SYMPOSIUM

Iowa: The Most Representative State?

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There are perhaps many good arguments for Iowa maintaining its "first in the nation" status, in terms of the presidential nomination process. The strongest, however, would seem to be an argument that it is representative of the nation as a whole. That is, somehow, Iowa is a microcosm of the national political forces, faithfully mirroring the relevant electoral structures and choices of the macro-stage. This belief is certainly held by some. Palo Alto County, in northwestern Iowa, has long been considered a presidential bellwether, faithfully voting with the winning candidate in a series beginning in 1916. But as media worthy as that fact might be, it seems most likely a product of chance, for its heavily rural, northern European-descended population make it far from demographically representative of contemporary America (Lewis-Beck and Rice 1992, 4–6). A similar charge is commonly made today against the state as a whole, by political commentators across the land. But is it true? Is Iowa really unrepresentative? That is the question we seek to answer.

Because *representation* has several meanings, it is important to be very clear about our definition. We refer to "descriptive representation" (Pitkin 1967). To what extent do the social, economic, and political characteristics of Iowa describe those of the nation itself? Put another way, is Iowa that most "typical" of states, or is it quite

Table 1
Factor Loadings

VARIABLE	FACTOR 1 (ECONOMICS)	FACTOR 2 (DIVERSITY)	FACTOR 3 (SOCIAL PROBLEMS)
Population	.449	.484	.371
65 and Older	.046	−.511	−.123
18 and Younger	−.105	.583	.327
White Alone	−.213	−.242	**−.762**
African American	.196	.009	**.792**
American Indian	−.551	.197	−.201
Asian American	.635	.624	.008
Hispanic American	−.040	**.856**	.037
Infant Mortality	−.134	−.246	**.801**
BA degree	.536	.387	−.538
Violent Crime Rate	.061	.424	.621
Per Capita Government Revenue	.099	−.118	−.403
Unemployment Rate	.115	−.104	.692
Manufacturing Employment	.170	−.604	.305
Average Pay	**.861**	.383	−.058
Per Capita Income	**.719**	.285	−.412
Gross State Product	.499	.509	.319
Household Income	**.707**	.349	−.453
Percent Poor	−.470	−.051	**.718**
Energy Consumption	−.464	−.256	.183
Homeownership	−.315	−.516	.086
Mobile Homes	**−.750**	−.090	.375
Traffic Fatalities	**−.777**	−.022	.422
Vanity Plates	.124	.037	−.362
Drivers Test Scores	−.531	−.126	−.256
Adult Depressive Episodes	−.304	−.046	−.286
Poor Mental Days	−.075	−.078	.629
Beer Per Capita	−.514	−.142	−.096
Wine Per Capita	.450	.431	−.417
Abortion Rate	.623	.571	.087
Voter Turnout	.198	−.273	−.640
Charity Contributions	.027	.562	.202
Secular Charity Contributions	.126	**.706**	−.191
Incarceration Rate	−.281	.195	**.748**

(*continued*)

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Table 1 (continued)

VARIABLE	FACTOR 1 (ECONOMICS)	FACTOR 2 (DIVERSITY)	FACTOR 3 (SOCIAL PROBLEMS)
Health Care Coverage	.627	−.432	−.430
Healthy Weight	.212	.539	−.558
Tobacco Use	−.210	−.551	.540
Seat Belt Use	.172	.428	.167
Percent Conservative	−.512	−.101	.503
Percent Liberal	.405	.175	−.415
High School Graduation Rate	.135	−.319	−.656
Union Membership Rate	**.760**	−.037	−.168
Private Sector Union Rate	.691	−.124	.000
Median Housing Price	.686	.476	−.213
Number of Farms	.001	−.066	.409
Percent Urban	.500	.683	.006
Language Other Than English	.280	**.848**	−.006
Percent Born in State	.156	−.696	.348
Percent Foreign Born	.489	**.816**	.001
In-State Tuition	.657	−.371	−.227
State Debt Per Capita	.656	.151	−.095

unlike the others? Initially, we are encouraged with regard to its typicality, on the basis certain geographic and historic indicators (Lafore 1975, 9). In particular, examining all the continental states, it is about at the midpoint in terms of size (thousands of square miles) and location (latitude and longitude). Further, it entered the union in 1846, placing it near the middle of the statehood timeline. But it could be contended that these facts are mere accidents of birth, telling us nothing about the inhabitants themselves. To respond to this criticism, we examine an extensive battery of state-level socioeconomic and political measures. These items are submitted to a factor analysis, in order to uncover their underlying patterns. Eventually, each state is scored, and rated, on central dimensions of performance and policy. As shall been seen, Iowa emerges, perhaps surprisingly, as a highly representative state.

DATA AND METHODOLOGY

Our dataset consists of 51 current (2000–2007) indicators of social, cultural, economic, political, and policy activities in each of the 50 states. The data are from standard documentary sources, such the U.S. Census Bureau. Further, our search is aimed to be exhaustive, covering as many variables as we

Table 2

Iowa in Comparison

	SOCIAL	POLITICAL AND POLICY	ECONOMIC
Higher than 1 Standard Deviation from the Mean (7 indicators)	Percent 65 and older; Percent White; High School Graduation Rate; Percent Born in State	Voting Eligible Population Turnout	Percent Manufacturing Employment; Number of Farms
Within 1 Standard Deviation of the Mean (39 indicators)	Population; Percent 18 and Younger; Percent African American; Percent American Indian; Percent Asian; Percent Hispanic; Percent BA Degree; Percent Vanity License Plates; Median Driver's Test Scores; Adult Depressive Episodes; Beer Consumption Per Capita; Abortion Rate; Percent not Overweight; Adult Tobacco Use; Percent Urban: Percent Language Other than English; Percent Foreign Born	Infant Mortality Rate; Violent Crime Rate; Per Capita Government Revenue; Traffic Fatalities Per 100 Million Miles; Incarceration Rate; Percent Covered by Health Care; Percent Seat Belt Use; Percent Conservative; Percent Liberal; In-State Tuition Rate: State Debt Per Capita	Unemployment Rate; Average Pay; Per Capita Income; Median Household Income; Gross State Product; Percent Below Poverty Level; Energy Consumption Per Capita; Homeownership; Mobile Home Rate; Percent Union Members; Percent Private Sector Union Members
Lower than 1 Standard Deviation from the Mean (5 indicators)	Poor Mental Days; Wine Consumption Per Capita; Average Percent of Income to Charity; Average Percent of Income to Secular Charity		Median Housing Price

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Table 3

State Representativeness Scores (absolute values all three factors)

RANK	STATE	REPRESENTATION SCORE	RANK	STATE	REPRESENTATION SCORE
1	Kansas	.85	25	Kentucky	2.55
2	Oregon	.95	26	Colorado	2.62
3	Delaware	1.02	27	New Hampshire	2.66
4	Virginia	1.04	28	Arkansas	2.68
5	North Carolina	1.46	29	Montana	2.73
6	Washington	1.50	30	Connecticut	2.73
7	Indiana	1.55	31	Idaho	2.75
8	Missouri	1.61	32	South Dakota	2.76
9	Oklahoma	1.80	33	Vermont	2.80
10	Rhode Island	1.88	34	Louisiana	2.80
11	Nebraska	1.88	**35**	Nevada	2.84
12	Iowa	1.92	36	Minnesota	2.87
13	Florida	1.97	37	Arizona	2.90
14	Georgia	1.97	38	Massachusetts	2.92
15	Illinois	2.02	39	Michigan	3.06
16	Maryland	2.07	40	Wyoming	3.07
17	Wisconsin	2.10	41	North Dakota	3.07
18	Tennessee	2.14	42	Utah	3.10
19	South Carolina	2.27	43	New Jersey	3.16
20	Pennsylvania	2.38	44	Texas	3.45
21	West Virginia	2.43	45	New York	3.89
22	Ohio	2.46	46	New Mexico	3.99
23	Alabama	2.51	47	Mississippi	4.01
24	Maine	2.54	48	California	4.78

deemed potentially relevant and available. The variables and their sources are given in the appendix.

As can be seen, the indicators cover a broad range of state life. Because they are so many and so varied, it is necessary to organize them in some way, to facilitate interpretation. For that, we turned to a type of factor analysis, a straightforward principal components extraction with varimax rotation (Dunteman 1989). This offers up a weighted combination of the 51 items, reducing them to a manageable number of common factors. We continued to extract factors as long as the next factor extracted could add 10% or more to the variance explained. This yielded three factors, explaining altogether 56% of the variance in the dataset. In other words, these three factors account for the majority of the differences, as measured, found among the states. These factors, and the loading of the individual indicators on them, are reported in Table 1.

The loadings, which are effectively correlations with the underlying factor, help to label the factor. Since the higher loadings most heavily define the factor, we concentrate on those that are a positive 0.7 or higher. These coefficients are in bold in the table. (We use 0.7 as a cutoff, since it suggests that the item could, by itself, account for about half of the variation in the factor). Factor I we label Economics, as it is dominated by average pay, per capita income, median household income, union membership, and housing prices. Factor II we label Diversity, as it is dominated by percent Hispanic, percent non-English speaking, and percent foreign born. Factor III we label Social Problems, as it is dominated, among other variables, by infant mortality, poverty, and the incarceration rate. In order to locate Iowa, or any other state, on a factor, we assigned it a factor score. (These scores on each factor are equivalent to standard scores, in that the mean equals zero, and the units of measurement are standard deviation units.)

THE REPRESENTATION HYPOTHESIS

Suppose that Iowa is representative. Then, for each factor, it should have a "typical" score or, more precisely, it should score at the mean. Since the factor scores (Z) are normed to the mean zero, this leads to the following alternative hypotheses:

H_0: Z = 0, Representative

H_1: Z ≠ 0, Not Representative.

Thus, to test the hypotheses, we simply examine how far, if at all, the Iowa score deviates from mean zero, and compare it to the other states.

RESULTS

Given the usual issues of sampling and measurement error, it is obviously unrealistic for the empirical estimate of Z to fall exactly at zero. Instead, we must judge whether the distance between the expected and observed value is large enough to reject the null. In Table 2, we observe if the Iowa's factor scores fall within one standard deviation of the mean. The overwhelming majority of them (39) do. Only 12 exceed the mean by a standard deviation. Further, close to half of those deviations could be judged favorably, as "social goods." That is to say, Iowa is well below average in poor mental health days, wine consumption, and housing prices; it is well above average in the high school graduation rate and voting

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turnout. On balance, from this first cut at the data, it seems that Iowa is a reasonably representative state. Furthermore, when it is not, that is often to the good, in terms of the social and political health of the system.

Table 2 provides a rough pass at the data. More precision is afforded by calculating a summary score for each state, and comparing them. To arrive at this representation score, we add up the absolute values on all three factors. In Table 3 one observes the rank of these scores for the 48 states of the continental U.S. Kansas, which has the total score closest to zero (0.85), stands as most representative, while California (4.78) stands as least. The Iowa score of 1.92 puts it in twelfth place. This is fairly impressive, in that these top-12 states have scores in a narrow range, of about one point (precisely, 1.92 – 0.85 = 1.07). By this assessment, Iowa still seems reasonably, if not perfectly, representative. Further, it is clearly more representative than its first-in-the-nation rival of New Hampshire, which ranks twenty-seventh.

Table 4

State Representativeness Scores: Economic Factors

RANK	STATE	REPRESENTATION FACTOR SCORE	RANK	STATE	REPRESENTATION FACTOR SCORE
1	New Mexico	–1.94105	25	Maine	–.20059
2	Wyoming	–1.52797	26	Georgia	–.08534
3	Idaho	–1.49633	27	Oregon	–.06421
4	Montana	–1.48296	28	Iowa	–.01760
5	South Dakota	–1.34656	29	Vermont	.11544
6	Arizona	–1.10366	30	Indiana	.16328
7	Oklahoma	–.99975	31	Missouri	.18146
8	Utah	–.95832	32	New Hampshire	.26096
9	Arkansas	–.94148	33	Wisconsin	.40178
10	North Dakota	–.77575	34	Virginia	.50804
11	Mississippi	–.70041	35	Delaware	.62716
12	Nevada	–.67965	36	Washington	.63011
13	Louisiana	–.64098	37	Minnesota	.85525
14	West Virginia	–.58506	38	Ohio	.86283
15	Texas	–.53911	39	Rhode Island	1.01314
16	Kentucky	–.49341	40	Maryland	1.07071
17	Nebraska	–.48868	41	Pennsylvania	1.10533
18	North Carolina	–.47601	42	Michigan	1.23742
19	South Carolina	–.45395	43	California	1.44040
20	Colorado	–.39264	44	Illinois	1.45997
21	Alabama	–.34304	45	Connecticut	1.53664
22	Florida	–.31600	46	Massachusetts	1.83830
23	Tennessee	–.26134	47	New Jersey	2.03772
24	Kansas	–.20754	48	New York	2.17346

What is pulling Iowa's rank away from the top spot? Recalling Table 2, it would seem to be the diversity factor. In a nutshell, the population of Iowa is too old and too white to represent the nation. There is no denying that Iowa is something of an outlier in these respects, as our data show. However, we have also shown that this is not the only factor that counts. Nor is it arguably the most important. Here is the share of the variance in the dataset that each of our factors explains: economics = 29.0%; diversity = 16.9%; social problems = 10.0%. In other words, in terms of distinguishing one state from another, the economics dimension is about three times as important as the problems dimension, and almost twice as important as the diversity dimension.

It is valuable, then, to see how Iowa ranks on this decisive economic factor. These results are reported in Table 4. Remarkably, the Iowa score is almost exactly at zero, and closer than any other state to that zero value. In other words, at least for this dimension, our representation hypothesis is fully sustained. With respect to economic conditions, arguably the most important feature differentiating one American state from the next, Iowa clearly is the most representative. This finding takes on a double importance, when the pivotal role of economic voting in U.S. presidential elections is considered (Lewis-Beck and Stegmaier 2007).

CONCLUSION

Is Iowa representative? Yes, at least reasonably so. And when it is not, that is often because it boasts a superior performance socially (e.g., educational attainment) or politically (e.g., voting turnout). Further, with respect to other social goods, it might be mentioned that the politics of Iowa is well known to be corruption free. If indicators on corruption had been included in our analysis, they would be expected to boost its ranking higher. With respect to the leading dimension of economic conditions, which we did measure, Iowa is unambiguously the most representative state in the country. In addition, its geographic and historic centrality, commented on initially, should not be forgotten. All things considered, there seems no cause to take away Iowa's first-in-the-nation presidential selection status. If one state must hold this position then it is hard to make a better pick. Although of course not impossible, if one accepts the first-place ranking of Kansas. ■

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