# Connecting the States: Compact Participation, 1970-2000

Neal D. Woods Ann O'M. Bowman

University of South Carolina

### **ABSTRACT**

Interstate compacts have been promoted as a vehicle by which states may resolve tough regional or national problems while simultaneously protecting their sovereignty vis-à-vis the federal government. Despite their increasing prevalence and importance, interstate compacts have been the subject of very little empirical research and theorizing. In this study we assess the question of why some states choose to cooperate with one another to solve policy problems. Using time-series cross-section GEE negative binomial event count models of interstate cooperation over a thirty year period, we find that patterns of interstate cooperation are explained by state capacity, homogeneity of preferences, size, distance, and political considerations.

Prepared for presentation at the State Politics and Policy Conference, Philadelphia, May 30-31, 2008. The authors thank Grant Hamilton, Ben Kassow, W. Lynn Shirley, and Milton R. Stark II for their assistance in data collection.

Constituent units within a federal structure are inherently rivalrous. As Skalaban (1993, 416) notes, "interstate competition is a systemic component of any federal system." Not surprisingly, theories of horizontal federalism typically take interstate competition as their starting point (Dye 1990; Kenyon and Kincaid 1991). The competition among states for economic investment is one illustration of this rivalrous behavior; another is the contestation over benefits of congressional enactments and allocations. Yet despite the competitive nature of a federal system, many circumstances arise in which states cooperate with one another. This state-to-state or horizontal cooperation is an important counterbalance both theoretically and substantively to interstate competition. States regularly join together to promulgate administrative agreements, form voluntary associations, and engage in legal actions. The primary vehicle for horizontal cooperation among states is the interstate compact.

An interstate compact is a formal agreement or contract between two or more states. Compacts are "powerful, durable, and adaptive tools for promoting and ensuring cooperative action among the states" (Mountjoy and Bell 2005). The U.S. Constitution provides for compacts in Article I, Section 10, a provision that was derived from the Articles of Confederation (Florestano 1994). Historically, compacts were used to settle boundary disputes between a pair of neighboring states but over time, the substance of compacts has broadened and the number of signatory states on a given compact has increased. Other than boundary compacts which resolve bilateral disputes over territory, compacts increasingly have administrative, financial, substantive, and technical dimensions (Zimmerman 2002).

Of the 199 interstate compacts on the books as of 2003, 24 had been ratified by only a single state, thus they were not in effect (Voit, Vickers, and Gavenonis 2003). Among the remaining 175 compacts, 59 were bilateral (such as the Boating Offense Compact between Oregon and Washington); many others were regional in nature (e.g., the Great Lakes Forest Fire Compact and the Southern Growth Policies Board). Another subset of compacts was national in scope, meaning that participation is open to all of the fifty states. Examples of national compacts include the Drivers License Compact, the Interstate Library Compact, and the Multistate Tax Compact.

Conjoint arrangements such as interstate compacts evolve as part of a dynamic process in response to policy demands in a federal system. In particular, they constitute a governmental response to the coordination issues created by fragmentation of authority among multiple units of government, a type of "self-organizing federalism" (Scholz and Feiock 2007). The issues compacts attempt to resolve are substantial, cross many policy areas, and range from regional commons resolutions to large-scale policy harmonization. Compacts have been promoted as a mechanism through which states can address important issues collectively, without the interference of the federal government. Insofar as participation in a compact is open to all states, then compacts essentially constitute national policymaking from the bottom-up.

At its core, compacting consists of a dyadic relationship between two states.

Legally, interstate compacts are not in force until a second state joins the first state participant. For instance, Connecticut was the first member of the New England Corrections Compact in 1958 but it was not until two years later when Rhode Island became a participant that the compact took effect. In 1961, Maine and Vermont joined

Connecticut and Rhode Island, making this a four member compact until the following year when Massachusetts joined. The last state to join was New Hampshire in 1969. This example demonstrates that, as more states join a compact, the basic dyadic connection expands to form a network of dyadic relationships. Taken together, these relationships form an overarching governance structure.

What explains patterns of interstate cooperation? The answer may lie in viewing compacting behavior as relational, driven at least in part by the relative characteristics of compact participants and their relationships to each other. Cooperation is more likely to occur among similarly situated states. One aspect of "similarly situated" is location, and some compacts are regional in their orientation, such as the New England Corrections Compact discussed above. But states share other characteristics that may prove useful in helping non-members decide about compact participation. In choosing whether to join a compact or not to join, a state may take cues from the set of extant member states. An important consideration to non-members may be whether states "like us" are participating in the compact. In effect, extant participants signal potential participants about the suitability of a compact.

In this paper we take steps toward developing a theoretical model of interstate cooperative behavior. Our theory focuses on interstate cooperation as a form of collective action. Our focus is on dyadic relationships, which allows us to incorporate prior research on states' general propensity to join compacts (e.g., Bowman and Woods 2007; Nice 1987) with factors pertaining to relations among states. Our theory generates hypotheses not only about which states tend to join compacts, but, more importantly, with whom they are likely to cooperate. We assess our hypotheses on an extensive set of

panel data for interstate compacts from 1970 to 2000. Our results suggest that interstate cooperation can be explained by a state's institutional capacity, by the degree of political and demographic homogeneity between states, by state proximity, and by states' levels of economic integration.

# **Theorizing about Interstate Compacts**

### The Benefits of Cooperation

Interstate compacts can be useful in rectifying the externalities (both positive and negative) associated with the actions of a single state. On their own, states are unable to deal with spillover problems that result when the policy choices of one state impose costs (or create benefits) for others. Cooperation can help alleviate these issues. Compacts have proven beneficial in dealing with issues related to the allocation of water from multi-state river basins, especially in situations in which an upriver state's action could have deleterious consequences for a state located downstream. Also, a compact may expand the supply of goods and services beyond state borders, as in the 1995 Emergency Management Assistance Compact, whose membership includes 47 states and the District of Columbia.

Cooperative arrangements may also produce economies of scale. A common problem affecting a group of states may be addressed more effectively and efficiently via a joint, multi-state process or structure. A regional education compact such as the Midwestern Higher Education Compact, which was created to promote resource sharing

<sup>&</sup>lt;sup>1</sup> Twenty-five water apportionment compacts are in force, along with 10 water use and flood control compacts. See Voit, Vickers, and Gavenonis (2003).

among its members, is one such type. Many compacts offer a solution to coordination issues, often simplifying the administration of complex programs. The Interstate Compact for Adult Offender Supervision to which 38 states belong is a case in point. Additionally, states may be able to reduce the costs associated with policy design and experimentation by cooperating with other states.

Changes in society over time have fostered a climate in which interstate cooperation can flourish. Widespread technological innovations have softened borders of all types, and in effect, reduced the impact of distance. Increased population mobility and economic integration have had similar effects of diminishing the distinctions between states. At the same time, the policy demands on governments of all types have increased, likely stimulating a wider search for solutions. As social and technological forces increase interdependence, states face increased pressures to find cooperative policy solutions (Mountjoy and Bell 2005).

# The Costs of Cooperation

Cooperation among states, however, is not costless. Potentially significant deterrents to compact participation exist and concern over the costs of implementing the compact may dissuade some potential participants. There is no upper limit on the number of compacts that can be created; a pair or group of states can decide to establish such a formal arrangement at any time.<sup>2</sup> However, it is not necessarily a simple process.

<sup>&</sup>lt;sup>2</sup> On rare occasions, federal law is the impetus for the creation of compacts. For example, the federal Low-Level Radioactive Waste Policy Act of 1980 (P.L. 96-573) made each state responsible for the disposal of the low-level radioactive waste (LLW) generated within its borders. The law gave states the choice of managing the waste themselves (i.e., developing their own disposal sites) or entering into interstate compacts with other states to devise a multi-state solution to disposal. Most states have opted to join compacts.

Compact administrators report that one of the major obstacles to developing and enacting a compact is the need to educate legislators and other state officials about it (Bell 2004). Even if proponents are successful and a compact becomes law in a state, various structures and procedures must be designed to make the compact operational. Compacts are administered by specially created commissions or by departments and agencies of member states, both of which involve costs to participants. Once the compact is up and running, the major task for administrators is dealing with compliance and enforcement of compact provisions.

Moreover, by joining a compact, states give up some degree of flexibility and sovereignty. Compacts are supersessive. Once a state ratifies a compact, its provisions have legal superiority, that is, they take precedence over conflicting state laws. The compact itself sets up the rules for state compliance with and withdrawal from the compact as well as amendments to and termination of it. Most compacts are submitted to Congress for approval, either prior to or subsequent to their enactment (Zimmerman 2002) but as a practical matter, it is "compacts that affect a power delegated to the federal government or alter the political balance within the federal system" that require congressional consent (Bell 2004, 15).

### Collective Action Issues

In addition to the direct and indirect costs of compact participation, there is another set of issues facing potential compact partners. Common goals and interests may be inadequate to motivate collective action. States may calculate that they can receive

policy benefits simply by free-riding on other states' provision of policies that produce collective benefits.

Collective action issues, in addition to the other problems associated with institutional fragmentation, are often seen as precluding coordinated responses to interjurisdictional problems (Downs 1994). The canonical solution to these problems is coercion by a central authority. Nonetheless, cooperative arrangements among states to deal with interstate problems often do emerge in the absence of federal government activity, and states are increasingly turning to compacts as a means to coordinate policy solutions (Mountjoy and Bell 2005). In fact, although interstate compacts are often promoted as a bulwark against federal intrusion, some research suggests that states increasingly join compacts during periods when federal activism recedes (Bowman and Woods 2007).

Interstate cooperation can therefore be viewed as a form of collective action undertaken by governmental institutions (Feiock 2004). As with all forms of collective action, institutional collective action (ICA) is motivated by a desire to achieve a collective benefit that could not be achieved through individual action. Feiock (2004) and subsequent collaborators have developed the institutional collective framework to explain why local governments in a region cooperate to solve joint problems, especially the provision of public services. Throughout the U.S., local governments of all types engage in cooperative actions regularly, developing numerous interlocal agreements for the provision of various services, be they mass transit, infrastructure planning, or recreational facilities. ICA provides a framework for understanding how local officials perceive and weigh the relative costs and benefits of jurisdictional cooperation. ICA has

applicability for states as well. Although states are unlike cities in many important ways, especially their constitutional standing within the federal system and their legal authority over constituent local governments, they have comparable motivations, goals, and constraints.

# Hypotheses

Feiock (2007, 51), applying the Coase theorem (1960) to metropolitan governance, contends that "under the right conditions local governments can negotiate agreements to capture scale economies and policy spillover effects." The "right conditions" arise when the potential benefits to cooperation are high and the transaction costs of creating and implementing the cooperative agreement are low (Heckathorn and Maser 1987). Insights from this approach guide us to several features that should raise the benefits or lower the costs of compact participation. These features include homogeneity of interests/preferences, repeat interaction, size, and economic integration.

First, states are more likely to cooperate with other states that have shared interests and similar preferences. The political and social characteristics of state populations help determine the potential costs and gains of cooperation. Feiock (2005) argues that cities with divergent interests and preferences are less likely to forge agreements in the first place. And even if they did so initially, they would be more likely to defect once the agreement became operational. States with similar ideologies and partisanship look to each other for policy cues, a tendency that has been shown to be important in other forms of horizontal relationships such as policy diffusion (Grossback, Peterson, and Nicholson-Crotty 2004). Demographic similarities between states matter

also. "Demographic homogeneity suggests that there will not be political and economic power asymmetries that advantage one of the parties and create problems for negotiating fair divisions of benefits" (Feiock 2007, 54). Thus we expect homogeneity in the political, economic, and demographic characteristics across states to increase joint compact participation.

Second, we expect repeated interactions among states to lead to increased cooperation. When states interact on a regular basis, norms of cooperation develop and trust is fostered. Regular interaction between states fosters trust and builds norms of cooperation. States that, based on their history of interaction with another state, believe that the state will honor the contract it has entered into and comply with the provisions of the compact are more likely to do so themselves. Reciprocal trust, especially when it is experienced repeatedly, reduces uncertainty about other states' intentions. A joining state is less likely to end up in the role of "sucker" if other states' reliability has been demonstrated in previous encounters. Shared borders also stimulate repeated interactions among neighboring states, and may thus reduce transaction costs by creating interdependencies (Feiock 2005).

Third, jurisdictional size is another factor that can ameliorate problems associated with collective action. Larger units typically possess the resources to more easily overcome collective action problems. On the other hand, smaller units have more need for cooperative solutions due to greater externalities. In both instances, an incentive to join exists. Less apparent, however, are the conditions under which large and small states will cooperate with each other.

Fourth, we expect that economic integration leads to greater levels of cooperation. States that have higher levels of economic interdependence have both greater incentives to engage in collective action, and potentially lower transactions costs as well. A good deal of the literature in international relations suggests that economic interdependence leads to higher levels of cooperation between nations (Robst, Polachek, and Chang 1997). We expect similar effects for the U.S. states.

Finally, distance is a barrier to collective action in that jurisdictions located far from one another are less likely to interact regularly and develop familiar routines for that interaction. Cooperation among distant states can be more costly. Distant states also have less interaction generally, and thus less opportunity to build norms and trust which facilitate overcoming collective action problems. Thus we would expect membership in compacts to be lower for physically-distant states, higher for those that are more proximate.

### **Data and Method**

We start with the notion that all states have some underlying propensity to join interstate compacts. This propensity varies across states due to state specific factors (Lee and Park 2007). The factors underlying a state's propensity to cooperate have been the focus of the research on interstate compacts to date. Prior research has shown that overall levels of cooperation can be linked to levels of state capacity (Nice 1987, Bowman and Woods 2007). In particular, in earlier work we find that state higher levels of bureaucratic capacity increase a state's propensity to join compacts, but that higher

levels of state wealth and legislative professionalism *decrease* a state's propensity to join compacts (Bowman and Woods 2007). Thus our model includes a measure of economic capacity--state wealth (measured by per capita income)--and two measures of institutional capacity: legislative professionalism (the King [2000] scores) and bureaucratic capacity (the number of state and local government employees per 1,000 population).<sup>3</sup> Prior research also generally demonstrates that cooperation breeds more cooperation (Skalaban 1993; Bowman and Woods 2007). Thus, we also include a variable indicating the number of compacts that a state entered into in the preceding decade.<sup>4</sup>

We expect that states will cooperate more with other states that have similar preferences or goals. Among the possible indicators of this phenomenon are several political factors including ideology and partisanship. Both of these have been shown to provide policy cues in other forms of horizontal relationships such as policy diffusion (Grossback, Nicholson-Crotty, and Peterson 2004), thus we assume that they provide cues to potential compact participants. In the analysis, the Erikson, Wright, and McIver (1993) measure of citizen ideology is included as are indicators of the amount of unified Democratic control and unified Republican control of state government per decade. We expect to find liberal and conservative states compacting with their ideologically similar counterparts. Further, our expectation is that states with Republican-controlled state

<sup>&</sup>lt;sup>3</sup> The sources for the four capacity variables are: U.S. Census Bureau, 1982. State and Metropolitan Area Data Book 1982 (per capita income); King, "Changes in the Professionalism of U.S. State Legislatures," U.S. Bureau of the Census, various years, *The Statistical Abstract of the United States* (state and local employment).

<sup>&</sup>lt;sup>4</sup> This variable is not dyadic in form. Rather it represents the number of compacts joined by a state during each of the decades (including the 1960s, in this instance). The source of the data is Voit, Vickers, and Gavanonis (2003).

<sup>&</sup>lt;sup>5</sup> The ideology measure is from Erikson, Wright and McIver (1993) *Statehouse Democracy*. The data on party control come from Klarner's (2003) data file, which can be accessed at: http://www.ipsr.ku.edu/SPPO/journal\_datasets/klarner.shtml

institutions will join compacts with other GOP-controlled states; and that Democrats will behave in a comparable manner. Other potentially important markers of homogeneity across states are state population size, population density, and gross state product.<sup>6</sup>

Again, the expectation is that similarly-situated states are more likely to cooperate.

There are different hypothesized causal processes underlying these two sets of variables. We expect that states with a greater overall propensity to join compacts will cooperate with each other more, but this result is merely a function of the fact that they have characteristics that make them more likely to join compacts generally. Thus we anticipate that states with relatively high levels of features that have been found to lead to greater compact participation to join more compacts together, but states that have relatively low levels of these features to be unaffected. To assess the accuracy of this prediction we create dummy variables for state capacity to represent whether both states in the dyad are at least a standard deviation above (high capacity) or below (low capacity) the mean in a given decade. Our expectation is that because they have a general propensity to join more compacts, states with high bureaucratic capacity will join more compacts together. States with low levels of bureaucratic capacity, on the other hand, should not be more likely to join compacts together. Following Bowman and Woods (2007) our expectation for legislative capacity and wealth are reversed: we expect that states with high legislative capacity and wealth will join fewer compacts together.

For the homogeneity variables, our expectation is that states that are similar on these dimensions will be more likely to cooperate. Thus states that are both high and low on these indicators should join more compacts together. Each of the homogeneity

\_

<sup>&</sup>lt;sup>6</sup> Data for population and population density were obtained from *The Statistical Abstract of the United States* (U.S. Bureau of the Census, Various Years). Gross state product data are from the Bureau of Economic Analysis, "Gross Domestic Product by State," <a href="www.bea.gov/regional/gsp/">www.bea.gov/regional/gsp/</a> (March 30, 2007)

variables is thus measured as the absolute value of the difference between the two states on that particular variable. Larger values indicate that the two states are farther apart on this variable.

Our empirical model includes two indicators designed to capture the incidence of repeated interaction. One measure is the number of compacts that a pair of states entered in the immediately preceding decade. We expect that the more frequently two states join together in compacts, the more likely they are to do so in the future. The other indicator is a measure reflecting whether a pair of states is physically contiguous with one another. Our argument here is that bordering states are likely to interact repeatedly over time as a simple function of location. Not all of these interactions are necessarily positive, but as they engage in their resolution, states will become more comfortable with one another (Feiock 2007). Additionally, geographically contiguous states are likely to confront common problems as a function of shared location that will stimulate memberships in the same set of compacts.

The model includes a measure of economic integration in recognition of the role that trade has played in mitigating some of the inherent rivalries among nation-states. We contend that interstate trade plays a similar role among U.S. states within its border and produces distance-lessening effects. In the analysis, the variable that is used is the value of trade between each pair of states.<sup>8</sup>

As noted earlier, larger units can more easily overcome collective action problems thereby facilitating their membership in compacts. Smaller states, on the other hand, have more need for cooperative solutions due to greater externalities, especially in

<sup>&</sup>lt;sup>7</sup> The data come from the Voit, Vickers, and Gavenonis (2003) compendium of interstate compacts.

<sup>&</sup>lt;sup>8</sup> The economic integration data come from the Commodity Flow Survey conducted by the U.S. Department of Transportation (Various Years).

situations characterized by geographic spillovers. Thus we would expect to see them readily participating in compacts, especially with similarly motivated small states. The geographic area variable is the absolute value of the difference between a pair of states' territorial sizes, in square miles. The joint cooperation of large and small states is less predictable, in terms of our theory. While a small state might desire a connection with a larger state, large states may have little incentive to reciprocate.

Finally, the analysis incorporates a measure of the distance between states in order to capture this deterrent to collective action. In accordance with prior work on interstate compacts (Bowman and Woods 2007; Nice 1987) we use the number of miles separating the states' capitals (in hundreds) as our measure of distance.<sup>10</sup>

In the analysis presented below, we model the number of compacts a state enters with another state as a function of independent variables representing each of the explanatory factors discussed above. Our dependent variables represent state participation in interstate compacts, which is taken from *Interstate Compacts and Agencies 2003* (Voit, Vickers, and Gavenonis 2003). A state's participation in compacts is measured at three different periods: 1979, 1989, and 1999. The dependent variable is the number of compacts a state entered into with another state in a given decade. The independent variables are measured at the start of each decade (where possible) and the analysis is pooled across the decade sections. Decades were chosen for both theoretical and practical reasons. Ten year intervals are long enough to allow for significant variation in the number of compacts entered. Moreover, data for many of our variables

<sup>9</sup> State territorial size data were taken from U.S. Census Bureau. 1982. *State and Metropolitan Area Data Book* 1982, Table C.

<sup>&</sup>lt;sup>10</sup> These data were provided by W. Lynn Shirley of the Department of Geography, University of South Carolina.

are only available periodically, making ten year intervals a reasonable choice from a dataavailability standpoint.

Our analysis looks at the number of compacts entered into by all pairwise combinations of the 48 contiguous states. The unit of analysis is therefore the state dyad. The dyad data set includes 3,384 observations: 1,128 state dyads for each of three decades. Direction does not matter: the Alabama-Arizona dyad is the same as the Arizona-Alabama dyad and thus represents a single observation. The dependent variable ranges from 0 (no compacts joined) to 9 (the maximum number of compacts joined) in a decade.

We thus have a time-series cross-section (TSCS) design with 48 states and three time periods. Accounting for the TSCS characteristics of the data is important for the analysis since three particular assumptions regarding the error term of the model—homoskedasticity, lack of autocorrelation, and cross-sectional independence (lack of spatial autocorrelation)—are likely to be violated (Baltagi 1995). Therefore we use a general estimating equations (GEE) technique to perform our event counts, with Huber-White standard errors to account for heteroskedasticity across cases. The primary advantages of GEE are the availability of alternative distributional assumptions, robust standard errors, and flexible error correlation structures (Liang and Zegler 1986; Zegler and Liang 1986; Zorn 2001). This procedure is appropriate for use with TSCS data that are cross-sectionally dominant, i.e., when the number of cross-sections (states, in this case) is larger than the number of time periods (decades). Most importantly, the

 $^{11}$  The formula is ([48 states x 47 potential dyadic partner states]/2) x 3 decades.

<sup>&</sup>lt;sup>12</sup> The analyses were performed in STATA, v. 9.0. We used the xtgee command, specifying the negative binomial distribution and the log link function with an exchangeable correlation structure and robust standard errors.

procedure yields parameter estimates that are uncontaminated by the effects of autocorrelated and heteroskedastic errors.

The dependent variable in the analysis below is a count of the number of compacts entered by pairs of states. We accordingly employ negative binomial event count models in our analyses. These analyses model the dependent variable as a non-linear function of independent variables, where the distribution of the dependent variable cannot achieve values below zero (see Long 1997). The possibility of overdispersion exists in these data (e.g., the conditional variance exceeds the conditional mean) which could occur if the events are not truly independent—i.e., if joining a compact makes a state more likely to join additional compacts. The distributional properties of the negative binomial model account for this possibility.

Interpreting these event count models is straightforward, although complicated a bit by the non-linear functional form. We thus interpret each coefficient through its incidence rate ratio (IRR), which is similar to an odds ratio. Because of the nonintuitive scale of several of our independent variables we interpret the IRR in terms of the percentage change in the expected number of compacts joined given a one standard deviation change in the independent variable.

### Results

The results are presented in Table 1. On the whole, the results indicate that interstate cooperation is driven by a variety of forces, with variables representing each of

six explanatory factors significantly influencing the number of interstate compacts joined by state pairs.

### Table 1 about here

Several of the variables representing a state's general inclination toward cooperation are significant. The results suggest that state dyads that have joined more overall compacts in the past—but not necessarily with each other--are much more likely to join compacts together. A one standard deviation change in prior overall compact participation increases the number of compacts jointly entered by 6.7%. Moreover, several of the dyadic features of state capacity also are also borne out. States with high legislative professionalism are less likely to join compacts with other states that have high levels of legislative professionalism, while states with high levels of bureaucratic capacity are more likely to join compacts together. These are consistent with the findings of Bowman and Woods (2007) that interstate compacts act as a substitute for state policymaking capacity, but that bureaucratic capacity may be necessary for effective compact implementation. We find no evidence however, that relative state wealth plays a role in joint compact participation.

We find substantial evidence that states join compacts with states with which they are politically homogeneous. A one-standard deviation increase in the difference between the percentage of the decade that states have unified Democratic governments tends to decrease compact participation by 1.7%, with a similar increase for Republican governments causing a 2.2% decline in joint compact participation. Also significant is citizen ideology, with a standard deviation increase in the difference leading to a 1.7% drop in joint compact participation, ceteris paribus.

Two of our hypotheses regarding the impact of demographic similarity on state compact participation are borne out. The more similar states are in terms of population and population density, the more likely they are to join compacts together. A one standard deviation increase in the difference in the states' population size decreases joint compact participation by 2.6%, and a one standard deviation increase in the difference in states' population density decreases joint compact participation by 2.5%. However, the size of the state economy does not appear to be related to states' participation in compacts.

In general our difference measures suggest that states tend to cooperate with similar states. State size, however, evidences the opposite effect: rather than forming cooperative relationships with states of similar size, the significant positive coefficient indicates that states enter into a greater number of compacts as the size disparity between them increases. On average a one standard deviation increase in the absolute value of the difference in geographic area between a pair of states is associated with a 1.9% increase in the number of compacts entered.

The results regarding repeat interactions between states are mixed. On the one hand, states clearly cooperate with their neighbors: the results suggest that contiguity has an impact even after controlling for distance, with states joining 11.9% more compacts with their contiguous neighbors. This lends support to the notion that frequent interaction leads to the development of trust and norms of reciprocity that may help overcome collective action dilemmas. The results for lagged dyadic compacts, however, strongly challenge this notion. The coefficient on the prior number of compacts the two states had jointly entered is negative and significant, indicating that prior cooperation significantly

reduces the likelihood of future cooperation. A one standard deviation change in the overall number of state compacts a pair of states had joined together at time t-1 decreases the number of compacts joined at time t by 12.6%.

Our measure of economic integration suggests that states are significantly more likely to join compacts with their trading partners. A standard deviation increase in dyadic trade leads to a 2.2% increase in the number of compacts joined. This result supports the contention that economic interdependence increases the potential benefits of cooperation.

Finally, as hypothesized, the distance between states strongly affects their rate of compact participation. As the distance between state capitals increases, states jointly participate in fewer compacts. A one standard deviation increase in the distance between state capitals reduces the number of compacts joined by 9.1%. This is consistent with the argument that distance acts as a deterrent to collective action between the states.

### Conclusion

A great deal of recent research in political science focuses on the effects of interstate competition. The flip side of the coin is that states often cooperate as well. Interstate compacts hold substantial promise: they provide a mechanism through which states can address shared problems, promote a common agenda, or produce collective goods. Yet there is significant variation in the rate of state participation in interstate compacts. Ultimately, however, scholars know little about the forces that motivate states to cooperate with other states.

The results reported here add to our knowledge base, but they are also somewhat confounding. Consider the case of previous experience with compacting. As expected, states with a demonstrated general proclivity toward cooperation have higher rates of compact joining than their less-cooperative counterparts. This comports with Skalaban's (1993) supposition that as federal systems mature, multi-jurisdictional problem solving becomes more common. But the analysis also shows that pairs of states that have joined together in the past are less likely to join compacts with each other in subsequent decades. This finding challenges the argument that repeated interaction facilitates mutual trust and cooperative norms. And, although we have determined that homogeneity of preferences accounts for much dyadic compacting, we found that one important component--state territorial size--displays a different pattern, one of dissimilarity. Large states are more likely to pair with small states in compacts. This is surprising because size asymmetries are thought to represent power disparities that could result in advantages and disadvantages for various partners (Feiock 2007).

To return to the issue of what we do know, it is evident that state capacity plays a role in joint compact participation, with legislative professionalism leading to lower amounts of joint participation, while bureaucratic capacity leads to higher amounts. Our analyses also indicate that states seek out agreements with other states that are similar on a number of other dimensions. One noteworthy finding, the powerful role played by governmental partisanship and citizen ideology suggests that compacts may be political devices as well.

Future research may focus on other demographic factors. Given the variation in compact substance, the demographic effects may be washing out. These findings

reinforce the need for systematic empirical research into this important, and largely unstudied, phenomenon. Lacking this research, discussions of interstate compacts to date have been forced to rely on a number of untested premises. The results of this study suggest that several of these premises deserve deeper examination. Such an examination promises to shed new theoretical light on the often murky world of intergovernmental relations.

### References

Baltagi, Badi H. 1995. *Econometric Analysis of Panel Data*. New York: Wiley and Sons.

Bell, Melissa Taylor. 2004. "Interstate Compacts: Obstacles and Support." *Spectrum: The Journal of State Government* (Fall): 12-15.

Bowman, Ann O'M. and Neal D. Woods. 2007. "Strength in Numbers: Why States Join Interstate Compacts." *State Politics and Policy Quarterly* 7 (4): 347-368.

Coase, Ronald. 1960. "The Problem of Social Cost." *Journal of Law and Economics* 3 (1): 1-44.

Dye, Thomas R. 1990. *American Federalism: Competition among Governments*. Lexington, MA: Lexington Books.

Downs, Anthony. 1994. *New Visions for Metropolitan America*. Washington, DC: Brookings.

Erikson, Robert S., Gerald S. Wright, and John P. McIver. 1993. *Statehouse Democracy: Public Opinion and Policy in the American States*. New York: Cambridge University Press.

Feiock, Richard C. 2004. *Metropolitan Governance: Conflict, Competition, and Cooperation*. Washington, DC: Georgetown University Press.

Feiock, Richard C. 2005. "Institutional Collective Action and Local Governance." Paper presented at the symposium, "Creating Collaborative Communities: Management Networks, Services Cooperation, and Metropolitan Governance," Wayne State University, October 31 2005.

Feiock, Richard C. 2007. "Rational Choice and Regional Governance." *Journal of Urban Affairs* 29 (1): 47-63.

Florestano, Patricia S. 1994. "Past and Present Utilization of Interstate Compacts in the United States." *Publius: The Journal of Federalism* 24: 13-25.

Grossback, Lawrence J., Sean Nicholson-Crotty, and David A.M. Peterson. 2004. "Ideology and Learning in Policy Diffusion." *American Politics Research* 32: 521-545.

Heckathorn, Douglas, and Steven Maser. 1987. "Bargaining and the Sources of Transaction Costs: The Case of Government Regulation." *Journal of Law. Economics, and Organization* 3: 69-98.

Kenyon, Daphne A. and John Kincaid. 1991. "Introduction. In *Competition among States and Local Governments*, ed. Daphne A. Kenyon and John Kincaid, 1-33. Washington, DC: Urban Institute Press.

King, James D. 2000. "Changes in the Professionalism of U.S. State Legislatures." *Legislative Studies Quarterly* 25: 327-343.

Klarner, Carl. 2003. "Measurement of Partisan Balance of State Government." *State Politics and Policy Quarterly* 3: 309-19.

Lee, In Won and Hyung Jun Park. 2007. "Choosing Sides: Formation of Regional Partnerships for Economic Development in Metropolitan Area and Landscape Theory of Aggregation." *International Review of Public Administration* 12 (1): 63-79.

Liang, Kung-Yee and Scott L. Zegler. 1986. "Longitudinal Data Analysis Using Generalized Linear Models." *Biometrika* 73: 13-22.

Long, J. Scott. 1997. Regression Models for Categorical and Limited Dependent Variables. Thousand Oaks, CA: Sage Publications.

Mountjoy, John and Melissa Bell. 2005. "Interstate Compacts: Trends and Issues." Pp. 42-49 in *The Book of the States* 2005. Lexington, KY: Council of State Governments.

Nice, David C. 1987. "State Participation in Interstate Compacts." *Publius: The Journal of Federalism* 17: 69-83.

Robst, John, Solomon Polachek, and Yuan-Ching Chang. 2007. "Geographic Proximity, Trade, and International Conflict/Cooperation." *Conflict Management and Peace Science* 24: 1-24.

Scholz, John and Richard C. Feiock. "Self Organizing Federalism: Voluntary Coordination in Metropolitan Areas." Unpublished paper.

Skalaban, Andrew. 1993. "Policy Cooperation among the States: The Case of Interstate Banking Reform." *American Journal of Political Science* 37: 415-428.

Voit, William Kevin, Nancy J. Vickers, and Thomas L. Gavenonis. 2003. *Interstate Compacts and Agencies 2003*. Lexington, KY: The Council of State Governments.

Zegler, Scott and Kung-Yee Liang. 1986. "Longitudinal Data Analysis for Discrete and Continuous Outcomes." *Biometrics* 42: 121-30.

Zimmerman, Joseph F. 2002. *Interstate Cooperation: Compacts and Administrative Agreements*. Westport, CT: Praeger.

Zorn, Christopher J. W. 2001. "Generalized Estimating Equation Models for Correlated Data: A Review with Applications." *American Journal of Political Science* 45: 470-90.

Table 1: Results of GEE Negative Binomial Model of Interstate Cooperation, 1960-2000

Independent Variable	b (S.E.)	Change in Incidence Rate Ratio
Propensity to Join		
High Dyadic Legislative Professionalism	269***	-2.8%
	(.079)	
Low Dyadic Legislative Professionalism	.022	
	(.152)	
High Dyadic State Wealth	055	
	(.105)	
Low Dyadic State Wealth	.035	
	(.066)	
High Dyadic Bureaucratic Capacity	.118***	1.7%
	(.066)	
Low Dyadic Bureaucratic Capacity	.037	
	(.072)	
Lagged Total Compacts Joined	.008***	6.7%
	(.001)	0.,,0
Homogeneity of Preferences	(.001)	
Relative % Unified Democratic Government	053***	-1.7%
	(.032)	1.770
Relative % Unified Republican Government	094***	-2.2%
	(.04)	2.270
Relative Citizen Ideology	002*	-1.7%
	(.001)	1.770
Relative Population	008**	-2.6%
	(.004)	-2.070
Relative Population Density	.004**	-2.5%
	(.002)	-2.370
Relative Gross State Product	.017	
	(.023)	
Size	(.023)	
Relative Geographic Area	.004**	11.9%
Relative Geographic Area	(.002)	11.970
Danagted Internaction	(.002)	
Repeated Interaction	.136***	4.5%
Contiguity		4.5 / 0
Lagged Dyadia Compacts Joined	(.033) 057***	-12.6%
Lagged Dyadic Compacts Joined		-12.0%
	(.006)	
Economic Integration	<i></i>	2.20/
Trade	.556***	2.2%
D: .	(.232)	
Distance Miles Peterson Conitals	014444	0.10/
Miles Between Capitals	014***	-9.1%
	(.002)	
Constant	.921***	
	(.052)	
N	3384	
Groups	1128	
Wald $\chi^2$	309.45***	

Note: GEE coefficients, with Huber-White standard errors in parentheses. Standard errors are clustered on state dyad. Change in incidence rate ratio represents the effect of a one standard deviation change in the independent variable on the number of compacts entered jointly. \*\*\* p<.01,\*\* p<.05,\* p<.10; one-tailed tests.