differences in the educational attainment of workers across states. Put another way, the differences in these weighted median wages across states reflect differences in the returns to education rather than differences in educational attainment.

The correlation coefficient between this alternative measure, using the weighted median wage, and the unweighted median wage series used in the WEI is 0.98. In other words, these series move extremely closely together, indicating that the weighted median does not introduce any significant additional information about the relative degree of variation between states with respect to median wages. Therefore, to keep the variables as simple as possible we used the simple state-level median wage.

Average hourly wages were adjusted for cost-of-living differences between states. No government agency produces a reliable measure of state-by-state cost-of-living differentials that is up-dated each year. Therefore, we needed to construct an appropriate adjustment. We adapted a method that was employed by researchers at the Census Department to make cost-of-living adjustments to the Federal poverty line (see Short 2001). The biggest cost-of-living differences between states are observed in housing and utilities expenditures. The Department of Housing and Urban Development produces estimates of average rent and utilities at the county level, call the Fair Market Rent (FMR). The FMR can be used to construct a cost-of-living adjustment on a state-by-state basis.

All cost-of-living calculations were determined relative to the national average. The county-level FMR data was aggregated to the state level using population-weighted averages. A ratio of state rents to national rents was calculated for all rental housing types (classified by number of rooms). The non-weighted average of this ratio across all housing types was used as an indicator of the state-level housing cost differential relative to the national average. The state-level cost-of-living adjustment was calculated as a weighted average of non-housing and housing components. The overall weight on the housing component of the cost-of-living adjusted includes both housing and utilities, since the FMR includes both of these costs. The weights were determined by the housing cost share that the Bureau of Labor Statistics uses to calculate the Consumer Price Index for all urban consumers.

Non-housing costs were assumed to be adequately reflected in the national average. This could pose problems since non-housing costs can vary from state to state. Unfortunately, systematic state-level data is not collected for non-housing price differences. To test whether this might significantly bias our cost-of-living adjustment, we used the non-housing, non-utilities cost-of-living estimates prepared by the American Chamber of Commerce Research Association (ACCRA). ACCRA estimates the cost-of-living differences between select urban areas in the U.S. It has been criticized as not producing consistent estimates of these differentials over time (Fisher and Gordon 2001, Appendix). Nevertheless, it gives us a basis for testing whether the FMR cost-of-living adjustment used to compute the WEI might be grossly inaccurate.

ACCRA data for all four quarters in 2004 was used to measure cost-of-living differentials in major urban centers for each state. Prices in three additional categories of expenditure were examined: food, transportation, and health care. Together with housing and utilities, these account for over 80 percent of the goods and services included in the calculation of the national Consumer Price Index. Price differentials for these three additional categories in the largest city in each state were selected. For states with two or more cities with populations over 100,000, the price differentials for the two largest cities were used and a weighted average (based on city population) was calculated. No data existed for two states – New Hampshire and Maine. For these states, New England-wide average price differences were used.

A new state-level cost-of-living adjustment was calculated from this data. The FMR technique was still used to measure price differences in housing and utilities. The ACCRA data was used to measure price differences in food, transportation, and healthcare. The prices of all other goods and services were assumed to move along with the national average. Once again, the weights for the various components were taken from the weights the Bureau of Labor Statistics uses to calculate the Consumer Price Index for all urban consumers.

The correlation coefficient between the FMR cost-of-living adjustment and the FMR plus ACCRA cost-of-living adjustment was 0.98 – nearly perfect. Moreover, the differences between the two cost-of-living adjustments were small relative to the overall

variability observed between states. Differences between the two series amounted to less than one standard deviation of the FMR adjustment measure, with one exception.

The single exception was the state of Hawaii. The price of non-housing goods and services in Hawaii were sufficiently higher than the national average to warrant a special adjustment. The Department of Health and Human Services assumes that the Hawaiian cost of living is approximately 15 percent higher than the national average in the development of its Federal poverty guidelines, used for determining eligibility for certain programs. Because of the exceptional nature of Hawaii, we apply this same 15 percent adjustment to non-housing costs in the state.

Based on these tests, we are confident that using the FMR cost-of-living adjustment is a reasonable technique for making wages more comparable between states. The ACCRA cost-of-living adjustments were not used because: (1) they represent city-level, not state-level measurements; (2) information is not available for all states; (3) the consistency of the estimates has been questioned; and (4) the cost-of-living adjustment using the FMR alone is highly correlated with a reasonable alternative measure that incorporates the ACCRA estimates.

Table 2 shows the 2004 median hourly wage estimates, the cost-of-living adjustment factor, and hourly wages adjusted for the cost of living in each state.

Health insurance – The percent of persons, aged 25 to 64, who reported positive wage or salary earnings in the previous year and whose employers or whose unions paid all or part of their insurance premiums. The sample excluded those who reported that their longest job held last year was with the Federal government or the military. The values were calculated from the 2004 March supplement to the Current Population Survey – the Annual Social and Economic Supplement. The 2004 supplement is the latest currently available, therefore this variable reflects health insurance benefits provided to workers in 2003. Data for this measure are weighted by the CPS-provided individual sampling weight for the March supplement.

Whether employers provide health benefits may be influenced by state-subsidized health insurance. States that provide generous subsidized health insurance programs may have the effect of lowering the proportions of workers obtaining employer-provided benefits. If this is the case, then the proportion of workers with job-related health benefits is not a good measure of how workers are faring in a particular state with regard to their access to health care.

In order to examine whether such a relationship exists between the state-subsidized health insurance and employer-provided health insurance, we compared two series: (1) the percent of workers with job-related health benefits excluding workers that received subsidized healthcare and (2) the percent of workers with job-related health benefits among all workers. If there is a systematic relationship between job-related health benefits and state-subsidized health insurance, then we would expect that states with generous state-subsidized health insurance programs will have a higher value in the

first series compared to the second series. That is, we should see these series diverge if there is a tradeoff between the occurrence of employer-provided health benefits and the generosity of state-subsidized health care programs (at a given point in time, across states). We found that these series are highly correlated (0.97). That is, they reflect the same relative differences between states regardless of whether workers who received subsidized health insurance are included. Therefore, using the percentage of workers whose employers or unions paid all or part of their health insurance premiums does not produce a systematic bias in the standardized indicator for each state.

Retirement benefits –The percent of persons, aged 25 to 64, who reported positive wage or salary earnings in the previous year and whose employers provided a pension or other type of retirement plan. The sample excluded those who reported that their longest job held last year was with the Federal government or the military. The values were calculated from the 2004 March supplement to the Current Population Survey – the Annual Social and Economic Supplement. The 2004 supplement is the latest currently available, therefore this variable reflects retirement benefits provided to workers in 2003. Data for this measure are weighted by the CPS-provided individual sampling weight for the March supplement.

Table 3 summarizes the indicators used to construct the job quality component, the standardized values of these variables (0 to 10), and the overall job quality score.

COMPONENT 2: JOB OPPORTUNITIES

Three indicator variables are used to score the job opportunities component of the WEI: (1) the state-level unemployment rate; (2) the rate of involuntary part-time employees; and (3) the percent of long-term unemployed persons.

Unemployment Rate – The number of unemployed expressed as a percent of the total labor force for each state. This variable was calculated from monthly samples of the 2004 Current Population Survey (CPS). The sample was restricted to members of the labor force, 25 to 64 years old. People are considered to be in the labor force if they (1) were employed during the reference week of the survey or (2) were unemployed, but available for work and made specific efforts to find employment sometime during the 4-week period prior to the survey's reference week.

An alternative measure of employment opportunities is the employment to population ratio. The employment to population ratio has the advantage of being able to track changes in the number of discouraged workers (individuals who want work but drop out of the labor force because they are unable to find work), in contrast to the unemployment rate which tracks the rate of employment only among those in the labor force. If there is a significant degree of variation across states in the proportion of discouraged workers, then the employment to population ratio may be a better measure of the difficulties individuals face in obtaining work as compared to the unemployment rate. However, the employment to population ratio also reflects differences in labor force participation rates that are likely to vary by state for reasons other than the difficulty of

individuals who are seeking work to obtain work. These reasons include decisions about whether family members should enter the labor force or provide for the family via non-market work (such as housework, family care, or other unpaid work). Because of this we examine the prevalence of discouraged workers specifically rather than the employment to population ratio.

We use one of the alternative unemployment measures proposed by the Bureau of Labor Statistics [Monthly Labor Review, October 1995, “BLS introduces new range of alternative unemployment measures,” pp. 19-26] to explore whether taking account of discouraged workers produces a significantly different unemployment measure. This alternative measure includes discouraged workers among the number of unemployed, rather than classifying such workers as not in the labor force (referred to as U-4 by the BLS). To the extent that there are discouraged workers, this will increase both the numerator and the denominator of the traditional unemployment rate measure. If the prevalence of discouraged workers varies by state, then this alternative measure of unemployment will vary from the traditional unemployment rate measure. We find that this alternative measure is highly collinear with the traditional unemployment rate measure; the correlation coefficient between the two measures is 0.996. Because of the cross-sectional differences in labor force participation rates that cannot be wholly explained by discouraged workers, and because of the high correlation between the state unemployment rate and an alternative measure that includes discouraged workers, we use the state-level unemployment rate in the job opportunities component of the WEI.

Involuntary Part-Time Employment – The number of persons, aged 25 to 64, who are involuntarily employed part-time expressed as a percent of all employed persons. This variable was calculated from the monthly samples of the 2004 Current Population Survey (CPS). Individuals are considered to be involuntarily part-time employees if they gave either of the following two reasons for having less than full-time employment: (1) they are working part-time because of an inability to find full-time work or (2) they are working part-time due to slack business conditions.

Proportion of Long-Term Unemployed – The percent of persons in the labor force, aged 25 to 64, who have been unemployed for more than 26 weeks. Greater than 26 weeks is considered “long-term” because it exceeds the number of weeks unemployed persons are generally able to receive unemployment insurance payments.

Because the measure of unemployment duration provided by the CPS is a measure of an “interrupted” spell of unemployment, taking the average number of weeks unemployed does not provide a measure of how long a newly unemployed person should expect to be unemployed. While this measure tends to go up and down depending on whether the average length of a completed spell of unemployment goes up and down, there is a particular problem that arises when comparing this measure across states. If states are at different points of their business cycle, then comparing the average duration of an interrupted spell of unemployment across states may reflect business cycle differences rather than differences in expected unemployment durations.

To see this, consider what happens to the average duration of unemployment (of an interrupted spell) when a state begins the downswing of a business cycle: there is an influx of newly unemployed workers and the average duration of unemployment falls. Compared to a state that is in the upswing of a business cycle, those workers who are still unemployed may have a long average duration of unemployment that is minimally dampened by any influx of newly unemployed workers. Though a newly unemployed worker is likely to have a longer completed spell of unemployment in the former example, the measure of the average number of weeks unemployed of an interrupted spell of unemployment will be longer in the latter example. Such differences in the average weeks of unemployment may be alleviated somewhat by using annual averages, thus smoothing out changes due to business cycles.

To avoid these varying affects of the business cycle across states, we use the percentage of long-term unemployed in the labor force as an indicator. This measure should be less sensitive to fluctuations in unemployment caused by business cycles because it is not affected by changes in the rate of newly unemployed workers.

As a check on whether our percent of long term unemployed tracks well the differences across states with regard to whether a newly unemployed person should expect to be unemployed for a relatively long period of time, we compare our measure to an estimate of expected completed duration (of unemployment) based on the CPS proposed by Kaitz (1970). Kaitz's estimate of expected completed duration requires the assumption that states' labor markets are in a steady state, that is, that the rate of workers becoming newly unemployed is constant and the duration of unemployment is constant. If this assumption holds, then the duration of unemployment may be estimated by dividing the total number of unemployed by the number of newly unemployed (defined as unemployed for less than five weeks). While this assumption is stringent, (however, less so based on annual numbers rather than monthly), we calculate this measure to provide a comparison series to our proportion of long-term unemployed. We find that our measure, the proportion of long-term unemployed is positively correlated (0.70) with the Kaitz estimate of expected completed duration.

A final note should be made about our measures of job opportunities. While the focus of our estimates is on the adult working population, we find that these measures also do well in reflecting state-by-state differences in employment opportunities among young workers – as mentioned earlier. Specifically, we find that the youth unemployment rate (the unemployment rate among persons 16 to 24 years old) correlates well with adult unemployment rate (0.83), the proportion of long-term unemployed (0.72), as well as the overall employment opportunities index, with a correlation coefficient of -0.71 (this correlation is negative because higher values of the job opportunities index correspond with lower unemployment rates and higher employment rates).

Table 4 summaries the indicators used to construct the job opportunities component, the standardized values of these variables (0 to 10), and the overall employment opportunities score.

COMPONENT 3: WORKPLACE FAIRNESS

Two sets of indicators were used to measure workplace fairness. The first broad category of workplace fairness is the degree of equity among workers in each state. The second category included indicators of the regulatory environment – focusing on state-level legislation. Two variables were used to measure different dimensions of job equity: (1) the percent of very low-wage workers in each state and (2) the gender wage gap. Three variables were used to characterize the regulatory environment: (1) whether the state is a “right-to-work” state, (2) a measure of the ability of public employees to collectively bargain; and (3) the existence of a state-level minimum wage law.

Equity

Gender wage gap – Measured as women’s average hourly wages as a percent of men’s average hourly rate. Part-time employment accounts for a larger share of women’s employment than men’s, and not all part-time work can be classified as “involuntary”. Among the employed women in our sample, 82 percent are employed full-time. In contrast, among the employed men in our sample, 96 percent are employed full-time. Therefore, wage estimates are restricted to full-time employees to make women’s wage estimates comparable to men’s. Average hourly wages are estimated using the same methodology described in the job quality section. See “average hourly wages” above for details. Because of the small sample sizes available for full-time women workers by educational categories, a similar analysis of the educational attainment differences by gender by state could not be done with any accuracy.

Including a measure of the gender wage gap is an important gauge of how good and bad jobs are distributed across types of workers. The measurement is influenced by a number of different factors that vary from state to state: work/family conflicts; labor market segmentation (in which women are stuck in “pink collar” jobs or limited by “glass ceilings”); and gender discrimination.

Percent of very low-wage workers – Measured as the percent of workers in each state, age 25 to 64, earning less than the national median wage in 2004 (\$15.00) adjusted for cost-of-living differences between states (see the “average hourly wage” section of the “job quality” component section for a description of the cost-of-living adjustment).

We chose this measure of the concentration of workers at very low wages instead of the other standard measures of wage equity (e.g., the ratio of the 50th wage percentile to 10th wage percentile) because we are interested primarily in capturing the degree to which workers in each state earn low wage *levels* as opposed to a low wage position *relative* to other workers within the same state. Because the ratio between the 50th wage percentile to the 10th wage percentile can shrink when the median wage falls (even when there is no change to the 10th wage percentile), the decline in this ratio may provide a misleading picture of whether the welfare of very low-wage workers is improving.

Despite this qualitative difference between these two measures, the two measures are positively correlated with each other (with a correlation coefficient of 0.60) indicating that the percent of very low-wage workers captures a fair amount of the variation in the ratio of the 50th wage percentile to the 10th wage percentile across states. In other words, the percent of very low-wage workers also tracks this alternative equity indicator reasonably well.

Regulatory Environment

Right-to-Work State – Indicates whether the state has a so-called “right-to-work” law. States that have “right-to-work” provisions that apply only to a small subset of employees are not counted as right-to-work states. A list of state-level right-to-work laws can be found at the Employment Standard Administration’s website, part of the U.S. Department of Labor: www.dol.gov/esa/programs/whd/state/righttowork.htm. The variable takes on a value of zero for states with a “right-to-work” law and one for states without such laws.

Public Sector Bargaining – Indicates to what extent the state allows or engages in collective bargaining with its public employees. States vary in the particulars of their public collective bargaining laws, precedents, and practices. Therefore, the variable takes on a value of 0 to 2 (prior to being standardized). States receive a score of zero if they (1) prohibit public sector public bargaining; (2) do not engage in collective bargaining with public employees; or (3) only have collective bargaining agreements with a negligible fraction of public employees. The variable takes on a value of 1 if states engage in collective bargaining with a significant fraction of their public employees, but exclude a large number of public workers from bargaining. The variable takes on a value of 2 if states collectively bargain with all or nearly all public sector employees.

Minimum Wage – This indicator was constructed by comparing state minimum wage laws to the Federal minimum wage program. Municipal ordinances or county-level provisions affecting minimum wages were not taken into account with this measure. Some states set minimum wages above the current Federal level of \$5.15 per hour. Others have no minimum wage laws. The most common situation is to have a state-level minimum wage law in which the state set the minimum wage at the Federal level. Some workers not covered by the Federal law would be protected by the state law.

Since the most common arrangement is for states to have a minimum wage law with the wage floor set equal to the Federal level, we anchored the standardized value of the minimum wage indicator for these states at approximately 5 – halfway between 0 and 10. States without a minimum wage law or with a minimum wage below the Federal rate of \$5.15 received a score of zero. States with a minimum wage above the Federal level would receive a score between 5 and 10, depending on the level of the minimum wage.

The following algorithm was used to derive the value for the minimum wage variable, prior to standardization, based on the state-level minimum wages as they existed in 2004. The variable was assigned a value of 0.6 for states with no additional minimum wage protection or with a state-level minimum wage below the Federal level. Assigning a

minimum value of 0.6 to the variable prior to standardization sets a range for the variable that is consistent with the standardized values discussed in the previous paragraph. For states with a minimum wage equal to or above the Federal level, the variable took on a value equal to the ratio of the state minimum to the Federal minimum. These values were then standardized using the same formula as was used with all other variables. It should be noted that this variable does not attempt to capture detailed differences in coverage between different state minimum wage laws. Data on state minimum wages can be obtained from the Department of Labor, www.dol.gov/esa/minwage/america.htm.

These three regulatory measures appear to proxy well for other types of labor laws, such as state-level prevailing wage laws mandating labor standards for workers employed on state-funded or financially-assisted construction projects. Among the 22 states with “right-to-work” laws in 2004, 15 do not have state-level prevailing wage laws in 2004. In contrast, among the remaining 29 states without “right-to-work” laws, 27 had state-level prevailing wage laws in 2004. Therefore, the presence of “right-to-work” laws proxies well for whether or not a state has a state-level prevailing wage.

A similarly close association exists between the degree to which states are supportive of public sector bargaining and state-level prevailing wage laws. Among the 22 states that have no to low support for bargaining among their state employees, 14 did not have state prevailing wage laws in 2004. Among the 29 states that have high support for bargaining among their state employees, only three do not have state prevailing wage laws in 2004.

Finally, whether states have a state prevailing wage law is also broadly consistent with whether a state has a state minimum set above the Federal minimum wage. All thirteen states (including Washington D.C.) with state minimum wage rates set above the Federal minimum wage have state prevailing wage laws. None of the state minimum wage laws in the 17 states without state prevailing wage laws exceed the Federal level.

Table 5a summarizes the values of the indicators used to calculate the workplace fairness component. Table 5b reports the standardized values of these variables (0 to 10) and the overall workplace fairness score.

IV. The Work Environment Index and State-Level Poverty Rates

The Work Environment Index is a composite measurement of different factors that help determine the quality of the economic and social environment for working people. Therefore, we would expect that the WEI would allow us to better understand why some states do better than others in terms of other socio-economic outcomes. If this is not the case, we would worry that the WEI is not reflecting the economic reality it was designed to capture. The state-level rate of poverty, as measured by the U.S. Census Department, provides one such socio-economic variable. Data on poverty rates may be obtained from www.census.gov/hhes/www/poverty/poverty03/table8.pdf.

We compare the WEI score with the state-level poverty rates, averaged over 2001-2003, the latest available state-level poverty estimates. Figure 1 shows the relationship between these two variables. The simple correlation coefficient between the WEI score and the state-level poverty rate is -0.74. That is, higher WEI scores are associated with lower poverty rates. A two-variable regression analysis of this relationship provides us with additional information. Regression results show that the relationship is indeed negative and highly statistically significant (the coefficient on the Work Environment Index is -0.16 with a t-statistic of -7.8). This suggests that every 1 point increase in the WEI score is associated with a 0.16 percentage point decline in the state-level poverty rate.

In addition, we find that the WEI rankings are highly correlated (coefficient of 0.73) with states' ranks based on poverty rates, with the lowest poverty rate receiving a rank of one. These strong relationships provide evidence that the WEI tracks factors that are important to the overall well-being of individuals and families.

V. The WEI and Economic Performance

We also would like to know how the WEI relates to overall indicators of economic performance in the various states. Does a good working environment support economic growth and a favorable business climate? Or does a better environment for working people discourage investors and raise concerns about profitability? A thorough analysis of these issues is beyond the scope of this technical discussion. We limit our attention in this paper to the correlation between the WEI and some general measures of economic performance. These relationships were presented in the summary report *Decent Work In America: The 2005 Work Environment Index*.

We use three direct measures of each state's economic performance as a way to compare overall WEI scores with the state's economic climate. These three direct measures of economic outcomes include: (1) the growth in the real Gross State Product per capita over a 5-year period (1999-2004); (2) the growth in employment over a 5-year period (1999-2004); and (3) the growth in new businesses over a 5-year period (1998-2003). We provide these data and state ranks based on these data in Table 6.

5-Year Growth in real Gross State Product Per Capita – Measures the percent change in real Gross State Product divided by state population from 1999 to 2004. Data for the Gross State Product and state populations can be obtained from the Bureau of Economic Analysis, www.bea.gov

5-Year Growth in Employment – Measures the percent change in total non-farm employment from 1999 to 2004. Employment data are based on the Current Employment Statistics (CES) survey of non-farm payroll records and are published by the Bureau of Labor Statistics. This employment data can be obtained from www.bls.gov/sae/home.htm. This establishment-level monthly survey is considered to provide reliable estimates of changes in employment levels.

5-Year Growth in New Businesses – Measures the percent change in the number of companies applying for new employment identification numbers per 1,000 workers, from 1998-2003 (the latest data available). The data series is published by the U.S. Small Business Administration, Office of Advocacy based on data provided by the U.S. Department of Labor (ETA) and U.S. Census Bureau. Data were taken from the Corporation for Enterprise Development (CFED) website (www.cfed.org).

We also consider the relationship between WEI and seven different published economic climate indexes. These seven indexes include:

1. *Fortune Magazine's* "Best States for Business" index (www.fortune.com);
2. *Site Selection's* "Top 25 State Business Climate" index (Nov. 2004, p 746-748);
3. The Small Business and Entrepreneurship Council's "Small Business Survival Index" (www.sbecouncil.org);
4. The Tax Foundation's "State Business Tax Climate Index" (www.taxfoundation.org);
5. The Cato Institute's "Fiscal Policy Report Card" (www.cato.org);
6. The Pacific Research Institute's "U.S. Economic Freedom Index" (www.pacificresearch.org);
7. The Beacon Hill Institute's "Competitiveness Index." (www.beaconhill.org)

Table 7 presents the state rankings for each of these seven indexes.

Table 8 presents the correlation matrix of the state rankings based on the three economic outcomes and seven economic climate indexes, along with the WEI index. The following observations can be made. First, the direct measures of economic outcomes are all positively correlated with each other so greater growth in real GSP per capita, tends to accompany greater growth in employment and greater growth in new businesses. Second, the Small Business Survival Index, State Business Tax Climate Index, Fiscal Policy Report Card, U.S. Economic Freedom Index and the Competitiveness Index only loosely move together and tend to move in the opposite direction as *Fortune's* Best States and *Site Selection's* Top 25. Therefore, these economic climate indexes do not appear to be tracking similar aspects of states' economies.

Correspondingly, these economic climate indexes do not appear to have any consistent relationship with the direct measures of economic outcomes: correlation coefficients between the economic climate indexes and 5-year growth in real GSP per capita range between -0.32 and 0.39; correlation coefficients between the economic climate indexes and 5-year growth in employment range between -0.22 and 0.25; and correlation coefficients between the economic climate indexes and 5-year growth in new businesses range between -0.16 and 0.32.

Not surprisingly, the relationship between the WEI rankings and these economic climate indicators vary widely, with correlation coefficients between the rankings ranging between -0.20 and 0.40. With regard to the direct measures of economic outcomes, the WEI rankings tend to move somewhat in the opposite direction of employment growth

(correlation coefficient of -0.10) and independently of new business growth (correlation coefficient of 0.03), but move directly with growth in real GSP per capita (correlation coefficient of 0.40).

VI. Summary

This paper describes how we constructed the WEI index and the indicators used to capture the important aspects of each state's work environment. As such, it provides the technical detail behind the summary report *Decent Work In America: The 2005 Work Environment Index*. One of our major goals was to construct the index using a methodology that is transparent and easy-to-understand, but also captures the multiple facets of the work environment. Therefore, the index and its component indicators are all based on well-known, publicly-available data sources. To insure the fairness and relative objectivity of the index, we used various methods to show that the measures we used in the index were robust, and not systematically biased. Moreover, the components of the index correlate well with other labor market characteristics that are not included as core indicators. Finally, the paper makes some preliminary observations about the relationship between states' work environments and other important economic issues, such as poverty rates, economic and employment growth.

Sources (other than those detailed in the text)

AFSCME Department of Research and Collective Bargaining Services. 2004. "AFSCME State and Local Collective Bargaining Arrangements," March 4.

Department of Health and Human Resources. "Computations for the 2004 Annual Update of the HSS Poverty Guidelines." <http://aspe.hhs.gov/poverty/04computations.shtml>. (accessed 31 August 2005).

Fisher, Peter and Gordon, Colin. 2001. "The State of Working Iowa." The Iowa Policy Project, Mt. Vernon, IA.

Kaitz, Hyman B. 1970. "Analyzing the length of spells of unemployment," *Monthly Labor Review*, November, p. 11.

Short, Katherine. 2001. "Where We Live." Paper presented at the Annual Meeting of the Society of Government Economists, New Orleans, LA. January 2001.

Figure 1

Work Environment Index and State-Level Poverty Rates

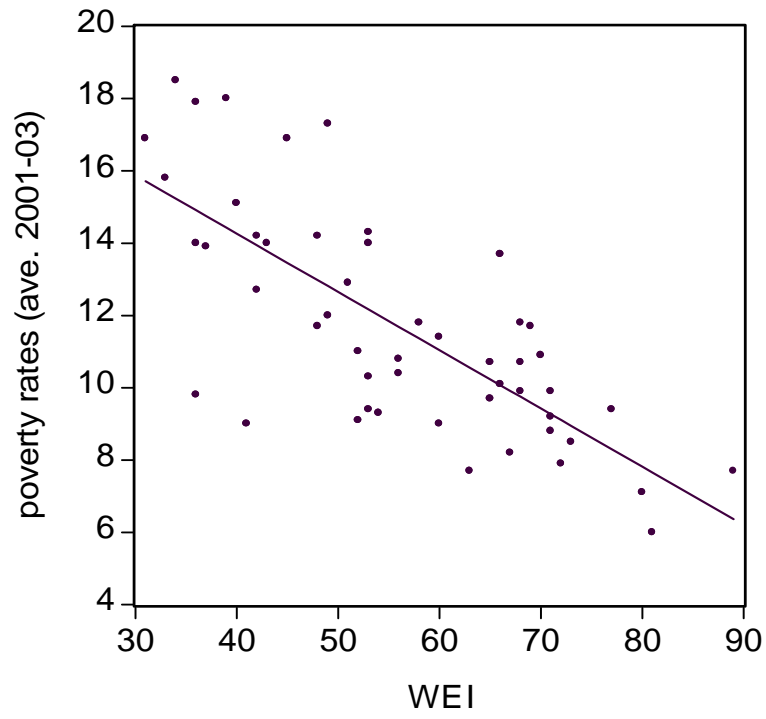


TABLE 1. WORK ENVIRONMENT INDEX (WEI) AND COMPONENTS

State	WEI COMPONENTS				
	Overall WEI Score	Overall WEI Rank	Job Quality	Job Opps.	Workplace Fairness
AK (Alaska)	60	21	47.8 (33)	37.1 (43)	94.9 (2)
AL (Alabama)	40	43	56.4 (22)	52.9 (33)	9.8 (49)
AR (Arkansas)	34	49	21.0 (50)	53.9 (32)	26.6 (41)
AZ (Arizona)	37	45	33.2 (45)	64.4 (19)	14.3 (46)
CA (California)	51	33	38.9 (40)	27.6 (47)	85.8 (9)
CO (Colorado)	53	27	48.9 (30)	57.3 (27)	53.6 (31)
CT (Connecticut)	72	6	87.1 (4)	49.3 (36)	79.3 (14)
DC (Dist. Columbia)	49	34	48.4 (31)	10.0 (49)	88.0 (8)
DE (Delaware)	89	1	89.6 (2)	85.2 (6)	93.2 (3)
FL (Florida)	42	40	23.3 (49)	67.2 (15)	36.3 (36)
GA (Georgia)	49	34	54.4 (24)	65.7 (16)	28.0 (40)
HI (Hawaii)	65	18	48.2 (32)	80.5 (9)	65.0 (25)
IA (Iowa)	73	5	82.0 (6)	78.5 (11)	57.3 (30)
ID (Idaho)	52	31	43.7 (37)	71.3 (13)	40.3 (34)
IL (Illinois)	58	23	64.4 (17)	35.8 (44)	75.0 (15)
IN (Indiana)	71	7	72.0 (11)	61.0 (24)	80.0 (12)
KS (Kansas)	53	27	74.6 (9)	51.3 (35)	32.4 (38)
KY (Kentucky)	66	16	67.2 (16)	65.5 (17)	66.6 (24)
LA (Louisiana)	31	51	47.6 (34)	44.1 (41)	0.0 (51)
MA (Massachusetts)	65	18	52.4 (27)	60.7 (25)	82.5 (10)
MD (Maryland)	63	20	40.0 (39)	80.0 (10)	69.7 (20)
ME (Maine)	68	12	49.1 (29)	64.7 (18)	91.7 (4)
MI (Michigan)	56	24	89.6 (2)	3.7 (50)	73.4 (18)
MN (Minnesota)	80	3	100.0 (1)	62.0 (21)	79.4 (13)
MO (Missouri)	66	16	85.2 (5)	48.9 (37)	63.8 (26)
MS (Mississippi)	36	46	46.2 (35)	56.2 (29)	6.2 (50)
MT (Montana)	53	27	27.9 (47)	62.9 (20)	68.1 (22)
NC (North Carolina)	42	40	50.2 (28)	45.7 (39)	30.4 (39)
ND (North Dakota)	69	11	64.0 (18)	100.0 (1)	42.2 (33)
NE (Nebraska)	71	7	68.1 (15)	83.3 (7)	61.0 (28)
NH (New Hampshire)	81	2	77.6 (7)	89.8 (4)	74.1 (16)
NJ (New Jersey)	67	15	70.5 (13)	61.3 (23)	70.4 (19)
NM (New Mexico)	39	44	0.0 (51)	46.3 (38)	69.5 (21)
NV (Nevada)	41	42	27.5 (48)	78.1 (12)	17.3 (45)
NY (New York)	48	36	37.3 (42)	38.3 (42)	68.1 (22)
OH (Ohio)	56	24	71.5 (12)	33.3 (46)	63.5 (27)
OK (Oklahoma)	43	39	34.1 (43)	58.3 (26)	37.5 (35)
OR (Oregon)	48	36	53.0 (26)	0.0 (51)	90.4 (5)
PA (Pennsylvania)	68	12	74.3 (10)	56.8 (28)	74.1 (16)
RI (Rhode Island)	68	12	58.3 (21)	55.4 (31)	90.4 (5)
SC (South Carolina)	36	46	60.4 (20)	35.2 (45)	12.2 (47)
SD (South Dakota)	70	10	54.2 (25)	94.4 (2)	60.8 (29)
TN (Tennessee)	53	27	55.9 (23)	67.8 (14)	34.5 (37)
TX (Texas)	33	50	28.4 (46)	44.9 (40)	24.4 (43)
UT (Utah)	36	46	33.3 (44)	61.5 (22)	12.1 (48)
VA (Virginia)	54	26	62.7 (19)	80.8 (8)	19.8 (44)
VT (Vermont)	77	4	46.0 (36)	85.9 (5)	100.0 (1)
WA (Washington)	60	21	70.5 (13)	21.6 (48)	88.9 (7)
WI (Wisconsin)	71	7	76.6 (8)	56.2 (29)	81.7 (11)
WV (West Virginia)	45	38	40.9 (38)	52.3 (34)	43.3 (32)
WY (Wyoming)	52	31	37.8 (41)	91.5 (3)	26.0 (42)

States with identical scores receive the same ranking. The state rankings for the individual components are in parentheses.

TABLE 2. AVERAGE HOURLY WAGES AND COST-OF-LIVING ADJUSTMENTS

State	Median Hourly Wages	Cost of Living Adjust.	Hourly Wages (COLA)
AK (Alaska)	\$17.00	1.05	\$16.17
AL (Alabama)	\$13.75	0.86	\$15.90
AR (Arkansas)	\$12.02	0.85	\$14.10
AZ (Arizona)	\$15.00	1.01	\$14.83
CA (California)	\$17.31	1.16	\$14.87
CO (Colorado)	\$16.48	1.04	\$15.87
CT (Connecticut)	\$18.00	1.08	\$16.68
DC (Dist. Columbia)	\$16.83	1.26	\$13.39
DE (Delaware)	\$16.50	0.99	\$16.69
FL (Florida)	\$14.23	0.99	\$14.32
GA (Georgia)	\$15.00	0.99	\$15.13
HI (Hawaii)	\$14.40	1.17	\$12.27
IA (Iowa)	\$14.00	0.87	\$16.13
ID (Idaho)	\$13.70	0.89	\$15.46
IL (Illinois)	\$15.75	1.02	\$15.52
IN (Indiana)	\$14.40	0.89	\$16.13
KS (Kansas)	\$14.42	0.89	\$16.13
KY (Kentucky)	\$13.02	0.86	\$15.15
LA (Louisiana)	\$13.90	0.88	\$15.71
MA (Mass.)	\$17.00	1.18	\$14.40
MD (Maryland)	\$16.25	1.12	\$14.48
ME (Maine)	\$13.29	0.93	\$14.29
MI (Michigan)	\$16.00	0.95	\$16.87
MN (Minnesota)	\$17.00	0.99	\$17.14
MO (Missouri)	\$14.99	0.90	\$16.66
MS (Mississippi)	\$13.00	0.85	\$15.24
MT (Montana)	\$12.21	0.88	\$13.84
NC (N. Carolina)	\$14.00	0.92	\$15.16
ND (N. Dakota)	\$12.50	0.86	\$14.45
NE (Nebraska)	\$13.37	0.87	\$15.33
NH (New Hamp.)	\$16.02	1.04	\$15.46
NJ (New Jersey)	\$17.50	1.13	\$15.49
NM (New Mex.)	\$13.14	0.90	\$14.52
NV (Nevada)	\$14.42	1.05	\$13.78
NY (New York)	\$15.80	1.10	\$14.35
OH (Ohio)	\$14.18	0.91	\$15.54
OK (Oklahoma)	\$12.50	0.87	\$14.34
OR (Oregon)	\$15.00	0.97	\$15.52
PA (Penn.)	\$14.96	0.95	\$15.77
RI (Rhode Island)	\$15.50	0.96	\$16.16
SC (S. Carolina)	\$14.00	0.90	\$15.62
SD (S. Dakota)	\$12.45	0.88	\$14.08
TN (Tennessee)	\$13.75	0.88	\$15.54
TX (Texas)	\$14.00	0.96	\$14.61
UT (Utah)	\$14.10	0.97	\$14.54
VA (Virginia)	\$15.61	1.04	\$15.01
VT (Vermont)	\$14.42	0.97	\$14.93
WA (Wash.)	\$16.00	1.01	\$15.89
WI (Wisconsin)	\$15.00	0.90	\$16.59
WV (W. Virginia)	\$12.96	0.85	\$15.32
WY (Wyoming)	\$13.00	0.88	\$14.76

TABLE 3. JOB QUALITY (2004) – DATA AND SCORING

State	Hourly Wage (COLA)	Health Benefits	Pension Benefits	Wages (0-10)	Health (0-10)	Pension (0-10)	Job Quality
AK (Alaska)	\$16.17	56.8%	48.5%	8.0	4.4	3.2	47.8
AL (Alabama)	\$15.90	59.0%	51.3%	7.4	5.4	4.8	56.4
AR (Arkansas)	\$14.10	54.5%	46.7%	3.8	3.4	2.3	21.0
AZ (Arizona)	\$14.83	59.0%	45.5%	5.3	5.4	1.6	33.2
CA (California)	\$14.87	58.5%	48.2%	5.3	5.2	3.1	38.9
CO (Colorado)	\$15.87	57.8%	49.2%	7.4	4.9	3.6	48.9
CT (Connecticut)	\$16.68	63.1%	58.0%	9.1	7.2	8.5	87.1
DC (Dist. Columbia)	\$13.39	64.9%	52.6%	2.3	8.0	5.5	48.4
DE (Delaware)	\$16.69	64.8%	57.7%	9.1	7.9	8.3	89.6
FL (Florida)	\$14.32	58.0%	44.1%	4.2	4.9	0.8	23.3
GA (Georgia)	\$15.13	59.5%	52.9%	5.9	5.6	5.7	54.4
HI (Hawaii)	\$12.27	69.6%	53.1%	0.0	10.0	5.8	48.2
IA (Iowa)	\$16.13	60.7%	59.9%	7.9	6.1	9.5	82.0
ID (Idaho)	\$15.46	56.1%	49.9%	6.6	4.1	4.0	43.7
IL (Illinois)	\$15.52	62.0%	53.7%	6.7	6.7	6.1	64.4
IN (Indiana)	\$16.13	60.8%	55.6%	7.9	6.2	7.1	72.0
KS (Kansas)	\$16.13	61.0%	56.5%	7.9	6.3	7.6	74.6
KY (Kentucky)	\$15.15	63.6%	55.0%	5.9	7.4	6.8	67.2
LA (Louisiana)	\$15.71	56.3%	50.4%	7.1	4.2	4.3	47.6
MA (Mass.)	\$14.40	60.4%	54.1%	4.4	6.0	6.3	52.4
MD (Maryland)	\$14.48	59.7%	49.2%	4.5	5.7	3.6	40.0
ME (Maine)	\$14.29	60.7%	52.9%	4.1	6.1	5.7	49.1
MI (Michigan)	\$16.87	64.1%	57.6%	9.4	7.6	8.2	89.6
MN (Minnesota)	\$17.14	65.1%	60.2%	10.0	8.0	9.7	100.0
MO (Missouri)	\$16.66	63.4%	57.1%	9.0	7.3	8.0	85.2
MS (Mississippi)	\$15.24	58.8%	49.6%	6.1	5.3	3.9	46.2
MT (Montana)	\$13.84	54.9%	50.3%	3.2	3.6	4.2	27.9
NC (N. Carolina)	\$15.16	61.6%	49.4%	5.9	6.5	3.8	50.2
ND (N. Dakota)	\$14.45	57.9%	60.8%	4.5	4.9	10.0	64.0
NE (Nebraska)	\$15.33	59.0%	58.4%	6.3	5.4	8.7	68.1
NH (New Hamp.)	\$15.46	64.3%	57.7%	6.6	7.7	8.3	77.6
NJ (New Jersey)	\$15.49	62.5%	56.0%	6.6	6.9	7.4	70.5
NM (New Mex.)	\$14.52	46.6%	42.5%	4.6	0.0	0.0	0.0
NV (Nevada)	\$13.78	63.1%	43.8%	3.1	7.2	0.7	27.5
NY (New York)	\$14.35	58.3%	49.6%	4.3	5.1	3.9	37.3
OH (Ohio)	\$15.54	62.5%	56.2%	6.7	6.9	7.5	71.5
OK (Oklahoma)	\$14.34	55.3%	50.8%	4.2	3.8	4.5	34.1
OR (Oregon)	\$15.52	59.1%	51.2%	6.7	5.4	4.7	53.0
PA (Penn.)	\$15.77	62.4%	56.6%	7.2	6.9	7.7	74.3
RI (Rhode Island)	\$16.16	60.1%	50.3%	8.0	5.9	4.2	58.3
SC (S. Carolina)	\$15.62	60.9%	52.6%	6.9	6.2	5.5	60.4
SD (S. Dakota)	\$14.08	61.2%	55.5%	3.7	6.4	7.1	54.2
TN (Tennessee)	\$15.54	59.8%	51.8%	6.7	5.7	5.1	55.9
TX (Texas)	\$14.61	54.6%	47.8%	4.8	3.5	2.9	28.4
UT (Utah)	\$14.54	57.6%	47.7%	4.7	4.8	2.8	33.3
VA (Virginia)	\$15.01	60.0%	56.5%	5.6	5.8	7.6	62.7
VT (Vermont)	\$14.93	56.8%	52.3%	5.5	4.4	5.3	46.0
WA (Wash.)	\$15.89	62.6%	54.4%	7.4	7.0	6.5	70.5
WI (Wisconsin)	\$16.59	58.5%	57.6%	8.9	5.2	8.2	76.6
WV (W. Virginia)	\$15.32	55.5%	49.7%	6.3	3.9	3.9	40.9
WY (Wyoming)	\$14.76	56.6%	49.6%	5.1	4.4	3.9	37.8

TABLE 4. JOB OPPORTUNITIES (2004) – DATA AND SCORING

State	Unemp. Rate	Invol. Part-time	Long-term Unemp.	Unemp. Rate (0-10)	Invol. P/T (0-10)	L.T. Unemp. (0-10)	Job Opps.
AK (Alaska)	6.1%	2.1%	0.9%	1.1	4.4	6.5	37.1
AL (Alabama)	4.5%	1.6%	1.2%	4.8	6.8	4.7	52.9
AR (Arkansas)	4.4%	2.1%	0.8%	5.1	4.6	6.9	53.9
AZ (Arizona)	3.7%	1.8%	0.8%	6.6	5.8	7.0	64.4
CA (California)	5.0%	2.6%	1.3%	3.6	2.1	3.8	27.6
CO (Colorado)	4.1%	1.8%	1.0%	5.9	5.8	5.8	57.3
CT (Connecticut)	3.9%	2.1%	1.2%	6.2	4.2	4.9	49.3
DC (Dist. Columbia)	6.6%	2.0%	2.0%	0.0	4.7	0.0	10.0
DE (Delaware)	3.2%	1.1%	0.7%	7.8	9.7	7.5	85.2
FL (Florida)	3.7%	1.8%	0.8%	6.7	6.2	7.3	67.2
GA (Georgia)	4.0%	1.5%	1.0%	6.0	7.7	6.0	65.7
HI (Hawaii)	2.3%	2.0%	0.5%	10.0	4.8	9.0	80.5
IA (Iowa)	3.5%	1.4%	0.7%	7.3	8.0	7.9	78.5
ID (Idaho)	4.1%	1.5%	0.7%	5.9	7.5	7.8	71.3
IL (Illinois)	5.0%	1.8%	1.6%	3.6	5.9	2.2	35.8
IN (Indiana)	4.3%	1.5%	1.0%	5.3	7.5	5.7	61.0
KS (Kansas)	4.4%	1.8%	1.2%	5.0	6.2	4.6	51.3
KY (Kentucky)	3.8%	2.0%	0.6%	6.6	5.0	8.2	65.5
LA (Louisiana)	4.8%	2.2%	1.0%	4.2	4.1	5.7	44.1
MA (Mass.)	4.2%	1.6%	1.1%	5.6	7.2	5.6	60.7
MD (Maryland)	3.3%	1.3%	0.8%	7.8	8.8	7.1	80.0
ME (Maine)	3.9%	1.8%	0.8%	6.4	5.8	7.4	64.7
MI (Michigan)	5.8%	2.7%	2.0%	1.7	1.2	0.1	3.7
MN (Minnesota)	3.9%	1.8%	0.9%	6.3	6.0	6.5	62.0
MO (Missouri)	4.6%	1.7%	1.3%	4.7	6.7	3.9	48.9
MS (Mississippi)	4.5%	1.4%	1.3%	4.8	8.3	4.1	56.2
MT (Montana)	3.8%	1.8%	0.8%	6.4	5.8	6.8	62.9
NC (N. Carolina)	4.2%	2.2%	1.1%	5.5	3.8	5.1	45.7
ND (N. Dakota)	2.4%	1.0%	0.4%	9.7	10.0	9.4	100.0
NE (Nebraska)	2.8%	1.6%	0.5%	8.8	6.8	9.0	83.3
NH (New Hamp.)	2.9%	1.1%	0.6%	8.6	9.6	8.0	89.8
NJ (New Jersey)	4.0%	1.5%	1.1%	6.1	7.4	5.1	61.3
NM (New Mex.)	4.7%	2.2%	1.0%	4.5	4.1	6.0	46.3
NV (Nevada)	3.4%	1.5%	0.6%	7.4	7.3	8.4	78.1
NY (New York)	4.8%	2.0%	1.5%	4.1	5.2	3.1	38.3
OH (Ohio)	5.1%	2.2%	1.3%	3.4	3.8	3.9	33.3
OK (Oklahoma)	3.8%	1.8%	1.1%	6.5	5.8	5.5	58.3
OR (Oregon)	6.3%	3.0%	1.8%	0.7	0.0	1.3	0.0
PA (Penn.)	4.4%	1.7%	1.0%	5.1	6.3	5.9	56.8
RI (Rhode Island)	4.4%	1.7%	1.1%	5.1	6.4	5.5	55.4
SC (S. Carolina)	5.7%	1.8%	1.4%	2.1	5.9	3.5	35.2
SD (S. Dakota)	2.7%	1.2%	0.5%	9.1	9.2	9.2	94.4
TN (Tennessee)	3.9%	1.4%	0.9%	6.2	7.9	6.2	67.8
TX (Texas)	4.9%	2.1%	1.0%	3.9	4.2	6.0	44.9
UT (Utah)	3.7%	2.2%	0.7%	6.7	4.1	7.8	61.5
VA (Virginia)	3.2%	1.2%	0.8%	8.0	8.8	7.0	80.8
VT (Vermont)	2.9%	1.5%	0.5%	8.5	7.7	9.1	85.9
WA (Wash.)	5.2%	2.8%	1.4%	3.3	0.9	3.6	21.6
WI (Wisconsin)	4.4%	1.9%	0.9%	5.2	5.5	6.5	56.2
WV (W. Virginia)	4.4%	2.0%	1.0%	5.1	5.1	6.0	52.3
WY (Wyoming)	2.9%	1.4%	0.3%	8.7	8.0	10.0	91.5

TABLE 5a. WORKPLACE FAIRNESS (2004) – DATA AND SCORING

State	Equity		Regulatory Environment		
	Gender Gap	Low wage	Right-to-Work	Public Bargain	Min. Wages
AK (Alaska)	81.7%	4.4%	No	2	\$7.15
AL (Alabama)	77.4%	5.7%	Yes	0	---
AR (Arkansas)	80.0%	5.5%	Yes	0	\$5.15
AZ (Arizona)	82.0%	6.5%	Yes	0	---
CA (California)	87.5%	11.4%	No	2	\$6.75
CO (Colorado)	82.4%	6.4%	No	0	\$5.15
CT (Connecticut)	75.7%	8.0%	No	2	\$7.10
DC (Dist. Columbia)	89.4%	11.1%	No	2	\$6.60
DE (Delaware)	83.8%	3.4%	No	2	\$6.15
FL (Florida)	81.9%	8.2%	Yes	2	---
GA (Georgia)	83.2%	6.9%	Yes	0	\$5.15
HI (Hawaii)	81.1%	16.0%	No	2	\$6.25
IA (Iowa)	81.3%	3.8%	Yes	2	\$5.15
ID (Idaho)	80.6%	5.5%	Yes	1	\$5.15
IL (Illinois)	80.0%	8.0%	No	2	\$5.50
IN (Indiana)	78.2%	3.3%	No	2	\$5.15
KS (Kansas)	82.8%	4.4%	Yes	1	\$2.65
KY (Kentucky)	81.1%	5.4%	No	1	\$5.15
LA (Louisiana)	73.8%	8.2%	Yes	0	---
MA (Mass.)	83.2%	10.2%	No	2	\$6.75
MD (Maryland)	80.5%	9.8%	No	2	\$5.15
ME (Maine)	83.6%	4.7%	No	2	\$6.35
MI (Michigan)	75.7%	4.9%	No	2	\$5.15
MN (Minnesota)	78.8%	4.0%	No	2	\$5.15
MO (Missouri)	77.0%	4.2%	No	1	\$5.15
MS (Mississippi)	76.9%	7.2%	Yes	0	---
MT (Montana)	76.7%	8.1%	No	2	\$5.15
NC (N. Carolina)	81.3%	4.4%	Yes	0	\$5.15
ND (N. Dakota)	80.2%	4.3%	Yes	1	\$5.15
NE (Nebraska)	85.3%	4.7%	Yes	2	\$5.15
NH (New Hamp.)	76.0%	4.7%	No	2	\$5.15
NJ (New Jersey)	80.0%	9.2%	No	2	\$5.15
NM (New Mex.)	78.1%	8.4%	No	2	\$5.15
NV (Nevada)	79.4%	9.7%	Yes	0	\$5.15
NY (New York)	83.0%	12.3%	No	2	\$5.15
OH (Ohio)	78.9%	5.4%	No	2	\$4.25
OK (Oklahoma)	80.0%	6.5%	Yes	1	\$5.15
OR (Oregon)	80.9%	5.7%	No	2	\$7.05
PA (Penn.)	78.7%	6.5%	No	2	\$5.15
RI (Rhode Island)	81.0%	4.9%	No	2	\$6.75
SC (S. Carolina)	77.3%	4.4%	Yes	0	---
SD (S. Dakota)	85.5%	4.9%	Yes	2	\$5.15
TN (Tennessee)	83.7%	4.0%	Yes	1	---
TX (Texas)	84.1%	9.3%	Yes	0	\$5.15
UT (Utah)	72.3%	7.6%	Yes	0	\$5.15
VA (Virginia)	79.6%	8.6%	Yes	0	\$5.15
VT (Vermont)	87.5%	4.4%	No	2	\$6.75
WA (Wash.)	78.7%	5.4%	No	2	\$7.16
WI (Wisconsin)	80.3%	3.8%	No	2	\$5.15
WV (W. Virginia)	75.4%	6.9%	No	0	\$5.15
WY (Wyoming)	70.0%	5.6%	Yes	1	\$5.15

TABLE 5b. WORKPLACE FAIRNESS (2004) – DATA AND SCORING

State	Equity		Regulatory Environment			Work-Place Fairness
	Gender Gap (0-10)	Low wage (0-10)	Right-to-Work (0-10)	Public Bargain (0-10)	Min. Wages (0-10)	
AK (Alaska)	6.1	9.1	10.0	10.0	10.00	94.9
AL (Alabama)	3.8	8.1	0.0	0.0	0.00	9.8
AR (Arkansas)	5.2	8.2	0.0	0.0	5.10	26.6
AZ (Arizona)	6.2	7.5	0.0	0.0	0.00	14.3
CA (California)	9.0	3.6	10.0	10.0	9.00	85.8
CO (Colorado)	6.4	7.6	10.0	0.0	5.10	53.6
CT (Connecticut)	3.0	6.2	10.0	10.0	9.90	79.3
DC (Dist. Columbia)	10.0	3.8	10.0	10.0	8.60	88.0
DE (Delaware)	7.1	9.9	10.0	10.0	7.50	93.2
FL (Florida)	6.1	6.1	0.0	10.0	0.00	36.3
GA (Georgia)	6.8	7.1	0.0	0.0	5.10	28.0
HI (Hawaii)	5.7	0.0	10.0	10.0	7.80	65.0
IA (Iowa)	5.8	9.6	0.0	10.0	5.10	57.3
ID (Idaho)	5.5	8.3	0.0	5.0	5.10	40.3
IL (Illinois)	5.2	6.3	10.0	10.0	5.90	75.0
IN (Indiana)	4.3	10.0	10.0	10.0	5.10	80.0
KS (Kansas)	6.6	9.1	0.0	5.0	0.00	32.4
KY (Kentucky)	5.8	8.3	10.0	5.0	5.10	66.6
LA (Louisiana)	2.0	6.1	0.0	0.0	0.00	0.0
MA (Mass.)	6.8	4.5	10.0	10.0	9.00	82.5
MD (Maryland)	5.4	4.8	10.0	10.0	5.10	69.7
ME (Maine)	7.0	8.9	10.0	10.0	8.00	91.7
MI (Michigan)	2.9	8.7	10.0	10.0	5.10	73.4
MN (Minnesota)	4.6	9.5	10.0	10.0	5.10	79.4
MO (Missouri)	3.6	9.3	10.0	5.0	5.10	63.8
MS (Mississippi)	3.6	6.9	0.0	0.0	0.00	6.2
MT (Montana)	3.5	6.2	10.0	10.0	5.10	68.1
NC (N. Carolina)	5.8	9.1	0.0	0.0	5.10	30.4
ND (N. Dakota)	5.3	9.2	0.0	5.0	5.10	42.2
NE (Nebraska)	7.9	8.9	0.0	10.0	5.10	61.0
NH (New Hamp.)	3.1	8.9	10.0	10.0	5.10	74.1
NJ (New Jersey)	5.2	5.3	10.0	10.0	5.10	70.4
NM (New Mex.)	4.2	6.0	10.0	10.0	5.10	69.5
NV (Nevada)	4.8	4.9	0.0	0.0	5.10	17.3
NY (New York)	6.7	2.9	10.0	10.0	5.10	68.1
OH (Ohio)	4.6	8.3	10.0	10.0	0.00	63.5
OK (Oklahoma)	5.2	7.5	0.0	5.0	5.10	37.5
OR (Oregon)	5.6	8.1	10.0	10.0	9.70	90.4
PA (Penn.)	4.5	7.5	10.0	10.0	5.10	74.1
RI (Rhode Island)	5.7	8.7	10.0	10.0	9.00	90.4
SC (S. Carolina)	3.8	9.1	0.0	0.0	0.00	12.2
SD (S. Dakota)	8.0	8.7	0.0	10.0	5.10	60.8
TN (Tennessee)	7.1	9.5	0.0	5.0	0.00	34.5
TX (Texas)	7.3	5.2	0.0	0.0	5.10	24.4
UT (Utah)	1.2	6.6	0.0	0.0	5.10	12.1
VA (Virginia)	5.0	5.8	0.0	0.0	5.10	19.8
VT (Vermont)	9.0	9.1	10.0	10.0	9.00	100.0
WA (Wash.)	4.5	8.3	10.0	10.0	10.00	88.9
WI (Wisconsin)	5.3	9.6	10.0	10.0	5.10	81.7
WV (W. Virginia)	2.8	7.1	10.0	0.0	5.10	43.3
WY (Wyoming)	0.0	8.2	0.0	5.0	5.10	26.0

TABLE 6. ECONOMIC OUTCOMES – DATA AND RANK

State	5-Year Growth in New Business (1998-2003)		5-Year Growth in Real GSP Per Capita (1999-2004)		5-Year Growth in Employment (1999-2004)	
	Value	Rank	Value	Rank	Value	Rank
AK (Alaska)	-5.3%	22	0.9%	50	9.4%	5
AL (Alabama)	-14.7%	37	8.7%	29	-0.9%	42
AR (Arkansas)	22.0%	1	5.3%	38	1.5%	28
AZ (Arizona)	-14.5%	36	9.9%	21	9.7%	3
CA (California)	-37.1%	49	11.8%	16	3.9%	18
CO (Colorado)	-5.7%	24	6.6%	34	2.2%	25
CT (Connecticut)	-15.7%	39	8.4%	30	-1.1%	44
DC (Dist. Columbia)	NA	NA	18.7%	3	7.2%	10
DE (Delaware)	-6.6%	25	12.2%	15	2.7%	22
FL (Florida)	-0.6%	11	8.7%	28	9.9%	2
GA (Georgia)	-27.9%	47	1.2%	49	0.9%	33
HI (Hawaii)	1.8%	6	9.2%	26	8.8%	7
IA (Iowa)	-4.4%	15	15.9%	6	-0.9%	41
ID (Idaho)	-4.6%	17	13.4%	11	8.9%	6
IL (Illinois)	-5.6%	23	4.2%	42	-2.5%	49
IN (Indiana)	-11.7%	32	6.6%	35	-1.3%	46
KS (Kansas)	-6.6%	25	8.3%	31	-0.3%	40
KY (Kentucky)	-19.2%	42	3.1%	46	0.0%	37
LA (Louisiana)	-15.6%	38	-5.5%	51	1.3%	30
MA (Massachusetts)	5.3%	5	14.3%	8	-1.7%	47
MD (Maryland)	-3.7%	14	11.4%	17	5.3%	11
ME (Maine)	-29.4%	48	10.4%	19	4.7%	15
MI (Michigan)	-19.4%	43	1.5%	48	-4.2%	51
MN (Minnesota)	7.1%	3	12.3%	14	2.1%	26
MO (Missouri)	1.3%	7	3.8%	44	-1.2%	45
MS (Mississippi)	-10.9%	30	3.9%	43	-2.4%	48
MT (Montana)	8.0%	2	14.1%	9	8.4%	8
NC (North Carolina)	-22.1%	46	9.4%	25	-1.1%	43
ND (North Dakota)	-7.8%	27	21.8%	1	4.1%	16
NE (Nebraska)	-4.4%	16	9.4%	24	2.8%	21
NH (New Hampshire)	-19.8%	44	12.4%	13	3.5%	20
NJ (New Jersey)	1.3%	8	10.8%	18	2.6%	23
NM (New Mexico)	5.9%	4	7.2%	33	8.4%	9
NV (Nevada)	-10.0%	28	5.0%	40	17.2%	1
NY (New York)	-4.8%	18	13.1%	12	-0.1%	38
OH (Ohio)	-12.6%	35	3.3%	45	-2.8%	50
OK (Oklahoma)	-17.2%	41	8.2%	32	0.6%	36
OR (Oregon)	-3.7%	13	9.5%	23	1.2%	31
PA (Pennsylvania)	-2.7%	12	9.8%	22	1.0%	32
RI (Rhode Island)	-20.5%	45	15.1%	7	4.9%	14
SC (South Carolina)	-12.4%	34	5.4%	37	-0.2%	39
SD (South Dakota)	-37.6%	50	18.8%	2	2.6%	24
TN (Tennessee)	0.9%	9	10.0%	20	0.6%	35
TX (Texas)	-10.4%	29	5.5%	36	3.5%	19
UT (Utah)	-5.1%	20	5.1%	39	5.2%	12
VA (Virginia)	-5.1%	19	13.4%	10	5.0%	13
VT (Vermont)	-0.2%	10	18.7%	4	4.0%	17
WA (Washington)	-10.9%	31	2.3%	47	1.9%	27
WI (Wisconsin)	-17.1%	40	8.7%	27	0.7%	34
WV (West Virginia)	-11.9%	33	4.7%	41	1.4%	29
WY (Wyoming)	-5.2%	21	17.2%	5	9.6%	4

TABLE 7. ECONOMIC CLIMATE INDEXES (2004) – RANK

State	Fortune Magazine's "Best States for Business"	Site Selection's "Top 25 State Business Climate"	SBEC's "Small Business Survival Index"	Tax Foundation's "State Business Tax Climate Index"	Cato Institute's "Fiscal Policy Report Card"	Pacific Research Institute's "U.S. Economic Freedom Index"	Beacon Hill Institute's "Competitiveness Index"
AK (Alaska)			20	3		33	27
AL (Alabama)	28	10	8	16	32	25	47
AR (Arkansas)	27		24	43	40	22	45
AZ (Arizona)	8	24	17	19	30	11	32
CA (California)	1	14	50	38	1	49	22
CO (Colorado)	18	23	9	8	3	2	5
CT (Conn.)	19		34	37		48	15
DC (Dist.Columbia)			51				
DE (Delaware)	29		23	18	37	8	18
FL (Florida)	4	6	5	2	11	22	29
GA (Georgia)	20	4	22	20	23	19	24
HI (Hawaii)			49	50	11	35	46
IA (Iowa)		19	43	28	33	16	15
ID (Idaho)			25	31	30	4	14
IL (Illinois)	9	3	19	23	20	46	39
IN (Indiana)	21	18	10	12		14	42
KS (Kansas)	22		31	32	28	1	10
KY (Kentucky)	23	12	29	44		39	38
LA (Louisiana)	30	20	32	27		40	49
MA (Mass.)	14		41	33	11	41	1
MD (Maryland)	24		21	21	17	27	19
ME (Maine)			46	42	8	29	36
MI (Michigan)	15	15	6	36	21	34	24
MN (Minnesota)	6	16	47	48	6	44	4
MO (Missouri)	16	24	18	11	41	10	20

TABLE 7, cont.

State	Fortune Magazine's "Best States for Business"	Site Selection's "Top 25 State Business Climate"	SBEC's "Small Business Survival Index"	Tax Foundation's "State Business Tax Climate Index"	Cato Institute's "Fiscal Policy Report Card"	Pacific Research Institute's "U.S. Economic Freedom Index"	Beacon Hill Institute's "Competitiveness Index"
MS (Mississippi)	31	13	7	25		27	50
MT (Montana)			38	17	4	21	28
NC (N. Carolina)	32	5	37	30	28	24	26
ND (N. Dakota)			26	39	23	18	11
NE (Nebraska)	33		35	35	34	20	6
NH (New Hamp)	34		14	5	2	7	7
NJ (New Jersey)	12		44	34	37	42	44
NM (New Mex.)			36	40	6	37	33
NV (Nevada)	13	22	2	6	39	12	37
NY (New York)	2	2	45	49	19	50	34
OH (Ohio)	10	8	40	29	42	43	43
OK (Oklahoma)	25	21	30	14	16	6	35
OR (Oregon)	26		39	10	21	29	15
PA (Penn.)	5	11	12	22	35	45	30
RI (R. Island)			48	46	11	47	31
SC (S. Carolina)	35	8	13	24	5	13	40
SD (S. Dakota)	36		1	1	8	15	23
TN (Tennessee)	11	7	16	15	8	26	41
TX (Texas)	3	1	11	4	27	17	20
UT (Utah)	17		28	26		5	2
VA (Virginia)	7	16	15	12	26	3	9
VT (Vermont)			42	45	17	35	8
WA (Wash.)			4	9	23	31	3
WI (Wisconsin)			27	41	11	38	13
WV (W. Virginia)			33	47	36	32	48
WY (Wyoming)			3	7		9	12

Table 8. Correlation Matrix of WEI, Economic Outcomes, and Economic Climate Index Rankings

	WEI	5-Yr. Real GSP Growth	5-Yr. Employment Growth	5-Yr. New Business Growth	Fortune Magazine Best States	Site Selection Top 25	SBEC Small Business Survival	Tax Foundation State Business Tax Climate	Cato Institute Fiscal Policy Report	Pacific Research Institute Economic Freedom	Beacon Hill Institute Competitiveness
WEI	1.00										
5-Yr. Real GSP Growth	0.40	1.00									
5-Yr. Employment Growth	-0.10	0.36	1.00								
5-Yr. New Business Growth	0.03	0.21	0.22	1.00							
Fortune Magazine Best States	-0.05	0.10	0.20	0.32	1.00						
Site Selection Top 25	-0.20	0.00	-0.22	-0.05	0.15	1.00					
SBEC Small Business Survival	-0.19	-0.32	-0.02	-0.16	-0.16	-0.08	1.00				
Tax Foundation State Business Tax Climate	-0.17	-0.12	0.15	-0.06	-0.12	-0.17	0.73	1.00			
Cato Institute Fiscal Policy Report	0.11	0.31	0.20	-0.11	-0.01	0.12	-0.12	-0.03	1.00		
Pacific Research Institute Economic Freedom	-0.16	0.07	0.25	-0.01	-0.36	-0.44	0.49	0.55	-0.15	1.00	
Beacon Hill Institute Competitiveness	0.40	0.39	0.18	0.13	0.07	-0.20	-0.01	0.13	0.20	0.28	1.00