Privatization and the Diffusion of Innovations

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The privatization of government services tends to bring about a more rapid adoption of innovative policies due to the competitive pressures of the market. In federal systems, however, the diffusion of innovations across subnational governments may offset such benefits of privatization. In this study, we test whether county governments that have privatized their provision of foster care services are more or less likely to adopt policy innovations and more or less likely to learn from the policies of other counties than are those that have resisted privatization. We explore the diffusion of four innovative foster care policies across 384 counties in five states between 1995 and 2006. We find that the initial innovativeness arising from the market competition of privatization is counterbalanced by learning across public diffusion networks.

An age-old question in political economy is which goods and services should be provided by government and which by the market. Scholars debate whether the efficiency gains of markets outweigh the accountability desired from government provision (e.g., Duggan 2004; Trebilcock and Iacobucci 2003). They ask whether, relative to government provision, private providers increase quality or simply cut costs (e.g., Hart, Shleifer, and Vishny 1997). Debates extend from arguments favoring greater public involvement in health care and banking to those advocating greater privatization of prisons, hospitals, and schools (e.g., Chubb and Moe 1990; Donahue 1989; Savas 1987). Across all of these debates, a long-standing and commonly held assumption is that privatization ensures greater innovation, resulting in better policies (e.g., Marshall 1907).

In a different corner of political economics research, scholars and practitioners of intergovernmental relations made separate claims and discoveries about innovation. Brandeis (1932), for example, argued that one of the virtues of American federalism was the possibility of states serving as laboratories of democracy, trying new and innovative policies that could later be adopted elsewhere if successful; and Walker (1969) noted that, whether due to experimentation and learning or due to intergovernmental competition (e.g., Tiebout 1956), innovative policies and practices diffuse across states from entrepreneurial leaders to later adopters.

This idea of the diffusion of policy innovations from one government to the next resonated with scholars, with hundreds of articles and books published within the past decade across the fields of American politics, comparative politics, and international relations.¹ Sophisticated methods of analyses have been developed (e.g., Berry and Berry 1990); the causes of policy diffusion have been explored (e.g., Berry and Baybeck 2005; Boehmke and Witmer 2004; Shipan and Volden 2008); and the politics behind policy diffusion have been shown to depend on such considerations as legislative professionalism (e.g., Shipan and Volden 2006), policy entrepreneurship (e.g., Balla 2001, Mintrom 1997a), and policy effectiveness (e.g., Volden 2006). Despite all of these complexities, however, the policy diffusion literature continues to emphasize how innovative policies spread rapidly.

Remarkably, while the literatures on privatization and on policy diffusion developed over the same period, the main arguments of these two broad research endeavors have yet to be brought together.² We find this lack of interaction and common purpose surprising because the idea of innovation is central to both areas of research. Competition brought about by

¹Karch (2007) and Stone (1999) offer useful reviews of these immense literatures.

²One notable exception is that scholars have examined the diffusion of privatization efforts across national and subnational governments (e.g., Brooks 2005; Mintrom 1997b; Rincke 2006). However, here we explore the other side of this relationship—namely the extent to which innovative policies are adopted and subsequently diffused under public versus private provision.

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the market under privatization is thought to produce innovative policies and processes. And yet, even absent privatization, state and local governmental officials are thought, in the policy diffusion tradition, to likewise seek out innovative policies with which other governments are experimenting. In this paper we bring these two distinct streams of scholarship together.

We argue that privatization of public good provision can indeed lead to a competitive market environment that initially promotes innovative policy choices. However, for subnational governments within federal systems, this increased innovativeness is counterbalanced over time in nonprivatized governments by the rapid diffusion of policies across networks of public officials who learn from one another’s policy experiments. Thus, while private systems may promote early policy innovativeness, public systems may catch up over time and in some instances even surpass the innovativeness originally enjoyed in privatized systems.

To illustrate our main claims, we examine the policy choices of government officials and private providers of foster care services at the county level in the United States. Specifically, we study five states in which control of foster care services has been devolved to the county level. Just over half of the 384 counties in these states privatized certain aspects of their foster care services. Using data from a unique internet-based survey about the privatization decisions and policy innovations between 1995 and 2006, we explore whether privately or publicly run foster care programs were more likely to adopt each of four policy innovations. We establish, first, that these innovative policies did diffuse across counties as both public and private providers learned about policy choices in other counties. Second, we find that, prior to such learning opportunities arising, counties with privatized foster care programs were more innovative. But, finally, we show that the diffusion of policy innovations across nonprivatized counties allowed them to achieve a similar rate of policy adoption as those counties that did privatize.

Our argument and subsequent findings have significant implications for privatization efforts targeted at schools, prisons, children’s health services, and countless other state and local services. For a broad array of policies, privatization is neither clearly inferior nor superior on other grounds, but is seen as attractive in bringing about innovative policy choices. Our study suggests that privatization debates concerning whether to sacrifice accountability to gain the efficiency and innovativeness of the market are centered on a false dichotomy. Public accountability and the efficient adoption of policy innovations may not be at odds with one another, but may all be achievable by subnational governmental provision in a federal system.

**Theoretical Considerations**

Although the empirical analysis offered in this paper is drawn from the policy area of foster care in U.S. counties, the theoretical arguments are far more general. We begin, therefore, with a general discussion of diffusion, privatization, and their interrelated effects on policy innovation. Scholars of policy diffusion tend to define a policy innovation as the adoption of a new policy by a government, even if that innovation has already been tried by others (Mintrom 1997a; Walker 1969). The spread of innovations in which current adoptions are a function of prior adoptions elsewhere is then referred to as diffusion. And diffusion is thought to occur in different policy areas through such mechanisms as competition among governments, the imitation of one another’s practices, or learning about policy success (Shipan and Volden 2008). The following hypothesis is common to such analyses of policy diffusion and central to the current study:

**Diffusion Hypothesis:** Policy innovations spread from one government to another, with early adoptions stimulating later adoptions elsewhere.

Wholly independent of studies of policy diffusion, scholars have been working to uncover the effects of the privatization of governmental services. For example, empirical studies tend to demonstrate that privatization improves policy outcomes for public services in such areas as water quality maintenance and refuse collection (e.g., Morris 1997; Savas 1999). On the other hand, surveys often indicate little difference in the perceived quality of service delivery based on whether contractors or governments themselves provide the service (e.g., Sonenblum, Kirlin, and Ries 1975; Stipak 1974). Such studies often focus on the incentives of public and private providers. Some argue that private providers of services are just as politically driven as are public providers (Henig et al. 2003), that they actually increase the size of the bureaucracy (Miller and Moe 1983), and that their policy choices are suboptimal (Reed and Meyer 2004).

The empirical work arguing that contracting leads to positive policy outcomes is undergirded by a theoretical literature suggesting that privatization promotes policy innovations (but see Hart, Shleifer, and
Privatization introduces competition, which in turn increases efficiency, cuts costs, and spawns innovation (e.g., Donahue 1989; Ostrom and Ostrom 1977; Savas 1987). Indeed, without competition, there are likely to be serious negative consequences to privatization, including the problems of corruption, of service-specific benefits, of increased costs, and of lack of accountability (e.g., Donahue 1989; Moe 1987). Competition, on the other hand, is presented as introducing innovative approaches to policy problems, which in turn lead to more efficient public management and better policy practices: “When it works well, privatization can boost efficiency through accelerated innovation” (Donahue 1989, 217). Such arguments lead to the following:

Privatization Hypothesis: Privatization increases the likelihood of adopting innovations.

While the expected separate effects of policy diffusion and of privatization on the adoption of innovations are derived in a straightforward manner from the extant literature, how privatization affects the diffusion of innovations is less clear. In its simplest version, our argument is that, while privatization promotes initial innovation, intergovernmental relations allow the spread of innovations to public and private providers alike through the policy diffusion process. Thus public providers never lag too far behind private ones. By itself, this claim is a significant step toward a better understanding of the innovativeness of subnational governments, relative to private providers. However, we suggest that the effects of learning-based policy diffusion may be even more substantial. It is possible that policy diffusion does not simply place limits on the improved innovativeness available through privatization. Rather, the process of learning about policy effects through public networks may outstrip the competitive incentives of private providers, such that privatization leads to less widespread innovation over time.

There are several reasons why public providers embedded in learning networks may be more innovative than private providers in a competitive environment. These reasons can be grouped into three categories based on those who learn, those who “teach,” and the interactions between them. First, consider the incentives and constraints of those who might adopt policy innovations. With such motivations as election, appointment, and policy goals, public officials have incentives to adopt effective policies to secure these goals. When those officials contract out with private providers, however, their focus and abilities change. Contracting for the private provision of public services can be quite complex (e.g., Smith and Smyth 1996). Contracting officials may, therefore, spend less time and effort interacting with innovative governments elsewhere because of the increased time and attention needed to monitor, evaluate, and manage their private contractors. If the decision regarding whether to adopt innovations is instead passed on to the contractor, the competitive marketplace may provide the contractor with incentives to develop new policy solutions and to learn about effective policies elsewhere. However, private providers of public goods and services may be wary of adopting innovations with up-front costs that are not recovered for some time.3

Second, consider those early experimenters from whom others might learn. With an interest in receiving insights from others and a desire to see their good ideas and effective experiments recognized more broadly, public officials share their experiences with their colleagues elsewhere. In the competitive marketplace, on the other hand, private providers fear losing their contracts to competitors from other jurisdictions, and they may themselves hope to expand their operations elsewhere. Such a competitive environment therefore may result in private providers being much less willing to share their “trade secrets,” and also less trusting of those from whom they might be able to learn. Soss, Fording, and Schram, for example, interviewed policymakers in the Florida Welfare Transition program, reaching the conclusion that “competition works at cross-purposes with policy learning by encouraging local actors to distrust the performance numbers that other regions produce, the best practices that other regions recommend, and the wisdom of sharing their own positive innovations” (2008, 9).

Third, the interactions among early adopters and those who might learn from them reflect these incentives and abilities. As part of a community seeking to improve policy outcomes, public officials have incentives not only to share information about the policies they have tried, but also to learn from other governments’ experiences.4 Their goals and assigned tasks are often quite similar from one jurisdiction to the next. The nature of contracting, however, means that networks of contractors (or of public officials who contract with specific entities) are more piece-
meal. Contractual arrangements differ significantly from one jurisdiction to the next. Whereas one contract may extend significant autonomy to the private contractor with respect to service provision, another contract may severely limit the contractor’s discretion. Some contractors operate in a single jurisdiction, while others span multiple jurisdictions. Some are mainly focused on the task assigned in the contract, while others (some nonprofit and religious organizations, for example) see the contract as secondary to their main purpose. This diversity of goals, interests, and abilities diminishes the strength of the networks that can be constructed for policy learning.5

In sum, these considerations lead to the following hypothesis:

**Diffusion Counterbalancing Privatization Hypothesis:**
Governments that provide their services directly are more likely than are private providers to adopt innovations found elsewhere. This diffusion of policy innovations counterbalances the enhanced initial innovativeness typically accompanying privatization.

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**Innovations within County-Administered Foster Care**

The above hypotheses are general and apply to a broad array of public goods provided by subnational governments and their contractors, ranging from privatization of schools to hospitals to prisons. To test these hypotheses, however, it will be useful to focus on a policy area in which there is substantial variation in public and private provision, as well as a series of policy innovations that would be appropriate for adoption by either public or private providers.

Foster care policy in the United States fits these criteria quite well. Foster care policy is mainly handled by state and county governments, with limited intervention by the federal government.6 Over the past two decades, foster care policymaking has seen a significant degree of privatization at the state level (e.g., Freundlich and Gerstenzang 2003). Privatization also has occurred locally, in states that have devolved control of their foster care services to the county level. It is at this level that there has been sufficient variation in privatization and in the adoption of innovations needed to test the above hypotheses. More specifically, we examine county-level foster care decisions in five states (California, Minnesota, North Carolina, Pennsylvania, and Wisconsin) in which the state government has devolved control of its foster care policies to the county level and in which just over half of the counties have privatized all or part of their foster care services.7 Moreover, significant policy innovations have been adopted recently in foster care (e.g., U.S. GAO 1998; Wulczyn 2000).

We investigate the adoption of four distinct foster care policies—performance-based funding, outcome-based standards, flexible funding, and comprehensive information management tracking systems—all of which were considered successful policy innovations by foster care leaders and experts. In an effort to ensure quality provision of services, “performance-based funding” makes funding contingent on such factors as child safety and permanency of placement. “Outcome-based standards” involve the codification of what such policy outcomes should be, regardless of whether funding depends on meeting such standards. “Flexible funding” allows service providers to spend on a variety of services as needs arise, rather than having fixed spending requirements. These three policies fall within the broader category of “managed care,” a reform effort that has received widespread attention over the past decade in numerous health and welfare services. The last policy, “comprehensive information management systems,” involves the adoption and implementation of database systems to track the circumstances of foster children over time.8

We argue that these four innovations are appropriately broad in scope for the current study. We do not, for example, analyze which specific performance targets would result in a specific dollar amount increase in funding. Such a narrow scope would yield only a handful of counties adopting the exact same policy details and would miss the overall picture of the diffusion of major categories of innovation. Likewise,

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5For further theoretical and applied consideration of the role of entrepreneurs within policy communities and networks, see Balla (2001), Mintrom (1997a), and Walker (1981).

6While the 1997 Adoption and Safe Families Act inserted a greater national role in foster care policymaking, states and counties maintained significant control over their policy choices.

7Five additional states (Colorado, New York, North Dakota, Ohio, and Virginia) feature full or partial county control of foster care decisions. We conducted preliminary surveys of counties in all ten county-run states to determine which states to include in our analysis. Based on the samples, we selected the five listed above because they offered significant variation in their privatization and in regional and demographic conditions, and because they yielded the highest initial response rates, with the strongest potential of limiting nonresponses, an especially critical consideration in diffusion studies. Future work replicating our analysis in the other five states may be useful.

8U.S. GAO (1998) provides a useful summary of the policy innovations used in our study.
focusing on the broadest assessment—whether a county adopted any foster care innovation—would result in over aggregation, leading to such inappropriate comparisons as treating information systems and flexible funding programs alike.9

Whereas a typical diffusion study might examine a single policy spreading across the regions within a single country, our study thus explores the diffusion of four different policies across the counties in five different states, thus adding significantly to the confidence we can place in the study’s findings.10 Conducting our analysis this broadly helps guard against the possibility that our findings are simply driven by odd patterns for a single state or a single policy.

Due to the unavailability of data on county foster care privatization decisions and innovations, we designed our own internet-based survey, with instructions emailed to foster care administrators in all counties across our five states, to obtain the relevant data. With significant follow-up, the ultimate response rates were: California (78%), Minnesota (91%), North Carolina (95%), Pennsylvania (91%), and Wisconsin (88%).11 Such high response rates were desired because diffusion studies must assess not only individual governments’ decisions, but also how those decisions depend on the actions of others. Extensive missing data would therefore undermine the validity of the findings.

The survey first asked questions about whether or not the county had privatized various aspects of foster care, ranging from provision of food and shelter, to recruitment and licensing of foster parents, to case management, to other miscellaneous services.12 If respondents answered affirmatively to any of these, they were prompted to provide additional information on what percentage of those services are privatized, how the degree of privatization has changed over the past decade, how many contractors they use, and the degree of turnover among those contractors. The second part of the survey asked whether or not, and in what year, the county adopted the aforementioned four policy innovations.13 The final section of the survey asked a series of demographic control questions, including the current number of foster children in the system.14

Preliminary examinations of the survey results by state and by policy innovation reveal broad patterns consistent with the hypotheses above. Consider the results in Minnesota, for example. Consistent with the Diffusion Hypothesis, the median county adopting outcome-based standards occurred three years later for the publicly providing counties than for those that had privatized their foster care services. And consistent with the Diffusion Counterbalancing Privatization Hypothesis, public providers were exceedingly slow in adopting performance-based funding absent a significant network of other public adopters but were very quick to adopt information management systems once such a network of earlier adopters was established. While such patterns are interesting, without controlling for other possible reasons for these policy adoptions, and without combining all policies and all states together over time, the degree of confidence in support of the hypotheses cannot be established. Thus we turn now to a more systematic approach.

Empirical Approach

Reiterating our main thesis, we argue that subnational governments learn from one another’s policy experiments, resulting in the diffusion of innovative policies. Moreover, we claim that such diffusion processes counterbalance the enhanced innovativeness commonly

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9It is important to note that these four innovations are relevant to both public providers of foster care services and private providers. All of these policy innovations have been utilized by numerous public and private foster care providers in each of the five states examined.

10That said, future work replicating the current study in policy areas outside of foster care would be most welcome.

11Among the 46 counties that did not respond to our survey were outliers with respect to high population (Los Angeles County) and high per capita county revenues (Alpine County in California). Setting these two counties aside, there were no statistically significant differences between the 46 nonrespondents and the 384 respondents in terms of the county populations, racial make-up, per capita incomes, and per capita county revenues.

12None of these aspects of privatization are necessary for, or even directly linked to, the four innovations used here.

13The surveys revealed varying rates and timing of adoptions across these four innovations, as well as that some of the innovations were adopted more broadly than others. Specifically, across the four policies of performance-based funding, outcome-based standards, flexible funding, and information management systems, the average number of adoptions per year were 5, 10, 5, and 24 respectively; the peak adoption rates in any year were 4%, 6%, 3%, and 12%, respectively; and the year in which the median adopting county in our sample adopted these four policies was 2003, 2003, 2000, and 1999, respectively. Such variance, coupled with variance in privatization across counties provides a useful set of conditions under which to test the above hypotheses.

14Wording of specific survey questions is given in the online appendix.
associated with privatization. Therefore, it may be the case that state and local government privatization of the delivery of goods and services within federal systems has a much more limited effect on innovativeness than has been previously assumed. We explore these broad claims through a three-part analysis, with each part testing one of the three hypotheses raised above. Specifically, we seek first to establish that foster care innovations do indeed spread from county to county. Second, we seek to demonstrate that the competition brought about through privatization enhances the innovativeness of foster care providers. Finally, we examine our main hypothesis, that diffusion in publicly administered foster care programs offsets the initial innovativeness of private providers.

To conduct our hypothesis tests, we utilize event history analyses, now common in studies of policy diffusion (following Berry and Berry 1990), where the event is the adoption of one of the four foster care policies identified above. Each observation in this analysis is a county-policy-year. Specifically, in each policy area, our dependent variable takes a value of zero in each year in which the county has yet to adopt the innovation. In the year of its adoption, the dependent variable takes a value of one for that county in that policy area. In subsequent years, the county is dropped from the dataset for that policy area, as the county is no longer at risk of adopting the policy. Our dataset includes each county that responded to the survey for each year from 1995 to 2006 for each of the four foster care innovations.

To leverage the benefits of exploring four foster care policy choices, we follow the approach of Shipan and Volden (2006), building off of Wei, Lin, and Weissfeld (1989), and pool the data together, yielding observations per county per year per policy. This pooling approach, without an additional ordered structure, is appropriate because any of the four policies could be adopted at any time in any order. Moreover, the theoretical predictions and control variable expectations are similar across all four policies and all five states. Conducting separate analyses for each policy area and for each state shows that the overall effects detailed below are largely the average of the individual effects of the nonpooled models, as would be expected.

**Diffusion and Privatization Variables**

We follow the lead of Shipan and Volden (2008) in testing for multiple diffusion mechanisms. Economic competition is typically geographically limited (Berry and Baybeck 2005). In the context of U.S. counties, geographically neighboring counties are more likely to compete with each other in order to attract or deter positive and negative economic spillovers than are those counties that do not border upon one another. **Neighboring Counties** captures the proportion of all contiguous counties to the observed county that have previously (before the current year) adopted the policy in question. Where one or more neighboring counties did not respond to our survey, this variable is constructed based on only those neighbors that did respond.

While there may be other suitable criteria to gauge imitation, we construct **Nearest Bigger County**. This measure looks within the state to see whether the nearest county with a larger population than the county in question has previously adopted the policy, under the assumption that counties are likely to imitate larger and geographically proximate counties. If the nearest bigger county has already adopted the policy, the variable takes on a value of 1; and if it has not, this variable is set equal to 0.

We explore a third diffusion mechanism, learning, with **Proportion of State Population Already Covered**. This variable is calculated by identifying the counties that have each type of foster care policy at the beginning of the calendar year, summing up the populations of those counties, and dividing by the overall population within the state. This variable captures the possibility of learning, to the extent that counties are able to learn from others’ experiences...

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15None of the policies were abandoned by the counties in our sample, and therefore there is no need to assess whether a policy might be adopted once again at a later date.

16Both managed care and privatization of foster care services took hold in significant numbers in the mid-1990s; thus we begin our analysis in 1995. Our surveys were conducted in 2007, so the data set ends in 2006.

17Pooling is particularly appropriate in the absence of broad reform proposals that modify many policies at once. Over the period of our analysis, 86% of the adoptions consisted of a single new policy in the given county in the given year. Moreover, no county adopted more than two of the policies we study in the same year. Finally, as noted below, we cluster by county-year to control for any lack of independence across these policy adoptions in the same county and year.

18Analyses of subsets of the data, of course, result in smaller sample sizes and thus increased standard errors.

19For the most populous county in each state, Nearest Bigger County is based on the second most populous county.
regardless of where in the state those model policies exist, and to the extent that more information on the effectiveness of policies is available from the counties that have larger populations affected by the policy.\textsuperscript{20} As Shipan and Volden (2008) concede, absent evidence of policy successes being copied and failures being abandoned, examining previous adopters can at best be said to capture the “opportunity to learn.” Nevertheless, none of the foster care innovations we are examining were abandoned, and all were perceived as successful according to professional associations and scholars. Thus their widespread usage may have provided additional opportunity to learn about just how effective they are.\textsuperscript{21}

While these three coding schemes are likely to capture key elements of competition, imitation, and learning, respectively, we believe that none of these variables exclusively captures these mechanisms. For example, in addition to learning from counties throughout the state, foster care administrators might be particularly open to learning from neighboring counties and from nearby larger leaders. Likewise, geographic proximity could affect policy diffusion not only through economic competition, but also through strong communication networks, overlapping media markets, or other considerations. Thus evidence of diffusion through these multiple mechanisms (as indicated by positive coefficients on these diffusion variables) may all be caused by learning or may reveal a combination of diffusion mechanisms at work.

Our \textit{ex ante} expectation is that diffusion in foster care is driven by learning, rather than by economic competition or imitation. One would not likely expect counties to be competing with one another for positive or negative economic spillovers with respect to foster care, for example. Likewise, county reputations are not sufficiently affected by foster care decisions so as to stimulate imitative diffusion. Rather, policies are most likely to spread across the counties due to a process of learning from the experiments found not just among geographic neighbors and near larger counties, but those throughout the state.

In addition to the diffusion variables, we created three measures relevant for testing the Privatization Hypothesis. For \textit{Proportion of Services Privatized}, county administrators were asked whether and when they had privatized aspects of six different foster care services.\textsuperscript{22} The number of positive responses across these categories was divided by six to create our proportional measure. The higher the proportion (measured at the start of the year), the more privatized the county. Second, \textit{Privatization Dummy} is an indicator variable for whether a county has already privatized \textit{any} of the six services. While this measure is less precise, it not only serves as a robustness check on the \textit{Proportion of Services Privatized} variable in the event of outliers, but also reveals whether even a small amount of privatization matters for innovation. Both privatization measures should yield positive coefficients if privatization enhances innovation.

Third, although we cannot directly measure the degree of competition faced by contractors in each county, we did ask county administrators in these privatized counties about the turnover among their foster care contractors. We use their answers to this question to create \textit{Privatization with Turnover}, a dummy variable taking a value of one if a county has experienced “Some” or “Complete” turnover of private foster care service providers across the range of privatized services over the past five years. About half of the counties with privatized services had such turnover of contractors and half did not. If we assume that more competitive privatized environments will feature greater turnover of contractors, a positive coefficient would indicate that competition is associated with greater innovativeness. Beyond these three main variables, interactions among the privatization and diffusion variables, as well as some recoding (detailed below), are needed to test the Diffusion Counterbalancing Privatization Hypothesis.

\textsuperscript{20}An alternative specification, capturing merely the number of previously adopting counties in the state, shows similar, albeit somewhat less significant results, as would be expected.

\textsuperscript{21}As opposed to learning, it is possible that this proportional variable could simply be capturing a fad or bandwagon effect or a feeling by policymakers that there is “safety in numbers.” While possible, there is no evidence in the case of foster care policy-making that these policies come and then go, as do fads, nor that the safest (and most prevalent) position is with the innovators, as a majority of the counties in our sample adopted at most one of the four innovations included here. While future work better defining and capturing the learning mechanism would be welcome, the behavior uncovered below in foster care policy diffusion is consistent with “learning.”

\textsuperscript{22}It is important to note that we are \textit{not} characterizing whether the policy innovations themselves were handled publicly or privately. Such an approach would lead to serious endogeneity problems. Instead, the privatization variables characterize the nature of the county’s foster care system as a whole, whether or not the innovations studied here are subsequently adopted.
County and Temporal Controls

It is essential to control for county-level factors that may influence the adoption of foster care policies. Lack of such internal determinants could lead to omitted variable biases and potentially spurious effects. As detailed in the appendix, we therefore control for Foster Children Per 1000 Residents, County Population, Proportion Non-White, Per Capita Income, and Per Capita Revenue. Finally, we include Year (taking a value of 1 in 1996, 2 in 1997, and so on), and Year-Squared variables to account for temporal changes in the baseline hazard rates. Inclusion of these terms allows us to control for possible temporal dependence (Beck, Katz, and Tucker 1998). All variables, data sources, and descriptions are summarized in the appendix.

Methodological Considerations and Concerns

As described above, we pool our observations across the four types of foster care policies. We test our hypotheses using logit analyses, although the results are robust to other functional forms, such as probit or the complementary log-log function. Other distributions of the hazard rates, such as revealed by a Cox proportional hazards model, yield very similar results. We rely on logit for ease of explanation, and to be consistent with prior work on these sorts of diffusion mechanisms. To account for heteroskedasticity and correlation across observations, we cluster by county-year using the cluster procedure in Stata 10, which allows the possibility of dependence in the four policy choices within each county in a given year and relies on Huber/White robust standard errors. The number of observations is determined by the number of counties at risk for each policy’s adoption in each year.

Because of the centrality of privatization within our analysis, it is important also to consider the relationship between privatization and the policy innovations at hand. In particular, one may be concerned that the same counties that are likely to innovate are also likely to privatize their service provisions. We address this concern in four ways. First, as noted above, each of the innovations being studied here has been adopted by both public and private providers, thus indicating the relevance of these innovations irrespective of privatization concerns. Second, the temporal ordering of privatization and innovation adoptions removes any endogeneity concerns. Specifically, the degree of privatization for a county is determined by the county’s privatization at the start of the year, whereas their policy adoption (or not) takes place within the given year. Thus there is no possibility of a spurious relationship caused by a county adopting a new foster care innovation and privatizing in order to implement that new policy, or by a form of reverse causality. Third, to the extent that larger counties, for example, are both more likely to privatize and more likely to adopt innovations, incorporating County Population as an independent variable controls for its separate effect. The same holds for the other county-level variables.

Fourth, one might be concerned that there is some unobserved variable yielding both greater privatization and greater policy innovation in particular counties. Perceived poor performance or a specific crisis, for example, may lead to reforms that include both privatization and policy innovation. To explore such possibilities, we ran a biprobit model with one dependent variable being the one used throughout the analysis conducted here and the second dependent variable being Privatization Dummy. Upon accounting for all of the variables included in the models reported below, important common omitted variables would result in a correlation between the errors of the two models. However, we find these errors to be uncorrelated (p = 0.667 for an assessment based on Model 3 below, for example). Thus we are confident that the relationships found here between privatization and innovation are not spurious, and the related analyses of our key hypotheses.

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23In contrast to state policy diffusion studies, which often control for partisanship, county level government partisanship presents coding problems, including significant differences across government forms (commissions, councils, executives, and administrators in various combinations), the combination of elections and appointments (of administrators), and occasional nonpartisan policymakers. Moreover, lacking a priori expectations for which party would adopt which foster care innovation, we do not include county partisan variables. Including county-level control variables for population density and for budget deficits shows no significant additional effects, while leaving the main results substantively unchanged.

24Also including state fixed effects does not change the results reported below, thus alleviating concerns that different circumstances across the states are driving the results.

25Similar results follow from clustering by county instead of by county-year.
can move forward without additional modification to the standard event history analysis structure.\textsuperscript{26}

**Results**

We proceed by testing each of the hypotheses in order, building each model upon previous results. Although this means that many early models lack key independent variables, this approach illustrates the effects of each additional variable on the overall findings in a systematic way, eventually culminating in fully specified models. Testing the Diffusion Hypothesis is straightforward given our data construction. As noted above, we use three different independent variables to capture alternative mechanisms of policy diffusion.

Model 1 in Table 1 reveals that when all three of these mechanisms are explored together, only the learning mechanism is positive and statistically significant.\textsuperscript{27} The coefficient on the competition variable is negative and insignificant, while the coefficient on the imitation variable is positive, but is also statistically insignificant.\textsuperscript{28} These results are not surprising in the context of foster care policy, where competition and imitation are likely less pronounced than learning. Such a finding comports well with our theoretical and anecdotal understandings of the
communication networks across county foster care administrators in the states being examined.

This learning-based diffusion may have been facilitated by perceptions that the foster care policies studied here were successes. For example, administrators labeled performance-based funding as a “good decision,” and outcome-based standards as having “helped out a lot.” Moreover, the Child Welfare League of America’s (CWLA) platform supports outcome-based standards to increase accountability and flexible funding to design service systems that work within a local context (CWLA 2010). And information management systems adopted through the 1990s and beyond were seen as a driving force behind attaining the measurable outcomes and evidence-based policies and programs needed for effective management and administration of the foster care system (Wulczyn 2001).

The size of the learning effect in Model 1 is quite large. Each additional percent of the state population covered by a particular foster care innovation elsewhere is associated with a rise of 4.1% in the odds of adoption of that innovation by each other county in the state. Put another way, a one-standard-deviation increase in the Proportion of State Population Already Covered variable nearly triples the odds of adoption by the remaining counties, thus supporting the Diffusion Hypothesis, here through the apparent mechanism of policy learning.

Beyond the diffusion results, Model 1 also shows that the county control variables generally behave as would be expected. Counties with more foster children per capita, larger counties, wealthier counties, and those generating greater tax revenues are all more likely to adopt foster care innovations, while counties with substantial minority populations are less innovative.

The remaining models in Table 1 report the results from adding our privatization variables to Model 1, in order to explore whether the competitive environment arising from privatization enhances innovation. The results of Model 2 yield significant support for the Privatization Hypothesis, showing that the more privatized a county is along the six possible privatization dimensions, the more likely the county is to adopt foster care policy innovations. Specifically, a one-standard-deviation increase in Proportion of Services Privatized is associated with a 31% rise in the odds of the county adopting each policy innovation. Model 3 shows that any degree of privatization results in greater innovation. Sixty-two percent of counties in our data set had privatized at least some of their foster care services by 2006. Compared to those with no privatization, these

\textsuperscript{26}One may be concerned further that some private contractors operate in more than one county in a given state, thus leading to nonindependent policy adoptions across these counties. Interviews with county administrators revealed that, while some foster care contractors do operate in multiple counties, this phenomenon is not widespread. Nevertheless, without a list of all contractors in all counties over the 11-year period of analysis, which is unavailable, a full accounting of such multiple-counties effects cannot be conducted. At a minimum, it is worth noting that, to the extent that multiple privatized counties adopt identical innovations within a similar time period due to overlapping contractors, such activities would bias our results in favor of diffusion being more robust in the privatized counties than in the public counties, a bias against finding support for our main thesis.

\textsuperscript{27}When we control for each diffusion variable independently, without including the others, each is statistically significant. Including pairs of mechanisms shows that the statistical significance of both competition and imitation disappear upon the inclusion of the learning variable, but they maintain significance when both are included but learning is not. This highlights the importance of exploring multiple diffusion mechanisms in order to distinguish which one (or more) is operating within a given policy arena.

\textsuperscript{28}Although these diffusion measures are clearly correlated, their pairwise correlation coefficients range from 0.464 to 0.599, raising little concern of multicollinearity from incorporating all three mechanisms in the same equation.
counties have 78% greater odds of adopting each foster care innovation in each year, all else equal.

In raising the Privatization Hypothesis, we proposed that such innovation is stimulated by the competitive environment often accompanying privatized services. Not to be confused with competition across counties over economic spillovers, competition among private providers may lead to greater innovativeness absent diffusion and may also affect learning-based policy diffusion. Privatization with Turnover allows a tentative exploration of whether counties with greater competition are more innovative, all else equal. Model 4 adds this variable to Model 3, showing the additional effect of competition. Counties with privatization but no turnover have 57% greater odds of adopting each policy innovation than do those that have not privatized. With significant competition and contractor turnover, this boost in odds rises to more than 100%.

### The Counterbalancing Effects of Diffusion and Privatization

The analyses thus far suggest that foster care innovations diffuse across counties through a learning process, and that these innovations are more likely to be adopted by counties that have privatized their service delivery, especially when faced with a competitive environment. What has yet to be addressed, however, is whether that learning-based diffusion varies between privatized and public counties, and whether such a variance allows public providers to achieve the same (or greater) degree of innovativeness as was found among privatized providers. As a first test of the Diffusion Counterbalancing Privatization Hypothesis, we create an interactive variable, multiplying Proportion of State Population Already Covered by Proportion of Services Privatized. A negative coefficient would indicate a greater degree of learning by the counties that have not privatized their services, thus supporting our overall thesis.

As seen in Model 5 of Table 2, the interactive term has a coefficient that is negative and significant. The size of this coefficient (-1.90) is not so negative as to cancel out the main diffusion effect (4.41), even for the most privatized counties. Specifically, for a county with no privatization, each additional percent of the state population operating under the policy innovations of other counties is associated with a 4.5% rise in the odds of adopting that same

<table>
<thead>
<tr>
<th>Table 1 The Impact of Diffusion and Privatization on Foster Care Innovation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model 1: Diffusion</td>
</tr>
<tr>
<td>Competition (Neighboring Counties) -0.245 (0.303)</td>
</tr>
<tr>
<td>Imitation (Nearest Bigger County) 0.119 (0.174)</td>
</tr>
<tr>
<td>Learning (Proportion of State Population Already Covered) 4.04** (0.299)</td>
</tr>
<tr>
<td>Privatization</td>
</tr>
<tr>
<td>Proportion of Services Privatized 2.15** (0.382)</td>
</tr>
<tr>
<td>Privatization Dummy — — 0.574** (0.135) 0.448** (0.152)</td>
</tr>
<tr>
<td>Privatization with Turnover — — 0.305* (0.156)</td>
</tr>
<tr>
<td>County-level Controls</td>
</tr>
<tr>
<td>Foster Children Per 1000 Residents 0.168** (0.0696)</td>
</tr>
<tr>
<td>County Population (in millions) 0.642** (0.165)</td>
</tr>
<tr>
<td>Proportion Non-White -1.04** (0.401) 0.768* (0.405)</td>
</tr>
<tr>
<td>Per Capita Income (in thousands) 0.0629** (0.0182)</td>
</tr>
<tr>
<td>Per Capita Revenue (in hundreds) 0.140* (0.0806)</td>
</tr>
<tr>
<td>Year 0.0669 (0.104) 0.0612 (0.104) 0.0633 (0.104) 0.0655 (0.104)</td>
</tr>
<tr>
<td>Year-Squared -0.00813 (0.00704) -0.00753 (0.00706) -0.00776 (0.00703) -0.00794 (0.00703)</td>
</tr>
<tr>
<td>Constant -6.46** (0.523) -6.78** (0.532) -6.82** (0.524) -6.80** (0.524)</td>
</tr>
<tr>
<td>Wald $\chi^2$ 514.3** 553.3** 536.9** 543.4**</td>
</tr>
<tr>
<td>N 12,184 12,184 12,184 12,184</td>
</tr>
</tbody>
</table>

Robust standard errors in parentheses, clustered by county-year.

**p < 0.01, *p < 0.05 (one-tailed tests).
innovation. For a fully privatized county, however, that rise is only 2.5%. Thus the response to diffusion pressures is nearly twice as strong for foster care administrators in public counties as for those in privatized counties. This finding provides initial support for the Diffusion Counterbalancing Privatization Hypothesis.

In developing that hypothesis, we suggested that public officials learn within strong communication networks that involve a greater degree of information sharing and learning both by and from one another. To explore this possibility in greater detail, we subdivide Proportion of State Population Already Covered into two variables: Proportion of State Population Already Covered (Public) and Proportion of State Population Already Covered (Private). The former of these variables captures what part of the state population already has the policy in question, as adopted by counties that have not privatized any of their foster care services. The latter variable captures a similar proportion for those covered by counties that have privatized at least some of their services. Together, these variables sum to the original Proportion of State Population Already Covered. But this subdivision allows us to answer the question of whether counties are more likely to learn from the prior experiences of public counties or of privatized counties.

Model 6 shows the results of this subdivision of the learning-based diffusion variable. In this model, we use the Privatization Dummy variable to be consistent with the “private” or “public” categorization of the recoded learning diffusion variables. Model 6 shows that counties learn from both public and private counties; however, they are more likely to learn from public counties. Based on a chi-squared test, these coefficients differ significantly from one another ($p < 0.057$). Substantively, each additional percent of the population covered by the policies of public foster care providers is associated with a rise of 5.9% in the odds of each other county adopting similar policies, compared to only 3.7% from privatized counties.

In addition to illustrating a greater learning effect from public counties, it is important to establish that the public counties learn greatly from one another. Model 7 makes this demonstration by interacting the subdivided learning variables from Model 6 with...
dummies for whether the county being analyzed has privatized any services \((\text{Privatization Dummy})\) or whether the county has privatized none of its services \((\text{Public Dummy})\). The results of this model are significant and telling. First, it is worth noting that the positive and significant coefficients on all four interactive variables indicate that both public and privatized counties learn, and learn from the experiences of both public and privatized counties. However, the size of these coefficients is also important. While the size of the effects of learning of and from privatized counties are not statistically distinct from one another, the coefficient on public counties learning from other public counties (8.31) is statistically and substantively larger than the other interactive effects.

Public counties are dramatically more likely to learn from other public counties rather than from private counties. And the experiences of public counties are more likely to lead to an adoption by other public counties than by counties that have privatized. Specifically, each additional percent of the state population covered by the policy innovations of public counties increases the odds of a similar adoption by another public county by 8.7%, while only increasing the odds of adoption by privatized counties by 4.3%. Is this difference sufficient to make up for the greater innovativeness of privatized counties absent diffusion, as indicated by the strong positive coefficient on the \text{Privatization Dummy}? The answer seems to be “Yes,” although it depends on the relative make-up of privatized and nonprivatized counties in the state, as well as on which counties are the early adopters of policy innovations.

Figure 1 illustrates these findings from Model 7, providing broad support for the Diffusion Counterbalancing Privatization Hypothesis. Holding all other variables at their means, the figure shows the effects of varying the existing policies found throughout the state on the probability of adopting the policy innovation.\(^2^9\) On the left of the figure, with no policy innovations adopted elsewhere in the state, counties with a privatized foster care system have a 1.2% probability of adopting each policy innovation in each year. This is double the rate of adoption in nonprivatized counties. Moving to the right on the figure illustrates these rates as the opportunity to learn from other counties increases. For example, when 30% of the state’s population has experienced the policy innovation (assuming half of those are in privatized counties and half in public counties for the purposes of this figure\(^3^0\)), the probability of policy adoption by a public county is 3.2%, which is proportionally much closer to the 4.0% for privatized counties than had been the case when there were no previous adopters. Moving further right on the figure illustrates the point (about 42% policy coverage) at which the public diffusion networks outpace the competitive forces of privatization to create a higher rate of adoption of the policy innovations under

\(^2^9\)Due to the high rate of adoption and the relatively low number of counties yet to adopt the policies once more than 50% of the state population already has the policy, we cannot extend the figure further to the right with any reasonable degree of confidence in the predicted values. Moreover, due to the complex assumptions involved in creating the figure, related to the interactions between the types of counties learning and the types of counties that have already adopted the policies, adding confidence intervals to the figure is analytically intractable. However, as Models 5 and 7 in Table 2 make clear, with no previous adopters the probability of privatized counties adopting the policy exceeds that of public counties with a high degree of statistical significance. This difference diminishes substantively and statistically as the number of previous adopters increases.

\(^3^0\)Whether this assumption is a close approximation of reality depends on the conditions in the state. For example, this assumption fairly closely matches the details in Wisconsin where less than half of the counties privatized their foster care services, and where the ratio of public to privatized adopters of the examined innovations remains about one-to-one across our time period. On the other hand, in Pennsylvania, where more than 90% of the counties privatized at least some of the foster care services by 2006, this assumption does not hold. For such a state, the probability of adoption by public counties never exceeds that for the counties that have privatized. Of course, that result is completely in line with our theoretical expectations, as well, because of the lack of a widespread learning network among the remaining public officials in the handful of nonprivatized counties.
investigation here. Thus, while private contractors are more likely to take the lead with new innovations, public administrators are not far behind. As active middle-adopters, they seem to base their decisions on learning from the tried and true policies of others in their diffusion networks.

**Discussion and Conclusion**

When considering privatization of government services, scholars and practitioners alike assess the new incentives, policies, and outcomes that would accompany such a shift. Competition and market-based incentives are thought to spur innovative policies with new outcomes for good or ill. If present governmental performance is sufficiently poor, privatization and its innovations are more likely to be embraced, even if they limit accountability and equality. All of this has been well studied and broadly understood.

What has been neglected as part of this story, however, is the fact that many of these potentially privatized services are delivered by states and localities within federal systems. It is at these levels that most governmental experimentation and innovation takes place. Moreover, the ability to learn across subnational governments has been shown to lead to the diffusion of innovations, especially those innovations that yield successful outcomes.

We offer the first study of policy diffusion across comparable public and privatized settings. In so doing, we illustrate how the adoption of policy innovations can be achieved both through privatization and through policy diffusion. We argue that the innovativeness brought about through the market competition of privatization can be counterbalanced by learning across public diffusion networks. In the area of county foster care policies, after initial experimentation, public providers were able to catch up with private providers and even to adopt innovative policies at a greater rate in some circumstances. We do not have the counterfactual evidence to argue that the same types and rates of innovation as uncovered here would have arisen in wholly public or wholly privatized systems. Rather, our findings suggest that policy innovations diffuse through public and privatized systems alike, but in different ways. Understanding these differences is an important step toward discerning the effects of privatization on policy innovation.

One potential concern related to the adoption of innovations is whether such innovative policies are truly effective. We should be wary of innovations in a program affecting vulnerable populations that simply cut costs by providing worse services (e.g., Hart, Shleifer, and Vishny 1997). There have been no reports of the four innovations examined here leading to a less effective or more dangerous foster care system. However, were harmful or failing innovations under consideration, perhaps an even stronger case could be made for valuing the public diffusion process over privatization. In particular, while private providers in this study were shown to be quick to adopt initial innovations, public foster care administrators took a more cautious approach, tending to adopt innovations after learning of the experiences in other counties.

Finally, it is possible that a mix of private and public provision of goods and services across state and local governments is preferred over a system with no privatization or with complete privatization. Private service providers appear to be more likely to adopt innovative policies when no one else will. Public providers then act as middle adopters, presumably picking up the innovations that work well and setting aside those that fail. In a federal system, the bold or desperate few take risks that will benefit the many. The combination of public and private provision of foster care throughout the states we study has brought about badly needed reforms that may not have been adopted as early or as broadly without this combination of public and private providers.

**Acknowledgments**

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Appendix: Variable Descriptions, Summary Statistics, and Sources

<table>
<thead>
<tr>
<th>Variable</th>
<th>Description</th>
<th>Mean</th>
<th>St. Dev.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Foster Care Policy Adoption</td>
<td>Dependent variable = 1 if county adopts the policy in this area in this year. Set = 0 if no adoption to date. Observation removed if already adopted.</td>
<td>0.033</td>
<td>0.178</td>
</tr>
<tr>
<td>Neighboring Counties</td>
<td>Proportion of contiguous counties that had adopted the policy in this area prior to the observation year.</td>
<td>0.179</td>
<td>0.264</td>
</tr>
<tr>
<td>Nearest Bigger County</td>
<td>Dummy = 1 if the nearest county that is larger than the observation county adopted the policy in this area prior to the observation year.</td>
<td>0.234</td>
<td>0.423</td>
</tr>
<tr>
<td>Proportion of State Population Already Covered</td>
<td>Proportion of state population living in counties with the policy in this area at start of the year.</td>
<td>0.255</td>
<td>0.249</td>
</tr>
<tr>
<td>Proportion of Services Privatized</td>
<td>Proportion of six services with some degree of privatization at start of year.</td>
<td>0.132</td>
<td>0.142</td>
</tr>
<tr>
<td>Privatization Dummy</td>
<td>Dummy = 1 if county privatized any of its services prior to this year.</td>
<td>0.621</td>
<td>0.485</td>
</tr>
<tr>
<td>Privatization with Turnover</td>
<td>Dummy = 1 if county privatized any of its services prior to this year and if there was some or complete turnover in contractors.</td>
<td>0.269</td>
<td>0.444</td>
</tr>
<tr>
<td>Foster Children Per 1000 Residents</td>
<td>Number of foster children in county divided by county population in thousands.</td>
<td>1.35</td>
<td>1.02</td>
</tr>
<tr>
<td>County Population</td>
<td>County population (in millions) based on 2000 census.</td>
<td>0.168</td>
<td>0.571</td>
</tr>
<tr>
<td>Proportion Non-White</td>
<td>Proportion of residents self-identified as non-White.</td>
<td>0.168</td>
<td>0.179</td>
</tr>
<tr>
<td>Per Capita Income</td>
<td>Average income per resident ($000s).</td>
<td>18.9</td>
<td>3.82</td>
</tr>
<tr>
<td>Per Capita Revenue</td>
<td>County revenues per resident ($000s).</td>
<td>2.63</td>
<td>0.937</td>
</tr>
</tbody>
</table>

Data sources:
- aCalculated by authors from internet-based survey.
- bConstructed by authors based on U.S. Census data.
- cConstructed by authors based on County and City Data Book.

References


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