Policy dynamics and the evolution of state charter school laws

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Abstract Baumgartner and Jones (1993) showed how radically new policies emerge on government agendas as a consequence of exogenous shocks to policy subsystems displacing privileged interests. But how do these policies evolve post-punctuation? In this paper, we present three different models of policy change. Policies may revert to the old status quo if displaced interests re-assert themselves, or they may be "locked-in" by new interests now reaping the benefits. Alternatively, they may incrementally change as lawmakers "learn" how to better meet target population needs, particularly by witnessing how other jurisdictions address similar problems. We test these models with data on change in state charter schools laws over time. We find that whether old status quos are overthrow, and the fate of charter policies when they are enacted, is influenced more by competing political interests, especially interest groups, than elite and public perceptions of broad systemic crises. Yet, we also find that changing demands on the state and learning from the successes and failures of neighboring states also play significant roles.

Keywords Public policy · Punctuated equilibrium · Pluralism · Charter schools · Education

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Some public policies percolate through the lawmaking process slowly and are subject to re-conceptualization, refinement, and compromise as they gradually acquire and retain winning coalitions (Pressman and Wildavsky 1979). Others burst onto decision agendas and are swiftly enacted. Kingdon (1995) explains this in terms of policy "windows," the brief opening of opportunities for non-incremental innovation when the streams of problems, policies, and politics align. For Baumgartner and Jones (1993), dramatic shifts in policy continuity, or "punctuated equilibria," occur when changes in problem definition expand the scope of conflict to draw in new interests that overwhelm longstanding policy monopolies. But what happens to these "opportunistic policies" *after* they have punctuated the equilibrium? Are powerful interest groups and lawmakers, temporarily displaced by the crisis opening the policy window, able to quietly re-assert the old status quo? Or are the gains of the new interests who overthrew the old regime locked-in and made permanent so that a significantly different status quo endures?

In this paper we identify three competing models of the evolution of opportunistic policies and use them to explain the emergence and subsequent change of a policy that has taken the American states by storm over the last sixteen years: charter schooling. Seemingly appearing out of nowhere and spreading rapidly across the fifty states, charter schooling is a good example of an equilibrium puncturing opportunistic policy. We start by modeling the likelihood of a state adopting a charter law and the initial form of this law using variables drawn from the three models. After identifying the variables contributing to adoption and structure, we then develop and test a statistical model of state policy change to find which of these best explains the evolution of charter school policy. We find that all three models have some leverage over policy change, though political factors, such as interest group competition and party control of government, tend to play larger roles than changes in the needs of target populations. Not only does this help scholars see crucial differences in why policies change (or not) over time, which is important if we believe that policy ought to change only in response to genuine changes in public needs rather than special interest politics, but it also gives us a better understanding of the real political dynamics embedded in charter schooling and the reform of American public education.

Three models of policy evolution

Public policies in democratic societies tend to reflect existing balances of power among competing interests and ideologies, usually changing incrementally as these interests change. But opportunistic policies may be exempt from these constraints because their emergence on decision agendas and subsequent enactment are unusually rapid, dramatic, and dependent on forces exogenous to policy making subsystems. They are not subject to the kind of scrutiny, bargaining, and veto politics that typically filter out or dilute new ideas disruptive to reigning subgovernment norms and interests advantaged by the status quo. Baumgartner and Jones (1993) explore the circumstances leading to the rapid emergence of opportunistic policies, often the result of a gradual build-up of pressure as new interests challenge the definitions of issue problems and policy solutions used by older interest groups and lawmakers to maintain the status quo; but little has been written about their fate after displacing the reigning policy. How do such policies evolve over time? Drawing on the policy literature, we identify three possible outcomes.

Subgovernment policy making and reversion

We start with perhaps the best known model of policy making, usually referred to as the "subgovernment" (or "iron triangle") perspective. Proponents of this view see political actors as partitioned into tightly knit subsystems, usually revolving around a legislative committee or subcommittee, characterized by common interests and values (McCool 1990). Their authority to dictate policy within their respective jurisdictions without interference from parent institutions or organized interests outside of the subsystem is guaranteed by norms of autonomy and reciprocity (Lowi 1969). These enfranchised law-makers and interest groups protect the status quo by promoting definitions of issue problems that justify particular policy solutions, solutions that also happen to benefit the constituencies on whom these elites depend for their political survival.

Kingdon (1995); Baumgartner and Jones (1993) show how emerging new interest groups, allied with ambitious legislators, articulating new definitions of existing problems can create enough instability in a subsystem to dislodge the elites advantaged by the status quo and replace it with a new and dramatically different policy. Large-scale disasters external to the subsystem may even create bursts of what scholars like McFarland (2004) call "high politics" where party leaders and presidents, under pressure from media and public opinion, sweep an old status quo aside. But subgovernment theory suggests that under normal circumstances, the underlying characteristics of the pre-shock system will reassert themselves. The old, dominating interests, and the legislators to whom they are connected, have not been destroyed, merely pushed temporarily aside. These pressures displacing them fade as public attention shifts to the next great crisis, allowing these interests to quietly reassert themselves and invest resources to bring about a reversion to the old status quo.

Punctuated equilibrium and policy lock-in

In contrast, Baumgartner and Jones argue that subsystems overthrown by exogenous pressures from new organized interests leading to dramatic changes in policy, what they term "punctuated equilibrium," often results in the permanent displacement of once dominant interests. Pushing "radical" new ideas, these advocates are often strong enough to reframe the definitions by which issue problems and solutions in a policy area are understood, and even change the institutional venues in which these decisions are made. During such periods of instability, the terms of debate are fluid and the potential for new, non-incremental policy change is great. If the newcomers are sufficiently strong, elites benefiting under the old policy lose legitimacy and critical gate-keeping positions and are ultimately displaced permanently.

But once in power, these former outsiders cement their own ties to lawmakers, co-opt or marginalize opponents, and otherwise "lock-in" their policy gains. Where this new dominant elite may have once needed to mobilize a normally indifferent electorate to bring about change, once in power they, like their predecessors, now take advantage of the public's limited attention span and use the tools of patronage they now control to con-solidate gains and make the new status quo path dependent. Ideas that were once unsettling, even revolutionary, become the new conventional wisdom. For example, in the 1970s, new organized interests with new legislative allies broke the hold business interests had in Congress to enact environmental and consumer protection laws, something unthinkable a decade before when "what was good for business was good for America" (Vogel 1989). Changing understanding of health risks helped mobilize new constituencies,

with new programs generating new beneficiaries (including businesses that specialized in alternative energy, new pollution-reducing technologies). The policy's definitions, goals, and beneficiaries have changed, but the new system's organization looks and functions remarkably like the old with mutually reinforcing power structures locking in a new status quo.

Policy evolution through collective learning

Both the reversion and lock-in models draw on political variables—public opinion, interest group influence, and partisan control—as the primary mechanisms steering policy adoption and subsequent evolution. In contrast, some scholars suggest that governmental decision making can be, and should be, responsive to more pragmatic considerations of what does and does not work. Linked to such terms as "new public management" (Kettl and DiIulio 1995; Barzelay 2001), they call for more objective policy analysis and change as the real needs of target populations and budget availability change. They also argue that networks of legislators and agency officials play central roles in identifying and disseminating examples of successful policy practice (Sabatier 1988; Mintrom and Vergari 1998). Although associated more with public administration, this perspective is also consistent with a line of political science research on policy diffusion among the states. Early adoption studies by Walker (1969); Gray (1973) found that states often follow their neighbors' lead, though it is not clear whether such behavior is due to genuine learning or merely mimicry (copying other states' policies because they appear to solve a problem). Though lawmakers may not be relying on objective policy evaluation as much as analysts might like when laws are amended, studies do suggest that national networks of policy professionals are expanding the geographic scope of learning and carrying working models (best practices) home to try out (Peterson et al. 1986; Glick andHays 1991; Balla 2001).

While the reversion and lock-in models are mutually exclusive within a given jurisdiction, policy learning would be evidenced by small and ongoing adjustments that are less dependent on existing configurations of political interests, and which consequently may either move in the direction of the old status quo, validate and reinforce the new one, or move in a new direction entirely depending on the changing needs of the target population. It is the motivation for change that differs as practical needs for workable solutions appear to trump politics.

The three models applied to charter school policy

In order to assess the applicability of these three models, we focus on an opportunistic policy that swept the American states in the 1990s: charter schooling. With intellectual roots in the belief that market competition, in this case offering more educational choices to parents, leads to greater system efficiency, coupled with a growing desire in the 1970s and 80 s in urban school districts for reform, charter schooling first emerged as a state policy in Minnesota in 1991 (Henig 1994; Nathan 1996). Although politically controversial and highly contested in most states, charter schooling appears to have emerged as lawmakers' vehicle of choice for experimenting with public education reform in the United States. By 2008, 40 states and the District of Columbia have adopted some version of charter school policy, with the Center for Education Reform, their primary advocacy

organization, claiming that over 4,100 charters are now enrolling approximately 1.2 million K-12 students.[1]

We argue that the emergence of charter schooling represents a punctuation of state education policy monopolies for five reasons. First, it is a distinctly different approach to public education. Charter schools operate outside of familiar public education systems characterized by compulsory attendance and fixed enrollment zones. Instead, states often exempt charters from most oversight and give them considerable freedom to design their internal operations and curriculum as they see fit, or as local education markets demand, with many targeting their course offerings at particular student populations (high performing, at-risk, or those with vocational interests), building themselves market niches (Hassel 1999; Finn et al. 2000).

Second, charter schooling was driven by interest groups and elected officials previously uninvolved in, or operating largely outside of, state education policy. Although state and local policy makers have incrementally tweaked the laws, they have largely left the system of centralized school district control untouched and unquestioned for over a century. Frustrated with the perceived poor performance of public schools in the 1970s and 1980s, an alliance of conservative theorists, business leaders, and even urban school teachers and parents in some states, came to regard choice in education, and charter schools in particular, as a way to use market incentives to improve education quality (Nathan 1996, p. 58). The fact that charters appeared to be relatively low in cost, both fiscally and political, led many governors and legislators to grab the opportunity to show that they were serious about education reform (Bulman and Kirp 1999; Bulkley 2005). Third and related, this policy was also a major defeat for, and displacement of, interest groups that had long dominated the arena of education policy, such as teachers unions, school board associations, and associations of district administrators, though in some cases they may have accepted charter schools as a compromise to stave off the greater threat of policies enabling students to receive publicly funded vouchers (Henig 1994).

Fourth, once started, charter school policy was quickly adopted by a large number of states in the space of only a few years. After the enactment of the Minnesota law in 1991, 10 more states had adopted charter school laws by 1994, 35 doing so by 1998, followed by a steep drop off as only 6 more did so by 2008. The final reason we believe charter school policy is an excellent example of punctuated equilibrium is that charters in a few states are starting to claim significant portions of the K-12 education market. In Arizona, over 100,000 students are now enrolled in 462 charters, as are nearly a fourth of all students in the District of Columbia.

Charter schooling is also a good policy for testing the three models because many state laws are now "mature" in that they have been on the books for over a decade. This means that legislatures and administrative agencies have had time to adjust policies in response to internal and external pressures. If reversion, lock-in, or learning has taken place, we should be able to see it in many states. Certainly, state laws vary considerably in terms of their degree of public support for charter schooling (Wohlstetter et al. 1995; Miron andNelson 2002; Vergari 2002). Some, such as Arizona, have maintained highly deregulated environments marked by unobstructed entry of new schools, broad discretion to set curriculum and staffing policies, and constraints upon government regulatory oversight and powers to close schools (Maranto and Gresham 1999). Such ongoing permissiveness suggests that policy lock-in has occurred.

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[1] See www.edreform.com/index.cfm?fuseAction=document&documentID=1964, accessed on July 16, 2008.

Other states have set high hurdles for the opening of new charters by placing caps on the overall number that might be established or prohibiting the conversion of existing public schools, as well as maintain restrictions on how they operate (limiting the use of uncertified teachers) by establishing strict oversight regimes (requiring considerable documentation, regular site visits, or limiting the length of time for which a charter is granted). In some cases, these restrictions were in the original law, creating variation from state to state in the policy's initial permissiveness. In other states, greater regulation was imposed or eliminated *after* initial enactment, suggesting that the laws have evolved and that reversion or learning may be taking place.

We expect that the choice states make between locking-in laissez faire charter school policies and reverting to more regulated regimes similar to traditional public education are determined by a set of political variables. These include the partisan differences of the lawmakers and interest groups who dominated education policy subsystems prior to the abrupt emergence of charter schooling, the pro-choice-in-education interests who brought about the punctuation, and the larger context of constituent desire for greater choice in education. Thus, organized interests outside of the old regime would be most influential in adopting and shaping charter school policy when supported by broad ideological sentiment and perceptions of an education crisis. For example, because charter schooling has intellectual roots in conservative ideology, the lock-in model predicts that pro-charter interest groups would have their greatest and most lasting impact in conservative states, where the electorate is more supportive of alternative options for education outside of the traditional system. Concern about high drop-out rates and spiraling costs may provide an impetus culminating in subsystem displacement, but once in place, the new policy regimes will spawn new interest groups and institutional structures to protect the initiative from erosion and propel it even further along the privatization dimension.

Alternatively, in ideologically liberal states more inclined toward government solutions to social problems and home to influential teachers unions and school board associations, a more serious exogenous crisis in public education and greater advocacy by pro-choice-in-education supporters might be needed to get charter schooling considered as a viable policy alternative. Lawmakers might adopt it in a rush to solve, or at least be seen as solving, the crisis. But even then, as predicted by the reversion model, unless pro-charter advocacy remains strong and/or the initiating crisis worsens, displaced interests would slowly erode the new law. Teachers' groups and allied lawmakers would work, perhaps quietly and subtly, to gradually ease the law back to the pre-punctuation status quo by essentially converting charters into traditional public schools.

Yet, some traditionally conservative states (Georgia for example) have passed what advocates consider to be "weak" laws, and some traditionally liberal states (Minnesota and Massachusetts) have been leaders in developing and maintaining broad and permissive charter school policies. These counter-intuitive cases may fit the expectations of the policy learning model and suggest that a set of variables *other* than political advocacy may also shape policy evolution. Though the windows enabling dramatic policy change tend to close quickly, once opportunistic policies are in place, vestiges of the crisis, such as a continuing failure to keep kids in school, may push lawmakers to modify their laws in ways not predicted by political variables.

Following the diffusion studies of Berry and Berry (1990), another way experts might approach on-going problems is to learn from the experiences of neighboring states. This may simply be lawmakers mimicking what other states do, or, as Mintrom and Vergari (1998); Renzulli and Roscigno (2005) argue, it may result from administrators and policy entrepreneurs traveling in professional networks where they exchange new ideas and best

practices. If states are quicker to import policy models from their neighbors, as some of the literature suggests, that need not be simply because legislators are more likely to hear about innovations just across their borders. Legislators, sensing that cultural, social, and political context may affect policy success, might reasonably infer that programs that appear to work when applied by their neighbors are more likely to transfer successfully than are policy blueprints that originate in more distant places. Either way, the perceived successes or failures of neighboring states may also cause a state's law to shift in either a more permissive or restrictive direction. In sum, while reversion and lock-in see politics driving change, the learning model holds that over time these factors become less influential than state needs and feedback from a policy's success (or lack thereof).

Research design

We proceed in three stages: (1) an event history analysis of why states adopted charter school laws from 1991 to 2006, (2) an analysis of why these laws initially imposed heavy regulatory burdens on charter schools or gave them flexible operating environments, and (3) an analysis of why these laws changed (if they did) from 1998 to 2006. The first two help us identify which variables from our three models are important in determining why this equilibrium punctuating policy emerged. In the third, we learn which variables primarily determine whether these laws became more or less regulation heavy over time.

Measuring policy change

Our dependent variable in the event history analysis is simply a binary indicator of whether a state adopted a charter school law that year. The variable for the other two use measures developed by the Center for Education Reform (CER) that distinguish state charter school laws by the degree to which they free schools from state and local regulation. Since 1998, CER has developed ten different measures of how supportive state laws are of large and varied charter school communities. Though each is designed to capture a specific aspect of a state's law, Shober et al. (2006) found that state charter school policies have two general features. One is flexibility, or the freedom from regulation to open schools with very different operational structures, curricula, and student target audiences. The other is accountability, or requirements that schools provide measures of educational success, such as standardized test scores. The former, we argue, more clearly represents the difference between charter schools and traditional public schools, so we select six measures out of the ten developed by CER, which we believe collectively capture this aspect of each state's policy. Each measure is scored from 0 to 5 so we simply add them together to produce a dependent variable ranging from 0 to 30, *higher* scores indicating *less* regulation. Details regarding the content and validity of these measures and why we selected them are in the appendix.[2] Means and standard deviations for this and all independent variables for all three analyses are presented in Table 1.

 Although well known in the community of charter school researchers, the use of CER scores has received some criticism (see Scott and Barber 2002), and we share some of these reservations. The Center is a pro-charter advocacy organization and its interpretations of the data it collects may reflect its preference for less regulated, more market-oriented chartering regimes. Yet, while CER has an organizational interest in promoting less

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[2] A more detailed methodological appendix is available from the lead author upon request.

Table 1 Descriptive statistics of dependent and explanatory variables: means (standard deviations)

Variable	Adoption model	Flexibility model	Change model
State has a law/1998 CER score/Change in CER score from 1998 to 2006 (dependent variables)	0.55 (0.50)	16.20 (7.92)	−0.90 (3.56)
Average state adoptions/Average regional CER scores/ Average regional CER change (diffusion)	0.52 (0.36)	10.73 (5.60)	3.48 (5.20)
Percentage of associations in state interest group community/Chamber of commerce contributions	30.38 (5.67)	34.67 (80.63)	6.70 (15.88)
NEA members as a percentage of all teachers in a right-to-work state	1.17 (0.52)	0.82 (0.52)	7.07 (20.91)
Number of Educational Management Organizations (EMOs) in the state	–	4.27 (9.18)	1.20 (2.73)
State legislature is unified under the democratic party	1.42 (0.49)	–	–
Average percentage of democrats in the state houses (assemblies) and senates by democratic control of state legislature	0.81 (0.49)	0.25 (0.33)	0.01 (0.05)
State governor is a democrat by democratic control of state legislature	0.65 (0.79)	0.14 (0.36)	0.04 (0.45)
Percentage growth in state student body populations	0.10 (0.13)	0.10 (0.12)	0.51 (1.25)
State graduation rates	0.72 (0.10)	0.71 (0.08)	0.04 (0.06)
State expenditure on education divided by gross state product	0.04 (0.01)	0.05 (0.07)	−0.01 (0.08)
Change in the number of charter schools from year one to year two divided by total public school enrollments	11.65 (22.50)	7.21 (17.84)	0.03 (0.08)
SAT verbal score average	518.49 (194.56)	532.30 (34.79)	1.88 (9.99)
Age of the law from adoption year	–	1.94 (1.99)	–
Public school students in the state in 1990 (divided by 1,000)	–	–	885.70 (970.33)

regulation overall, it is not clear that this orientation systematically alters its incentive to provide a reliable measure; the organization has often drawn attention to states imposing more regulation (smaller values on its measures) to bolster its claims that (a) it is feasible to have a highly regulated charter system, and (b) opponents of charters will seek to re-regulate unless challenged. The advantages of CER scores are: (1) they were specifically designed to capture changes in a state's policy over time; (2) they are widely known and employed by researchers and activists on both sides of the school choice debate; (3) since 1998, they have been generated on a yearly basis using a stable set of criteria, though it is possible that we may be missing some of the earliest dynamics of policy formation by not having data on the structure of charter school laws prior to 1998.

The first report on state laws was produced by CER in 1998 so we use this as our baseline and compare it to the status of the laws in 2006. Of the states with charter school laws in 1998, the least regulatory was Arizona with a score (the sum of the six measures we selected) of 27.5. Perhaps not coincidentally, Arizona is home to the second largest number of charter schools (462; California had 637 as of 2006). Many of the states around Arizona, however, had much lower scores, such as 14.5 for Nevada and 10.25 for New Mexico, while the next three with the highest scores were Michigan (27.2), Delaware (26.9), and Minnesota (26). There does seem to be a tendency for states that were first to adopt laws to

have initially had higher scores. Minnesota, the very first, adopted its law in 1991, while Arizona and Michigan adopted theirs in 1994 and 1993, respectively. The state with the lowest score in 1998 was Mississippi at 2.3.

By 2006, many of these states had seen substantial change in how much regulation they placed on charter schools. Georgia amended its law to be much more regulation-free, its score increasing from 13 to 19 (the largest increase), and New Mexico rising from 10.25 to 16 (second largest). On the other hand, Arizona's decreased by 2.5 points, Delaware's by 1.4, and Michigan's by 1.7, while Minnesota and Mississippi saw virtually no change at all. The states making the largest changes from 1998 to 2006 in terms of subjecting charter schools to greater regulation were South Carolina and Texas, their scores falling by 11.5 and 10.75, respectively. Overall, 21 states added greater regulation and public oversight, while 12 made their laws more accommodating to charters (and two making no changes at all). Interestingly, the mean score remained virtually unchanged, falling from 16.15 to 15.51, and the standard deviation of the scores only decreased from 7.8 in 1998 to 7.4 by 2006. Looked at from a regional perspective (as defined by the U.S. Census Bureau), the standard deviations of the Northeast Central, Mountain, New England, and Southwest Central regions all decreased, implying that the scores of the states in the regions were converging as the learning model would predict. Finally, out of the six states to adopt charter schools laws after 1998, only Indiana adopted a law with a CER score (26.5) substantially higher than the national mean.

Political and contextual explanatory variables

We assembled three sets of predictors corresponding to internal state dynamics, external forces, and the choices of regional neighbors. In-state political forces include broad ideological support for charter schooling, partisan control of state government, and the strength of relevant interest groups. Although there are examples in a few states of conservative Democrats supporting charter school legislation (see Bulkley 2005), free-market minded Republican politicians more frequently stepped forward as advocates, as seen in Michigan, Pennsylvania, Arizona, and the District of Columbia (Mintrom 2000; Bulkley 2005; Lacireno-Paquet and Holyoke 2007). Democrats were more supportive of interests vested in the old status quo and resisted charter school legislation, or at least helped insure that enacted policy regimes were characterized by significant regulation and oversight. We therefore measured partisan control of state government with data from 1998 to 2006.[3] As Coleman (1999) finds, partisan control of both legislative chambers makes it far more likely that the dominating party controls the agenda and can move or block legislation with minimal regard for the preferences of the minority party. We therefore coded a dummy 1 if the legislature was divided between the two parties in the observed year and 2 if it was unified under Democrats. Then, we calculated the percentage of legislators in the upper and lower chambers who were Democrats and averaged them to give us a measure of the size of their margin of control and multiplied it by our unified government indicator.[4] We also coded a dummy to indicate whether the state's

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[3] The 1998 data came from the *Book of the States* for 1998, while the 2006 data came from the National Conference of State Legislatures at: www.ncsl.org/statevote/partycomptable2006.htm.

[4] We used a coding of 1 and 2 rather than the more traditional 0 and 1 because we did not want to eliminate only partial Democratic control by multiplying it by 0. This approach enhances Democratic power if they control both houses.

governor was a Democrat that year and multiplied it by the unified legislature dummy as well because governors, like presidents, may be in better positions to control legislative agendas and push or resist legislation when their party controls the government (Eshbaugh-Soha 2005; Cummins 2006). Anomalous cases like Nebraska (one legislative chamber) and the District of Columbia were dropped.

The broader political atmosphere characterized by an electorate desiring greater choice in education might have further bolstered sympathetic politicians hoping to score points with voters. With no polling data on public support across all of the states, we chose a "revealed preferences" measure, the rate of expansion in the number of charter schools *immediately after* policy enactment. Greater public desire for choice in education generally should, we believe, translate into a greater desire among parents to enroll their children in charters, which should then encourage entrepreneurs to open more schools.[5] For each observed year where a policy was adopted, we found the number of schools in the first following year and subtracted it from the number in the second year and then divided the difference by the total number of public school students in the state so that demand in California could be compared to that in Wyoming.

As Baumgartner and Jones (1993) argue, policy punctuation occurs when the scope of debate is expanded so that new, competing interest groups become involved in policy subsystems from which they had been previously excluded. We therefore required measures of private organized interest strength on both sides of the charter debate. The notion of a competitive, market-driven education policy has long been advocated by state and local business communities as a way to improve education performance, empower parents, and, assuming that the quality of schools improves, stimulate economic development (Nathan 1996, p. 58; Henig et al. 1999a, pp. 107–109). Business communities often lobby through their state chambers of commerce so we measured chamber power by the total amount of contributions they made to state candidates and parties from reports filed with state campaign finance agencies and collected by the Institute on Money in State Politics.[6] As we were not able to obtain complete contribution records prior to 1998, for our event history analysis, we substitute the percentage of each state's registered interest groups that are professional and trade associations in 1990 from Gray and Lowery (1996, p. 105), although these also do not vary over time.

For the other side, we focused on organizations representing public school teachers invested in the traditional system and who have tended to resist choice-in-education policies, as seen in Michigan, Oregon, Arizona, and the District of Columbia (Mintrom 2000, p. 239; Henig et al. 1999b). We recognize that in many states, such as Arizona, public school board and district administrator associations lobbied against the charter school law, but only teachers' unions appear to have consistently opposed charter laws across the United States. And even within the American Federation of Teachers (AFT) there has been an inconsistency of positions, with AFT president Albert Shanker supporting the concept of charter schooling in 1988 (Nathan 1996, p. 63). We therefore focus on the one organization that appears to have most consistently opposed charter school laws, and lobbied for greater public oversight and regulation where such laws were enacted anyway, the

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[5] We used schools rather than students because so many charter schools in the early years were unable to enroll even a fraction of the number of students applying.

[6] The Institute's data is available at www.followthemoney.org. The values were quite large, and so as not to produce skewed coefficients, we divided the state contribution by 10,000. Though this reduces the per-state number, the variation is unchanged.

National Education Association (NEA) and its state affiliates.[7] Unlike the business community, these organizations have tended to rely more on grassroots advocacy as their primary lobbying tool so we measured their influence by membership in each state's NEA affiliate.[8] We obtained from the *NEA Handbook* for each year the number of K-12 teachers and calculated NEA's state strength as a percentage of the size of each state's teacher population (this data coming from the National Center for Education Statistics (NCES)). As their political power might be greatly handicapped in states with right-to-work laws that allow non-union teachers to be more easily employed, we coded a state 1 if it did not have such a law and interacted it with the NEA strength measure for our analyses.

There is one other interest group we chose to include, though we do not use it in the policy adoption model. Lacireno-Paquet (2006) found that a school's affiliation with a for-profit corporation specializing in school management, educational management organizations (EMOs) as they are called, had an affect on the number of low-income and minority students enrolled in charter schools (also see Henig et al. 2005). We suspect that their influence might also extend to the political realm, perhaps lobbying for more permissive policies and working to ensure that lock-in outcomes occur. For example, in Arizona, the Advantage Corporation, which runs numerous charter schools in that state, once it became clear that a law would pass, employed a lobbyist in Phoenix to influence the kind of law the legislature would produce. Similarly, the Edison Corporation hired a lobbyist in the District of Columbia when a charter school law was passed there. We therefore obtained a count of educational management organizations (EMOs) in each state from data compiled by Alex Molnar and colleagues for 1998 and 2006 (Molnar et al. 2006).[9]

The second set of explanatory variables regard the decision making environment, or issue context, in terms of whether there was an educational crisis, a rising demand for education services, and general government support for education. Perhaps the most frequently cited measure of a crisis is falling standardized exam scores, so we obtained the average SAT verbal score for each state and each year from NCES.[10] Crisis can also be measured by falling graduation rates. In order to measure this, we obtained the number of 9th graders enrolled in each state four years prior to each observed year along with the number of high school graduates in the observed year and calculated the percentage difference, presuming that smaller numbers of graduates from enrolled 9th graders four years earlier is due to students dropping out.[11]

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[7] We are aware that the NEA and AFT have also been supportive of charter schools in some states (see Buss 1999), even opening a few of their own, but this did not start happening until many years after the first law was enacted, after these organizations had presumably realized they were not going to stop charter schooling and had better change their political positions to remain relevant. We cannot be certain, but we suspect that doing so kept them from being completely marginalized in many state education policy communities, allowing them to still lobby effectively for greater regulation and oversight of charter schools in those states.

[8] Renzulli and Roscigno (2005) also used membership in the American Federation of Teachers, but they argued it is the NEA that has led the fight against charters, and so we only use the NEA data.

[9] Molnar's EMO data can be found at http://www.asu.edu/educ/epsl/CERU/.

[10] Although Adequate Yearly Progress (AYP) scores are considered by many scholars to be the best measures of student performance, this data does not exist as far back as 1991, so we were only left with SAT scores. ACT scores were also unavailable for the early 1990s, and so we have relied exclusively on SAT scores.

[11] We recognize the important and ongoing debates over the proper measurement of dropouts. We share with its critics some reservations about the precision and reliability of this indicator, particularly when it would be used as part of a formula for policy sanctions. For our purposes, however, this is a reasonably good addition to test scores and has the advantages of being available and well recognized.

Some states have been facing demographic pressures to expand the number of schools because of rapidly growing numbers of school-age residents, a pressure that may have encouraged lawmakers to endorse charter schools to help absorb the overflow. We therefore decided to measure the rate at which this demand had been growing by finding student body size in each state in 1990 with data from NCES, the size of the student body in the observed year, and then calculating and entering the percentage of growth.

States willing to spend more on education may also have been more inclined to support charter schooling, although lawmakers may actually have expected charter schools to reduce state and local education expenses, making the policy more appealing to states trying to spend less on education. Indeed, Bulkley (2005, p. 541) found funding to be a crucial factor in the Michigan policy debate. For a measure of government fiscal support, we obtained data on the total state and local government real expenditures on K-12 education from NCES. Berry and Lowery (1984) argue that real government support, and especially growth in government support, should be measured by dividing the real expenditure by gross state product, so we obtained this data from the Bureau of Economic Analysis and made the appropriate corrections.

Finally, to capture diffusion, we constructed a measure of the choices already made by other states in the same region. Given the models we estimate, we constructed two variables. One indicates the percentage of states in the same region, as defined by the Census Bureau, which already had adopted charter laws by each observed year, and the other indicates the flexibility of those laws as measured by the average of regional CER scores in 1998 and 2006.[12]

Analysis and discussion

Influences on state adoption and a state law's initial flexibility

Our first steps are to identify the variables influencing whether a state adopted a charter school law and how flexible that law in its early stages was (how much freedom from regulation charter schools enjoyed). For the first, we utilized an event history model based on the work of Berry and Berry (1990); Box-Steffensmeier and Jones (1997).[13] Starting in 1991, the year Minnesota adopted the first charter law, every state is entered up through the year it adopts, after which it is censored, giving us 401 observations. All variables vary by state and year except for the percentage of interest groups classified as associations, which varies only by state. The results are in Table 2 "policy adoption" column.

To learn which variables influenced the early structure of each state law in terms of how much it freed schools from regulation, we examined the six combined CER measures for

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[12] Case et al. 1993 started to investigate the idea that diffusion might happen among state "peer-groups" defined on the basis of characteristics other than geographic proximity, such as demographic and fiscal similarities, an idea that has also been explored somewhat by Volden (2006). Although work as recently as Boehmke and Witmer (2004) has continued to rely on the geographic approach, we did try a couple of non-geographic approaches by separating the states into groups based on population (by 1/4th standard deviation around the mean) and percentage of the population living in urban areas, data from the Census Bureau, and found that these new variables performed virtually the same as our geographic diffusion variable. As the latter still represents the norm in the literature, we decided to keep it in the analyses, although we are willing to provide the alternative estimates upon request. A list of Census Bureau geographic regions can be found at http://www.census.gov/geo/www/reg_div.txt

[13] This is a standard survival model with errors assumed to follow an exponential distribution.

Table 2 Estimates of policy adoption and early flexibility of state charter school law: maximum likelihood estimates (robust standard errors)

Explanatory variable	Policy adoption (*event history*)	Early flexibility (*tobit*)
Policy adopted/Law's flexibility in other states in region (diffusion)	0.87* (0.49)	−0.12 (0.23)
NEA affiliate members as percentage of state teacher population not in right-to-work states	−0.60* (0.33)	−8.49** (3.50)
Percentage of the interest group community are associations/state chamber of commerce contributions	−0.02 (0.03)	−0.04** (0.02)
EMOs as a percentage of state student population	–	0.11*** (0.02)
Legislature is unified under democrats	−0.40 (0.70)	–
Margin of democratic control of legislature	0.66 (0.86)	−7.54* (4.07)
Democratic governor leads a unified government	−0.30* (0.18)	0.39 (4.82)
State student graduation rate	0.59 (1.45)	−8.76 (21.92)
State real expenditure on education	−91.77*** (31.46)	−508.86 (314.32)
Percentage growth in state public school student populations	2.54* (1.51)	3.98 (16.84)
Public demand for charter schools for year one to year two	0.01** (0.01)	13.32 (12.76)
State average SAT verbal test scores	−0.01 (0.01)	0.01 (0.04)
Age of the charter school law in 1998	–	0.01*** (0.01)
Constant	−0.91 (2.31)	11.74 (27.79)
Wald χ^2/F-statistic	48.84***	18.10***
N	401	49

* $p < 0.10$

** $p < 0.05$

*** $p < 0.01$

states with laws in 1998. States without policies may still exhibit influences inimical to charter schooling that we cannot observe but still influence our explanatory variables, so we include all 49 states, coding states without laws as 0 (otherwise data for these states are the same as the variables for those with laws). This truncates our dependent variable at 0, so we used Tobit regression to estimate this model (Amemiya 1973). We used the regional average CER score for diffusion, included the EMO variable, controlled for the law's age by subtracting the adoption year from 1998, and due to multi-collinearity, dropped the unified legislature dummy (but kept margin of control by unified legislature).[14] Results are in the "early flexibility" column.

We find some evidence of interest groups playing a role in whether a state adopted a charter school law and how flexible that law was. As expected, the more teachers in a state are members of the NEA, the less likely that state was to venture into charter schooling. When the state did, NEA strength contributed to a more regulation heavy, less flexible law. Yet, we did not find that the business community, as represented through their associations,

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[14] The policy adoption model had a much larger *N*, and so multi-collinearity was not a problem.

had any real effect on adoption. Although of limited value, we re-estimated the adoption model using state chamber contributions instead, which limited us to only the years 1998 through 2006, and found that this variable at least did have a positive and significant ($p < 0.10$) impact on the probability of a state adopting a charter law during those later years.[15] Surprisingly, we also found chamber contributions to be negatively related to how regulation-free a state's law initially was. While chambers may have been less willing to fight for regulatory exemptions their own members did not enjoy, we find pro-charter advocacy at the detail stage was perhaps taken up by at least one type of business, EMOs intending to actually run charter schools.

Although we did not find that greater Democratic control of state legislatures made states more or less likely to adopt a charter law (unlike Wong and Shen 2002), we did find that a governor's Democratic affiliation did when his/her party also controlled the legislature. This is not surprising as large initiatives, like charter schooling, often begin with state executives, and in this case Republican governors were generally more likely to push through pro-choice-in-education laws than Democrats. With strong legislative backing, Democratic governors were perhaps in better positions to resist charter school policies. Perhaps that is why West Virginia, long governed by Democrats (Cecil Underwood not withstanding), did not adopt a law. Where legislative partisan differences emerged is in the law's details regarding the degree of freedom from regulation schools would have. As seen in the law flexibility model, the greater the degree of Democratic legislative control, the more restrictive a state's law was in 1998. Governors, it seems, played the dominant political role in deciding whether or not there would be a new policy, but it was legislators who worked out the details. Our charter school demand variable was positive and significant in the adoption model, indicating a response by government to public desire, but not in the flexibility model. Not surprising, while broad public pressure may help open the window for enacting dramatically new policies, the public is often less aware of the details of that policy, leaving lawmakers with more electoral freedom in policy design.

Turning to our variables capturing the issue context, we found to our surprise that neither lower graduation rates nor lower SAT scores, measures of a public education system in crisis, made it more (or less) likely a state would enter the charter school arena or influenced how the law was designed and implemented. Political interests apparently played the main role in shaping the early years of this debate more than any real or perceived crisis. On the other hand, a potential crisis in terms of growing student bodies and smaller budgets both contributed to charter law adoptions. Growing demand seems to have pushed lawmakers to prioritize education reform and made them more open to the idea of charter schooling, perhaps believing that this would provide a new, low cost means of expanding the supply of classrooms. These broad factors, however, do not appear to have contributed to the structure of state charter laws in 1998.

Finally, our diffusion variable was positive and significant in the adoption model but not in the policy flexibility model. It seems that when states *did* adopt a law, lawmakers were more interested in internal factors such as interest group influence, party politics, and student demand (which may have negative ramifications for our learning model). Gray (1973) found generally that state policy adoption rates begin slowly and then increase rapidly as a large number of new states jump on the bandwagon, only a few hanging back and perhaps never adopting the policy. There do seem to be a few "catalyst" states taking the first step while others waited to see how this controversial new policy shook-out

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[15] No other explanatory variables changed significance or direction in this limited re-estimation and we are happy to provide interested readers with the full results.

(several early adopters produced poorly run schools that fell apart amid media circuses). One example is in New England where Massachusetts enacted a charter school law in 1993, but Rhode Island and New Hampshire adopted theirs in 1995, perhaps waiting a bit to see what happened to their neighbors. Similarly, in the southwest, though a little more slowly, New Mexico and Colorado enacted laws in 1993, then Arizona in 1994, Texas in 1995, Nevada in 1997, and Utah in 1998.

In sum, growing demand, smaller budgets, interest group maneuvering, party politics, and even watching the choices of neighbors appear to have been the keys to opening policy windows, and, with the exception of the choices of neighboring states, are the explanations for the details of policy design as well. But do these variables influence how a state's policy evolved?

Estimating and predicting change in state charter school policies

Now, we come to the heart of our analysis. In order to estimate a model of policy change over time, we subtracted the CER scores of the thirty-four states with laws for which we had data in 1998 from their 2006 scores, giving us a dependent variable ranging from −11.5 to 6, higher scores indicating movement towards *less* regulated, more flexible policy regimes. Our independent variables are the 1998 values of the variables used to explain adoption and flexibility subtracted from their 2006 values with the percentage change entered, except for SAT scores and change in Democratic control of state legislatures, which we felt were clearly captured by the raw numbers, the latter multiplied by the dummy indicating whether Democrats controlled both legislative houses in the relevant year. Also, for change in the party controlling the governor's office, we coded a variable 1 if control changed from Republican to Democrat, −1 for the reverse, and 0 for no change for either party. Policy diffusion was simply the average of the changes in the CER scores of the other states in the same region. To control for larger demographic changes in the states across the entire time period studied, we also entered the count of the student population in 1990 (divided by 1,000) from Census data.[16] We estimated the model using OLS regression and present the results in Table 3, keeping in mind that a positive change is associated with support for the lock-in model while negative changes suggest reversion. Policy learning can be in either direction and is supported if the diffusion and contextual variables are significant.

We first look at our political variables. The lack of influence by the governor's affiliation with the party controlling the legislature suggests that governors in 2006 may have been less concerned with perpetuating the big initiatives of their predecessors in 1998 and happy to leave these details to legislators, just as they were in hammering out the details of the early versions of the laws. We do find that increased control of state legislatures by Democrats is associated with state laws becoming more restrictive. It appears that not only were liberal legislators less willing to support a true laissez-faire experiment initially (as seen in the flexibility model), they were also unwilling to perpetuate it and put more regulatory restrictions in place. Whether this is a sign of reversion occurring is not immediately clear as we would also expect the NEA variable to be significant and negative as well, but it is positive. Are Democrats investing time and energy in changing policy

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[16] There is some correlation between some of the independent variables, and so we checked the model with a variance inflation test. Each explanatory variable is regressed on all others one at a time. The R^2 of each regression is subtracted from 1 and then divided by 1. If it produces a score in excess of 10 for one regression, then collinearity is a serious problem. Fortunately, the highest score we calculated was 3.45, and so we conclude that multi-collinearity was not a problem.

Table 3 OLS estimation of change in each state's CER Law from 1998 to 2006

Explanatory variable	Coefficient (robust standard error)
Average change of law flexibility in other states in region	0.36*** (0.12)
Percentage of change in National Education Association members in the state not in right-to-work state	0.12*** (0.03)
Percentage of change in state chamber of commerce contributions	0.13** (0.05)
Percentage of change in the number of EMOs	−0.55* (0.31)
Increase in democratic party dominance of the state legislature	−20.02** (8.47)
State government became unified under a democratic governor	−0.98 (1.56)
Percentage of change in state graduation rate	−0.71 (7.93)
Percentage of change in state real expenditure on education	20.13 (17.21)
Percentage of change in state public school student population from 1998 to 2006	0.13** (0.05)
Student population in 1990	−0.01* (0.01)
Public demand for charter schools by rate of increase in schools from year one to year two	−3.96 (6.44)
Change in state SAT verbal scores	0.07 (0.06)
Constant	0.09 (1.06)
F-Statistic	3.34***
R^2	0.52
N	34

* $p < 0.10$

** $p < 0.05$

*** $p < 0.01$

back to something akin to the old status quo, as the reversion model suggests, even while displaced groups like the NEA are willing to accept a lock-in of the new policy?

Not necessarily. Taking a closer look at states where NEA membership increased, we found several cases where charter laws actually became more regulation heavy. In Connecticut, NEA membership grew by 4,107 members, Democratic control of the legislature increased by two seats in the House and 5 in the Senate, and the CER score of 12.9 fell to 10. Conversely, in both Wyoming and Arkansas, NEA membership fell, Democratic proportion of legislative seats also fell, and CER scores rose. Suspecting a more complex relationship, we multiplied the NEA variable by the proportion of Democratic control and re-estimated the model. The new variable's coefficient was −0.78 and was significant at $p < 0.05$.[17] Consistent with the lock-in model, lacking legislative allies, the NEA was more likely to accept the new status quo. But when they *did* have allies teachers helped to place more restrictions on charter school organization and activity. Not only is this consistent with the reversion model, but it also reflects a key finding in lobbying research that advocacy tends to succeed when groups have legislative allies through whom they can influence the lawmaking process (Hojnacki and Kimball 1998).

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[17] Though we do not create a new table showing the re-estimated model with the interactive term, it is worth noting that the EMO variable was no longer statistically significant, but it was the only variable to significantly change. The estimation results are available from the lead author upon request. The robust standard error for the interaction term was 0.36.

Not that charter school supporters ever gave up the fight. In Georgia, where the chamber of commerce boosted its contributions from a paltry $1,700 to well over $20,000, the CER score increased 6 points, even though state NEA membership also rose. Here, the lock-in model may be a more apt description of a policy's fate. Lock-in may also be true in states where both sides were strong and the policy underwent little significant change, such as New York, where the NEA affiliate boasted over 30,000 members, the chamber increased its contributions from $3,800 to over $73,611, and the CER score fell only by a very modest 0.4 points.

The negative sign on our other pro-charter advocacy variable, growth in the number of EMOs, was surprising for we had assumed that they would lobby for further deregulation. The pattern we find is more consistent with the regulatory capture literature (e.g., Weingast and Moran 1983), though this may be a form of learning by interest groups. The regulatory capture literature predicts that established businesses may support tighter regulation as a way to raise the price of entry to new competitors. While EMOs initially saw local districts as seeking to protect their monopoly, several have begun working with them to run schools, including non- charter schools, under contract, such as in Philadelphia. Instead of using leverage at the state level to work around local districts, some EMOs may be learning to create tight working relationships with localities where they benefit from the district's ability to restrict access to others.

Some support for the learning model came in one of our issue context variables. Though graduation rates and SAT scores were not statistically significant, the diffusion variable was positive and significant. As their regional neighbors increased or decreased the regulatory requirements of their charter laws, individual states made similar changes. We admit that we cannot prove that this is real learning through interaction rather than simple mimicry, but like Mintrom and Vergari (1998), we feel that this finding is more likely to be the result of communication between lawmakers from these regions, perhaps at professional conferences, which Balla (2001) found to be important venues for the dissemination of ideas.

Conclusion

What can we say about a policy's fate? At least in terms of charter school policy, high visibility problems like rapidly growing student populations created punctuations allowing new and different opportunistic policies to be enacted, but much of the real pressure to adopt appears to have come from politicians and interest groups seeking to make their mark in education reform. Yet this competition also makes it less likely that a lock-in outcome is guaranteed for much of a policy's fate appears to have been driven by the balance of power between competing interest groups and politicians. If the interests overthrowing the old regime are given time to cement their gains, policies may be locked-in and path-dependent until the next punctuation occurs. But if opposition to the new status quo grows as the once marginalized interests and their legislative supporters reassert themselves, a policy may very well cease to evolve as the new interest desires and reversion may occur. If both sides remain strong, then a balance of power may determine the new policy as proponents and opponents compete. For those who care about policy change, in public education and elsewhere, this may be cause for alarm as the fate of policies appear to be dictated significantly by interest group politics.

Yet, even though the results were not all we might have hoped for, we also saw some policy learning taking place as well in the geographic diffusion variable. Active social

networks of legislators, administrators, and advocates across the states appear to have had an effect on many states' laws as best practices were learned and problems witnessed and studied, not unlike Glick and Hays's (1991) findings regarding the evolution of living will laws. What was most interesting is the extent to which this happened after the initial policy was in place, indicating that to a considerable extent, even though politics still plays a major role, true policy evaluation and amendments based on that evaluation also occurs. For advocates of "good government" or non-political administration these are good signs for not all of a policy's fate after punctuation is shaped by raw politics.

On a broader note, this paper highlights the complexity of policy change. We presented three models of how policies enacted in response to crises change over time and attempted to isolate the factors driving this evolution. For those who feel that the role of politics should take a back seat to the development of a fine-tuned policy answering the problem that brought it into existence, or in response to the changing needs of affected constituents, these results may be discouraging. Not only does state politics play a leading role in policy enactment, it also influences how it subsequently changes, perhaps pulling the new policy back towards the original status quo or helping it retain its radical new focus because the forces supporting it are able to use the institutional tools of patronage to cement their gains.

Yet, finding evidence that policy learning is taking place simultaneously with politics does raise some questions: can politics and policy learning co-exist together easily? Can these two forces jointly revise and amend policy based on feedback from the constituencies it is designed to benefit? What if these target constituencies are not the same as those represented by interest groups whom lawmakers need to support to maintain their own electoral careers? Will one ultimately subvert the other, will politics trump good policy-making, or will it be the other way around? And, finally, which would be appropriate in a democratic system of government?

Appendix 1

Measuring state charter school laws

Our measure of how little regulation a state places on charter schools (its "flexibility") is drawn from measures developed by CER where five researchers coded a state's laws along ten dimensions (from *Charter Schools* at www.edreform.com/_upload/charter_school_laws.pdf):

(1) *Number of schools:* States that permit a number of autonomous charter schools encourage more activity than states that limit the number of autonomous schools.

(2) *Multiple chartering authorities/binding appeals process:* States that permit a number of entities in addition to or instead of local school boards to authorize charter schools, or that provide applicants with a binding appeals process, encourage more activity.

(3) *Variety of applicants:* States that permit a variety of individuals and groups both inside and outside the existing public school system to start charter schools encourage more activity than states that limit eligible applicants to public schools or public school personnel.

(4) *New starts:* States that permit new schools to start up encourage more activity than those that permit only public school conversions.

(5) *Schools may start without third-party consent:* States that permit charter schools to form without needing consent from competing districts or the general public encourage more activity than those that do not.

(6) *Automatic waiver from laws and regulations:* States that provide automatic blanket waivers from most or all state and district education laws, regulations, and policies encourage more activity than states that provide no waivers or require charter schools to negotiate waivers on an issue-by issue basis.

(7) *Legal/operational autonomy:* States that allow charter schools to be independent legal entities that can own property, sue and be sued, incur debt, control budget and personnel, and contract for services, encourage more activity than states in which charter schools remain under district jurisdiction. In addition, legal autonomy refers to the ability of charter schools to control their own enrollment numbers.

(8) *Guaranteed full funding:* States where 100% of per-pupil funding automatically follows students enrolled in charter schools encourage more activity than states where the amount is automatically lower or negotiated with the district.

(9) *Fiscal autonomy:* States that give charter schools full control over their own budgets, without the district holding the funds, encourage more activity than states that do not.

(10) *Exemption from collective bargaining agreements/district work rules:* States that give charter schools complete control over personnel decisions encourage more activity than states where charter school teachers must remain subject to the terms of district collective bargaining agreements or work rules.

CER codes each dimension from 0 to 5 and then sums them for one aggregate measure, but this creates two problems. First, the measures may be biased because CER is an advocacy organization. Second, some dimensions may capture very different attributes of a state's policy that are lost when summed. We tackle the second issue first. Witte et al. (2003) argue that there are two basic dimensions in state charter school policies, "flexibility" (ease of organizing and running new schools) and "accountability" (oversight of school achievements). The aggregate CER mixes together both of these when they should be kept separate, which suggests that not all ten dimensions should be used. As our concept of interest is the degree to which states have policies facilitating the growth of large and diverse communities of charter schools largely free from regulation and oversight, we selected six of the ten that we felt captured elements of this concept, namely dimensions 2, 6, 7, 8, 9, and 10.

Wong and Shen (2006) argue that because CER's scales are measuring different concepts, many of them actually change in different directions from year to year, rendering the aggregate measure internally inconsistent and masking crucial variation. We therefore found the differences of all ten dimensions from 1998 to 2006 and calculated the standard deviation for every state, the average being 0.86. Changes in different directions should produce larger standard deviations, so a subset of these dimensions changing in the same direction should produce smaller ones. We found that five of our selected six (excluding 10) plus dimension 5 (third party consent for opening a school) reduced the average of all state standard deviations to 0.76. We feel that dimension 5 does capture freedom from regulation as it removes much of the public's role in new school approval, so we combine it with 2, 6, 7, 8, and 9 (still excluding 10 which actually increased the average standard deviation when included) for a final conceptually and statistically consistent measure of charter policy. Our choice is subsequently confirmed by a factor analysis where these

Table 4 State CER Scores for 1998 and 2006 (from the six measures we combined)

State	1998 Score	2006 Score
Alaska	9.6	6
Arizona	27.5	25
Arkansas	5	10.5
California	20.8	20.5
Colorado	20.25	20.5
Connecticut	12.9	10
Delaware	26.9	25.5
District of Columbia	25.5	27
Florida	21.25	21.75
Georgia	13	19
Hawaii	10.5	9
Idaho	11.2	14
Illinois	15.25	13.75
Indiana	–	26.5
Iowa	–	5
Kansas	2.6	3
Louisiana	14.75	14.75
Maryland	–	4.5
Massachusetts	25.2	23
Michigan	27.2	25.5
Minnesota	26	26
Mississippi	2.3	2
Missouri	24.2	21.5
Nevada	14.5	13.5
New Hampshire	11.1	8
New Jersey	18.7	14
New Mexico	10.25	16
New York	24.9	24.5
North Carolina	22	21
Ohio	19.9	21.5
Oklahoma	–	14
Oregon	–	15
Pennsylvania	17.25	17.75
Rhode Island	7	5
South Carolina	21.25	9.75
Tennessee	–	8.75
Texas	23.75	13
Utah	9.3	9.5
Virginia	5.4	3
Wisconsin	14.7	13.5
Wyoming	3.45	5.75

measures loaded on one dimension (eigenvalue of 3.49, 0.29 the next largest). The 1998 and 2006 codes for each state with charter laws are listed in Table 4.

As for measure validity due to political bias, three of the five members of the Center's coding team are from research institutions (Nathan, Greene, and Walsh) and we see no obvious flaw in their coding methodology. Apart from the fact that other researchers have found the CER measures to be acceptable (see Kirst 2006; Stoddard and Corcoran 2007), we note that after Witte et al. developed arguably the most valid and reliable coding scheme for state charter laws (see Shober et al. 2006), they found their measure correlated with the full CER measure at 0.82. Not only were they content to use CER scores as a baseline for evaluating their own measure, the high correlation suggests that the CER measure is most likely valid and reliable as well.

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