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# An Examination of the Impact of Union Presence on Social Agendas

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Louis J. Pantuosco and Vanessa Hill

Are labor unions with broad social agendas effective in influencing government spending? This article examines the influence of social agendas on union strength by observing the relationship between union presence and government spending. More specifically, the article investigates the impact of union presence on education and welfare spending at the state level. If social agendas truly facilitate union success, then an increase in social awareness resulting in higher consideration of education and welfare by state policy makers would be observed. In addition, it would be expected that

unions would organize in states where education and welfare spending are more highly considered. A model is developed that allows the implied role of unions' influence on state educational and welfare spending to be estimated.

## Social Responsibility in Union Objectives

Union objectives are as diverse as the constituents they serve; yet one commonality within each union's mission statement is an ambitious social agenda. These social agendas are attempts by unions to gain the support of the general public. The union entity gains strength by enhancing relationships with those groups in the general public who bestow legitimacy to the union; these groups can exert pressure on private and public sector organizations to interact with unions (Outwater & Cherof, 1999). The challenge for unions is to justify their roles in the process of defining social responsibility (Freeman, 1988), particularly, in the areas in which govern-

ment and union objectives overlap. Since both organizations that claim to protect workers' rights and interests are needed entities, will one suffice? Is government an effective substitute for unionism?

Table 1 summarizes statements of purpose for ten prominent unions. From the table, it is evident that participation in the discussion of social responsibility is important for unions as it establishes legitimacy by defining their roles in the workplace and society. These statements demonstrate that unions have included the pursuit of broad social agendas as primary objectives of their organizations. If broadening the agenda to include social issues supports the perpetuation of labor unions, then it would be expected that evidence of a relationship between union growth and heightened social awareness will exist. It is proposed that heightened social awareness would be demonstrated through increased spending on prominent social issues such as welfare and education.

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**Table 1**  
**Statements of Purpose for Ten Prominent Unions**

<b>Labor Organization</b>	<b>Statement of Purpose</b>
AFL-CIO	The mission of the AFL-CIO is to improve the lives of working families—to bring economic justice to the workplace and social justice to our nation. To accomplish this mission we will <i>build</i> and <i>change</i> the American labor movement.
United Mine Workers of America	Today, the UMWA continues its primary role of speaking out on behalf of American coal miners. But it also has taken on an active international role by working to end apartheid in South Africa and by helping workers in the former Soviet Union and developing nations form democratic labor unions.
United Auto Workers	The UAW, however, is more than a collective bargaining agent; we are a social movement committed to dealing with the problems of all people.
National Education Association	The NEA was founded in 1857 “to elevate the character and advance the interests of the profession of teaching and to promote the cause of education in the United States.” ...The Association is committed to meeting the challenge of giving every single child in America a quality education. Our vision includes a public education system where every person in the community has a voice and a role in ensuring that tomorrow’s schools serve tomorrow’s students through active learning, advanced technology, and modern and safe classrooms.
The Teamsters Union	To make life better for Teamsters members and their families—and for all working families—the Teamsters organize the unorganized, make workers’ voices heard in the corridors of power, negotiate contracts that make the American dream a reality for millions, protect workers’ health and safety, and fight to keep jobs in North America. Today’s Teamsters are a community of workers, fueled by a contagious spirit that is equal part compassion, commitment, creativity, solidarity, and might. Collectively, we are dedicated to the ultimate tenet of the trade union movement—the commitment to enhance the lives of our members all across North America...and to win justice for working families.
Utility Workers Union of America	We are an organization of men and women of every race, religion, age, and ethnicity, who are committed to a society where all workers and their families live and work with dignity; where there is an economic and political mandate for a more equitable distribution of the nation’s wealth for all those performing useful service to society; where workers have a collective voice and power at the workplace; where economic well being is achieved for our members and all workers; where work is satisfying and fairly rewarded.
United Steelworkers of America	The USWA is 1.2 million working and retired members throughout the United States and Canada, working together to improve our jobs; to build a better future for our families; and to promote fairness, justice, and equality both on the job and in our societies.
HERE: Hotel Employees and Restaurant Employees	For more than 110 years, HERE’s mission has been to improve the lives and working conditions for all hospitality trades workers. We are dedicated to justice, equality, fairness, and dignity on the job and in society.

**Table 1**  
(continued)

<b>Labor Organization</b>	<b>Statement of Purpose</b>
The International Union of Food, Agricultural, Hotel, Restaurant, Catering, Tobacco, and Allied Workers' Associations (IUF)	The guiding principle of the IUF is international labour solidarity. Our purpose is to strengthen member unions through mutual support. We are committed to promoting and defending trade union rights and human rights in general, as well as the right of workers to control decisions affecting their lives at work and in society. We oppose all forms of exploitation and oppression.
The Airline Pilots Association	The mission of the Air Line Pilots Association is to promote and champion all aspects of aviation safety throughout all segments of the aviation community; to represent, in both specific and general respects, the collective interests of all pilots in commercial aviation; to assist in collective bargaining activities on behalf of all pilots represented by the Association; to promote the health and welfare of the members of the Association before all governmental agencies; to be a strong, forceful advocate of the airline piloting profession, through all forms of media, and with the public at large; and to be the ultimate guardian and defender of the rights and privileges of the professional pilots who are members of the Association.

## Descriptive Statistics

Over the sample period, state governments allocated more revenue toward education than any other single item. On average, states spent nearly 34 percent of their budgets on education. In 1986, this average peaked when educational spending reached 38 percent of state revenues, only to fall over the next seven years toward the trough of 31 percent in 1993. Since then, it has recovered to around 33 percent.

Variability between the states is wide in the percentage of spending distributed to education (see Table 2). Through the 1983 to 1997 sample period, many of the Northeastern U.S. states appropriated relatively low

percentages of their state budgets to education. In fact, nine of the bottom ten states are in the New England and Mid-Atlantic regions. The high end is represented by a variety of states throughout the U.S.

Surprisingly, some states that have ranked low in terms of education quality, i.e., South Carolina and Mississippi, spend a greater percentage of their budgets on education than the states that traditionally have been considered "education-oriented." Table 2 presents two possible explanations for this phenomenon. First, the Northeastern states could retain larger budgets, therefore, a small piece of a large pie could result in a bigger slice than a large piece of a small pie. However, it is

unclear that Northeastern states have larger budgets than states in other regions. New York State expenditures as a percent of total income rank among the highest, but the same is true of Mississippi and South Carolina.

Second, the percentage of school-aged children may be smaller in the Northeastern states; this occurrence would lead to a smaller percentage of state spending on education. As expected, Florida has the lowest percentage of population between the ages of 5 and 17. But, clearly the Northeastern states are among the lowest in school-aged population. With this in mind, a statistical model of educational spending must control for the size of the

Table 2

Education		Union Membership		Expenditures/Income		5 to 17 Population	
MA	0.209	SC	4.26	FL	0.099	FL	0.162
NH	0.220	NC	5.04	NH	0.101	MA	0.164
CT	0.238	TX	6.79	MO	0.104	RI	0.168
NY	0.241	AZ	7.39	VA	0.105	CT	0.169
RI	0.249	GA	7.74	TX	0.106	NJ	0.173
NJ	0.269	FL	7.79	IL	0.107	NY	0.174
MD	0.282	MS	7.85	CO	0.111	PA	0.175
PA	0.286	LA	8.10	MD	0.112	NV	0.175
SD	0.288	VA	8.12	TN	0.114	VA	0.176
ME	0.293	SD	8.19	CT	0.116	MD	0.176
IL	0.296	NM	8.48	GA	0.117	DE	0.178
OR	0.298	AR	8.60	IN	0.118	NC	0.181
NV	0.301	ID	9.32	KS	0.118	NH	0.184
OH	0.319	OK	9.71	NE	0.118	CA	0.184
LA	0.321	UT	9.75	AZ	0.122	ME	0.185
VT	0.323	ND	10.03	PA	0.123	TN	0.185
CA	0.323	CO	10.09	NC	0.124	OR	0.185
WY	0.325	VT	10.47	NV	0.124	VT	0.186
MT	0.326	NE	10.53	NJ	0.124	WA	0.187
WI	0.329	NH	10.77	OH	0.129	CO	0.188
MI	0.332	TN	10.86	CA	0.134	WV	0.188
TN	0.336	KS	12.51	MA	0.135	IL	0.188
DE	0.340	AL	13.19	SD	0.135	MO	0.188
MN	0.341	WY	13.38	AR	0.136	OH	0.189
FL	0.342	KY	13.41	OK	0.138	AZ	0.189
WV	0.346	IA	13.78	AL	0.139	KS	0.192
NE	0.347	DE	14.82	ID	0.140	IA	0.192
ND	0.348	MO	14.89	IA	0.141	IN	0.192
SC	0.355	MD	15.26	MI	0.142	KY	0.192
MS	0.356	ME	15.67	WI	0.143	WI	0.193
KY	0.363	CA	15.88	MN	0.146	MI	0.193
MO	0.369	MA	16.88	OR	0.146	MN	0.193
WA	0.371	MT	17.27	WA	0.148	SC	0.194
VA	0.374	WV	18.11	KY	0.148	AL	0.194
ID	0.378	IN	18.51	SC	0.149	OK	0.194
CO	0.379	CT	18.54	DE	0.153	GA	0.196
OK	0.382	NV	18.63	ME	0.154	AR	0.197
NM	0.384	RI	18.97	NY	0.156	NE	0.197
IA	0.386	PA	19.59	MS	0.157	ND	0.199
GA	0.388	OR	19.79	UT	0.158	MT	0.202
AR	0.390	WI	19.80	RI	0.160	TX	0.205
AL	0.399	OH	20.34	VT	0.162	SD	0.206
IN	0.399	IL	20.49	LA	0.163	LA	0.211
KS	0.402	MN	20.65	MT	0.177	NM	0.213
AZ	0.406	WA	22.48	WV	0.180	MS	0.214
TX	0.415	NJ	22.99	ND	0.182	WY	0.217
NC	0.415	MI	24.86	NM	0.196	ID	0.223
UT	0.437	NY	28.05	WY	0.221	UT	0.256

state's budget and the age of the state's population.

Table 2 indicates that unions are not an antecedent to educational spending at the state level. Among the U.S. states, Arizona, Texas, and North Carolina spend the highest percentages of their revenues on education. However, these states are among the lowest in the U.S. in their percentage of the employed in unions. In general, strong union states are not necessarily strong education states in terms of the percentage of their budgets spent on education.

From 1985 to 1996, the average percentage of state government revenue dedicated to welfare spending nearly doubled from 10.6 percent to 20.7 percent. Texas witnessed the largest growth with an increase of more than 200 percent, from 6.8 percent to 23.1 percent. Many Northeastern states rank among the leaders in welfare spending, even though their growth has been modest.

Table 3 displays other factors that may impact state welfare spending. Ironically, many of the Northeastern states that have the nation's highest levels of per capita income also have the nation's highest percentage of their budgets allocated toward welfare spending. As previously mentioned, this does not appear to be a result of larger state governments. At a glance, in a small group of states union membership and welfare spending were

positively correlated. Illinois, Michigan, and New York spend generously on welfare and are strong union states.

Over the past twenty years, at the national level it is clear that union growth has come from the public sector. The cause of this growth may be (1) a defensive strategy implemented by public employees to combat decreasing real wages, or (2) a result of aggressive recruitment by union organizers to increase enrollment.<sup>1</sup> Either way, union leaders have been relatively successful in their quest for increased public sector membership. Since public sector unions generate public sector jobs (see Allen, 1988), unions may have success organizing in states where the public sector is growing.

In summary, the stylized facts do not indicate a positive relationship between union membership and education spending. However, on the surface some evidence of a spurious relationship between welfare spending and union membership appears to exist.

## Methodology

Cross sectional data permits an analysis of the variability across states, but it cannot capture the dynamics of a relationship over time. The use of panel data, across states and over time, provides a dynamic framework for analysis. This panel specification technique

overcomes limitations of cross sectional and time series analysis. The limitations of a panel are the loss of state specific estimates, the possibility that the error components will not be random and mutually independent, and the oversimplification of results. However, the panel does provide a useful framework for drawing conclusions regarding a "typical state." Dummy variables were included to capture any significant regional differences, such as industrial composition. The data used for this analysis are for the years 1983 to 1997. Sources are listed in the Data Sources Appendix.

Steps were taken to address the econometric issues of heteroscedasticity, autocorrelation, and multicollinearity. Using rates of change mitigated heteroscedasticity and autocorrelation. Incorporating lagged dependant variables controlled for autocorrelation. Stepwise regression was implemented to simplify the model and to control for multicollinearity. Since education and welfare spending are allocated from a state budget concurrently, a two equation simultaneous panel was estimated. This technique accounts for the joint determination of spending on these two programs. Note, the union growth equation stands separately from the other two.

Table 3

Union Membership		Public Welfare		Per Capita Income (\$)	
NY	28.05	NY	0.264	CT	25,817
MI	24.86	ME	0.249	NJ	23,857
NJ	22.99	PA	0.234	MA	22,715
WA	22.48	MA	0.230	NY	22,531
MN	20.65	CA	0.221	MD	22,184
IL	20.49	NH	0.219	DE	20,948
OH	20.34	IL	0.216	CA	20,927
WI	19.80	TN	0.216	IL	20,587
OR	19.79	OH	0.206	NH	20,555
PA	19.59	MI	0.205	NV	20,520
RI	18.97	RI	0.205	VA	20,081
NV	18.63	MN	0.199	CO	19,898
CT	18.54	KY	0.195	MN	19,827
IN	18.51	VT	0.193	WA	19,600
WV	18.11	WI	0.190	RI	19,568
MT	17.27	CT	0.186	PA	19,294
MA	16.88	GA	0.185	FL	19,209
CA	15.88	AR	0.185	MI	18,973
ME	15.67	MO	0.181	OH	18,521
MD	15.26	IN	0.179	WI	18,164
MO	14.89	NE	0.177	KS	18,161
DE	14.82	WV	0.171	OR	18,014
IA	13.78	LA	0.171	NE	17,942
KY	13.41	MS	0.170	MO	17,889
WY	13.38	MD	0.169	WY	17,673
AL	13.19	NJ	0.168	GA	17,646
KS	12.51	IA	0.167	TX	17,579
TN	10.86	TX	0.166	IN	17,483
NH	10.77	OK	0.163	VT	17,432
NE	10.53	CO	0.163	IA	17,318
VT	10.47	AZ	0.160	NC	17,273
CO	10.09	FL	0.157	AZ	17,118
ND	10.03	WA	0.156	TN	16,857
UT	9.75	NC	0.153	ME	16,745
OK	9.71	SC	0.152	OK	16,125
ID	9.32	SD	0.151	SD	16,082
AR	8.60	ND	0.149	ND	15,870
NM	8.48	AL	0.148	SC	15,595
SD	8.19	KS	0.144	AL	15,590
VA	8.12	OR	0.142	ID	15,545
LA	8.10	MT	0.136	LA	15,452
MS	7.85	VA	0.133	MT	15,451
FL	7.79	UT	0.127	KY	15,426

Table 3  
(continued)

Union Membership		Public Welfare		Per Capita Income (\$)	
GA	7.74	ID	0.122	UT	15,157
AZ	7.39	NM	0.119	NM	15,118
TX	6.79	DE	0.108	AR	14,747
NC	5.04	NV	0.095	WV	14,437
SC	4.26	WY	0.085	MS	13,417

## Union Growth

Using the change in a state's union membership (UNGRO) as the dependent variable, the influence of the percentage of the state budget for education spending, EDUPER, and the percentage of the state budget for welfare spending, WELPER, on union growth was determined.<sup>2</sup> The most notable result was that union growth has been most heavily correlated with states that are not spending as much of their budgets on education. The percentage of the state budget for education spending is negative and significant. Thus, rather than increased education spending indicating an environment conducive to union growth, it is more likely that states not spending as much on education have had stronger union growth. WELPER was not significantly correlated with union growth.

Other factors are relevant when considering climates that accommodate union growth. For example, researchers have determined a direct relationship between union density and Gross National Product (GNP) and Gross State Product (GSP) growth (Free-

man & Medoff, 1984; Pantuosco et al., 2001) and an indirect influence on economic growth through productivity and employment (Hirsch, 1991; Dunne & Macpherson, 1994). In each of these studies, unions were determined to have negative impacts on the growth components. However, Allen (1988) claimed that in order for unions to survive markets have to be imperfect, or profits have to be made. These counter arguments suggest that unions do not cause economic growth or lower unemployment rates, but, if favorable economic conditions exist, then unions have a better chance of survival.

With the exception of the unemployment rate, the control variables were insignificant. This result provided support for Allen's (1988) suggestion that unions need strong economic conditions to grow. Real GSP, public employment, and the percentage of the employed in the manufacturing sector were all insignificant. The correlations were too weak to draw any defensible conclusions. The regional dummies did display some modest differ-

ences between rates of union growth. Union growth was strongest in the East North Central (EC) region where unions have a strong base. While New England, the omitted region, experienced the largest relative declines.

## Unions' Impacts on Social Objectives

Equations 1 and 2 were estimated simultaneously to evaluate the influence of union membership on the proposed measures of social awareness. Equation 1 estimated the percentage of budget spending on educational expenditures (EDUPER), while Equation 2 estimated the percentage of budget spending on welfare expenditures (WELPER). Each equation had a constant term, a measure of union membership, growth of GSP, state specific control variables to fully identify the equation, and a feedback term. In each equation, the focus was on the union membership component.

$$\text{EDUPER} = a_0 + a_1 * \text{UNION} + a_2 * \text{GSP} + a_3 * \text{LOTTERY} + a_4 * \text{YPOP} + a_5 * \text{BUDGET} + a_6 * \text{WELPER} + e \quad [1]$$



UNION was the percentage of the employed in unions. LOTTERY was a binary dummy variable indicating the years the state had a lottery. YPOP was the percentage of the population between ages 5 and 17. BUDGET was the ratio of total expenditures to total personal income. FOODSTAMPS was the percentage of the population eligible for food stamps. PCI was the per capita income of the state. All data were state level and annual.

In the mission statements presented in Table 1, unions emphasize the improvement of society as one of their objectives. The research in this area tends to focus on the impact of teachers' unions on educational spending (see Hoxby, 1996; Baugh & Stone, 1982), however, Equation 1 analyzed the direct impact of labor unions on educational spending. If unions can impact society's health, then, holding other factors constant, a strong labor union should result in a higher percentage of state spending allocated toward education. With this concept in mind, the coefficient of the union term,  $a_1$ , should have been positive.

Many of the thirty-seven U.S. states that had lotteries claimed lotteries supplemented their state's educational spending and, thus, increased the percentage of their revenues dedicated to education. However, the assumption of a positive relationship between lotteries and educational

spending has not gone uncontested. Gearey (1997) determined that non-lottery states spend an average of ten percent more on education than lottery states; Miller and Pierce (1997) claimed that lotteries have no effect on educational spending. Lotteries were added in Equation 1, not as an attempt to settle the lottery debate, but as a control for random changes in the percentage of spending a state dedicated toward education.

Youth population and GSP were added as control variables to capture exogenous factors that impacted the percentage of spending on education. The ratio of total state expenditures to total state personal income was added to Equation 1 to control for the size of the budget. The percentage of state funding allocated toward welfare spending was added as a feedback term. The interdependence of state spending on education and welfare justified the simultaneous estimation of Equations 1 and 2.

The impact of unions on employment works through the economy to influence state welfare spending. As employment decreases, the government is responsible for assisting the unemployed with increased subsidies; therefore, it would be reasonable to find unions supporting increased spending on welfare. Increased spending on welfare is consistent with the unions' philosophies, as it

enables them to pursue greater goals for their members.

In their study regarding the resting place of lottery revenue, Miller and Pierce (1997) found that the additional funds generated from lotteries did not make their way toward education. They concluded that once lottery revenue entered the general operating budget it was dispersed to deficient agencies. In Equation 2, the empirical question addressed was whether welfare was one of the deficient programs that lottery revenues were used to support.

FOODSTAMPS and PCI were included in Equation 2 to capture the income level of the population. GSP growth was added as a control variable. Since Equations 1 and 2 were determined simultaneously, the EDUPER was included as a feedback term.

### Simultaneous Panel Results

The two columns in Table 4 show the estimation results of the simultaneous determination of welfare and education spending by states. Some interesting correlations for these social programs were revealed. In each equation the feedback term from the other type of social spending was negative. This provides evidence that welfare and education spending were gross substitutes in the state budget.

**Table 4**  
**Unions Impact on Social Objectives**  
**(absolute *t*-statistics)**

	(1) EDUPER	(2) WELPER
Constant	0.548* (27.25)	.216* (3.47)
UNION	-.323* (7.28)	-.123* (2.55)
FEEDBACK	-1.13* (13.48)	-.37* (2.81)
GSP	.339* (4.20)	.223* (3.42)
LOTTERY	.011 (1.63)	.017* (3.47)
YPOP	0.0229* (9.14)	
BUDGET	-.071 (1.15)	
FOODSTAMPS		.0324* (9.58)
PCINCOME		0.003463* (4.69)
R <sup>2</sup>	.23	.42

N = 720

\* Significant at .01

The influence of unionism was negative and significant on both education and welfare. Thus, those states with stronger union memberships were spending a significantly smaller portion of their budgets on education and welfare. If a union objective is to increase awareness for education and welfare, the model results provided no evidence to support their success. Even though these estimates simply reveal correlations, the results reveal that unions would have difficulty claiming a positive impact on social spending programs.

Both education and welfare spending were positively and significantly correlated with GSP. Both types of spending were then normal goods that increase with the states prosperity. The coefficient on education spending was somewhat larger suggesting that support for education expands at a greater rate when states experience economic growth.

The lottery did reveal a positive correlation with both types of spending. However, the coefficient on education spending was not different from zero. The positive significant correlation between

welfare spending and the lottery could reflect a shift of lottery funds toward a deficient program as suggested by Miller and Pierce (1997), or a negative externality generated from gambling activities.

The other control variables performed as expected. The youth population was significantly correlated with education spending. Similarly, welfare spending moved positively with the number of families who qualified for food stamps. Per capita income was also positively and significantly correlated with welfare spending.

In summary, the simultaneous panel estimates reveal that education and welfare are substitute services; strong growth leads to higher spending on education and welfare services; lottery funds are allocated to welfare then education; and most importantly, unions cannot empirically defend the claim that their presence leads to greater social awareness in the areas of education and welfare.

## Conclusion

While businesses and government agencies have clearly defined and measurable objectives, unions struggle to defend their societal goals. Their mission statements indicate a commitment to improve social awareness, enhance social justice, and deal with the problems of all people. Yet, their ability to assess their progress in accomplishing these objectives remains a challenge. One approach to measure the impact of union presence on society's general health is the level of spending a government dedicates toward education and welfare. The empirical analysis presented in this article failed to establish a positive link between union membership and states that support social spending.

Government spending on social and welfare programs was lower in areas where union presence is stronger. This result challenges the

assertion that the unions' attention to broader-based social and political issues contributes to their successes. However, a rich literature on welfare capitalism provides an alternative explanation for the results observed for welfare spending. This theory states that a decrease in government spending on social programs is indicative of successful union representation. In the event that the government does not pay for social programs, the cost of various welfare services shifts toward private citizens and/or businesses (Brown, 1997). This concept provides an alternative explanation for the inverse relationship between government spending on welfare and union presence. The negative correlation between union presence and government spending on education is more difficult for union organizers to rationalize. Unions must rethink their societal goals or, at least, find a way to substantiate that their presence can move society in a positive direction.

## Endnotes

1. The impact of the growth of public sector unions on state economic conditions is discussed by Pantuosco et al. (2002).

2.  $UNGRO = a_0 + a_1 * EDUPER + a_2 * WELPER + a_3 * GSP + a_4 * UR + a_5 * PUBEMP + a_6 * MANPER + e$  [3]

GSP is the growth of the real Gross State Product; UR is the state unemployment rate; PUBEMP is the percentage of the employment in the public sector, and MANPER is the percentage of the employed in manufacturing. The error component is represented by  $e$ . All data are annualized and measured at the state level.

## References

- Allen, S. G. (1988). Unions and job security in the public sector. In Freeman, R. B. and Ichniowski, C., (Eds.), *When public sector workers unionize*. NBER, The University of Chicago Press.
- Baugh, W. H. & Stone, J. A. (1982). Teachers, unions, and wages in the 1970's: Unionism now pays. *Industrial and Labor Relations Review*, 35(April): 368-376.
- Brown, M. (1997). Bargaining for social rights: Unions and the reemergence of welfare capitalism, 1945-1952. *Political Science Quarterly*, 112(4, Winter): 645-657.
- Dunne, T. & Macpherson, D. A. (1994). Unionism and gross employment flows. *Southern Economic Journal*, 60(January): 727-738.
- Freeman, R. B. (1988) Contraction and expansion:

- |  |  |   |
|--|--|---|
| The divergence of private sector and public sector unionism in the United States. <i>Journal of Economic Perspectives</i> , 2(2, Spring): 63-88. | Hoxby, C. M. (1996, August). How teachers' unions affect education production. <i>Quarterly Journal of Economics</i> , 111(3): 671(48).  | Pantuosco, L. J., Parker, D., Seyfried, W., & Lyman, S. (2002). Macroeconomic differences in public and private union density: An analysis if U.S. state economies. <i>Review of Regional Studies</i> , 32(2, Summer/Fall): 171- 186. |
| Freeman, R. B. & Medoff, J. L. (1984). <i>What do unions do?</i> New York: Basic Books.  | Miller, D. E. & Pierce, P. A. (1997). Lotteries for education: Windfall or hoax? <i>State and Local Government Review</i> , 29: 34-42.   | Pantuosco, L. J., Parker, D., & Stone, G. (2001). The effects of unions on labor markets and economic growth: An analysis of state data. <i>Journal of Labor Research</i> , 22(1, Winter): 195-206.                                   |
| Gearey, R. (1997, May 19). The numbers game—State lotteries: A ticket to poverty. <i>The New Republic</i> , 216(20): 19-24.                      | Outwater, L. C. & Cherof, E. M. (1999, June). Best employer practices to remain union free. Paper presented at the 51 <sup>st</sup> Annual Conference for the Society for Human Resource Management. |   |
| Hirsch, B. T. (1991). <i>Labor unions and the economic performance of firms</i> . Kalamazoo, MI: W. E. Upjohn Institute for Employment Research. |  |   |

## Data Appendix and Definitions

### Sources of Mission Statements for Table 1

AFL-CIO. (2003). What we stand for: Mission and goals of the AFL-CIO. [On-line]. Available: <http://www.aflcio.org/aboutaflcio/about/mission/>.

United Mineworkers of America. (2003). A brief history of the UMWA. [On-line]. Available: <http://www.umwa.org/history/hist1.shtml>.

United Auto Workers. (2003). Toward progress for all. [On-line]. Available: <http://www.uaw.org/about/works/constitution.html>.

National Education Association. (2003). What is the national education association? [On-line]. Available: <http://www.nea.org/aboutnea.html>.

Teamsters Union. (2003). Building better lives. Together. [On-line]. Available: <http://www.teamsters.org/about/about.htm>.

Utility Workers Union of America. (2003). Preamble to the Constitution. [On-line]. Available: <http://www.uwua.org/newpage8.htm>.

United Steelworkers of America. (2003). Our union. [On-line]. Available: <http://www.uswa/uswa/program/content/301.php>.

HERE: Hotel Employees and Restaurant Employees. (2002). About HERE. [On-line]. Available: <http://www.hereunion.org/about/default.asp>.

International Union of Food, Agricultural, Hotel, Restaurant, Catering, Tobacco and Allied Workers' Associations (IUF). (2003). IUF: Building global solidarity. [On-line]. Available: <http://www.iuf.org/en/about.shtml>.

The Airline Pilots Association. (1992). About ALPA: Mission statement. [On-line]. Available: <http://www.alpa.org/alpa/DesktopModules/ViewDocument.aspx?DocumentId=175>.

#### **Data Sources**

- Education, Welfare and Total State spending data were taken from the United States Department of Commerce, U.S. Census Bureau Statistical Abstracts, State and Local Governments Finances and Employment.
- Gross State Product Gross state product (GSP) data were from the U.S. Department of Commerce, Bureau of Economic Analysis.
- Public Employment data were taken from the U.S. Department of Labor, Bureau of Labor Statistics.
- Union membership data were from the United States Statistical Abstracts and diskettes from Hirsch, Barry and David A. Macpherson.
- Lottery data were from the individual states' lottery websites.
- Youth Population data (in thousands) were taken from the United States Department of Commerce, Department of the Census.
- Food Stamps (in thousands) data were taken from the United States Department of Commerce, U.S. Census Bureau Statistical Abstracts.
- Per capita income (in thousands) data were taken from the United States Department of Commerce, Bureau of Economic Analysis.

#### **Region Definitions**

NE = CT, ME, MA, NH, RI, VT  
MA = NJ, NY, PA  
EC = IL, IN, OH, MI, WI  
PC = CA, OR, WA  
SA = DE, FL, GA, MD, NC, SC, VA, WV  
ES = AL, KY, MS, TN  
WS = AR, LA, OK, TX  
MT = AZ, CO, ID, MT, NV, NM, UT, WY  
WC = IA, KS, MN, MO, NE, ND, SD