

# “U.S. Medicaid managed care markets: explaining state policy choice variation”

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## U.S. Medicaid managed care markets: explaining state policy choice variation

### Abstract

State Medicaid programs transfer over \$100 billion to private firms to manage the health care needs of beneficiaries every year. As a result of state policy choices, there is a great deal of variation among the states in the scope and use of managed care organizations to serve state Medicaid populations. This research answers the questions about what factors help to explain the variations among states; with a specific emphasis on both the role of interest group populations and bureaucratic capacity. The questions posed are answered utilizing pooled, cross-sectional time series analysis from 1997 to 2007 to test the relationship between Medicaid managed care policy choices and a variety of political, economic, demographic and governmental control variables. The findings from the models suggest that interest groups play an important role in explaining why states choose to use commercial for-profit managed care arrangements. The models also find that states with higher levels of bureaucratic capacity tend to rely less on the use of all forms of managed care in Medicaid contracting, and that state specific managed care markets are positively related to state managed care policy choices.

**Keywords:** Medicaid, entitlements, interest groups, state policymaking, state bureaucracy, bureaucratic capacity, contracting, privatization, health policy, managed care.

### Introduction<sup>1</sup>

U.S. States are increasingly relying upon managed care arrangements to serve the needs of an ever-expanding Medicaid population. As a result of the passage of the Patient Protection and Affordable Care Act of 2010 (PPACA)<sup>2</sup>, the trend is expected to accelerate (Kaiser, 2011). States now utilize many types of managed care arrangements that include for-profit, not-for-profit and hybrid managed care to serve the Medicaid population. As a result of the numerous options, there exists a diverse set of policy choices states make in contracting out Medicaid. Scholarship related to Medicaid and to state policy formulation and implementation has left several unanswered questions about why we have observed variation in the type of contracting choices made by states for Medicaid programs. As Medicaid contracting mechanisms have matured in a post-TANF<sup>3</sup> environment, patterns have emerged in state contracting choices and the means that they have employed to deliver services to Medicaid beneficiaries. Questions about how and why states utilize certain types of contracting arrangements take on even more significance as a result of PPACA implementation; since by 2014 it is estimated that there will be an additional 16 million Medicaid enrollees or a nearly 40 percent increase in the Medicaid population (HHS, 2010; Kaiser, 2011).

The differences in the managed care types used by states are principally a function of who bears the

risk to manage the health care services required of Medicaid beneficiaries. Commercial and Medicaid MCOs both accept capitated or per beneficiary payments per month to manage the care for a defined population of enrollees. The goal of the state Medicaid agency in entering into the contract is to transfer the risk to the MCO to efficiently and effectively manage the health care of the enrollees for the amount of money they have accepted from the state. The MCOs are licensed insurance entities and authorized to bear risk by state insurance regulators. The challenge for the state Medicaid agency is making certain that the MCOs can effectively manage the Medicaid population within the revenue provided under the contract. Medicaid-only MCOs also have added issues; they are constrained by only accepting Medicaid beneficiaries, which provide unique challenges in finding providers that will accept contracts with them due to historically low levels of reimbursement (Kaiser, 2009).

State governments utilize a diverse set of contracting arrangements to essentially privatize public health care services. States' use of private organizations to provide Medicaid services is best defined as a choice between directly reimbursing providers (i.e., hospitals, physicians, and ancillary providers) and contracting for providers' services through licensed managed care organizations that bear risk (MCOs, which include HMOs, PPOs, or insurers). This choice is ultimately a reflection of policy decisions that state officials make to improve efficiency, reduce costs, and provide quality care to Medicaid beneficiaries (Smith and Lipsky, 1993; Duggan, 2004).

Analogous to the choices state governments make to deliver health care services is the United States Veteran's Administration (VA). The VA is the largest integrated health care system in the United States

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<sup>1</sup> The models, data and concepts advanced are a product of Randall (2012).

<sup>2</sup> U.S. Public Law 111-148, also referred to as PPACA and ACA.

<sup>3</sup> TANF-Temporary Assistance to Needy Families, which is contained in Personal Responsibility and Work Opportunity Reconciliation Act (PRWORA) of 1996, is also known as Welfare Reform. See also Greenberg (1996).

and provides public-sector care for honorably discharged veterans of the U.S. armed forces (Evans, 2005). The VA is financed mostly from general taxation, offers a broad range of health care services to meet veterans' needs, and can be characterized loosely as a veteran-specific national health service (Oliver, 2007). The VA also can be categorized as a publicly run, funded, and administered health care system, with the federal government owning, operating, and providing the necessary health care personnel to administer care to veterans.

The choices that states make to serve the Medicaid population can best be described as either direct contracting with health providers or a contract with an organization licensed to bear the risk of providing the service on a fixed or capitated basis. Several researchers have classified this choice as one of efficiency and as a means of reducing costs (Halverson et al., 1998; Duggan, 2004). States can also choose to run state hospitals and employ physicians and other health care personnel to serve the Medicaid population, which was common in the early period of Medicaid implementation. However, few states have retained that delivery mechanism as a result of the high fixed costs associated with maintaining a physical infrastructure (hospitals) and the personnel costs associated with direct delivery of services (Smith and Moore, 2008).

There are many reasons governments may choose to privatize a service such as health care. Various scholars suggest that efficiency is a principal motive (Kettl, 1993; Gormley, 1989). Others suggest that vested interests play a vital role in shaping the choices that state agencies make regarding Medicaid programs (Gold, 1997; Johnston and Romzek, 1999). Finally, Duggan (2004) suggests that private markets play an important role in shaping the contracting choices made by Medicaid agencies. Substantial research by numerous scholars has found multiple political, economic, and institutional factors in state policy-making to explain a policy choice such as Medicaid contracting. Additionally, there is extensive theoretical scholarship that provides a basis for understanding the process of both privatization and contracting and also assists in explaining the observed variation in contracting schemes the states have used over time. All of this research points to the conclusion that there are multiple rationales behind a government's choice to privatize health care services. This study sheds light on the factors that shape the policy choices of one of the most complex state programs.

## 1. Data

In order to discern what factors help to explain the specific Medicaid contracting policy choices made by states over time, it is useful to describe the con-

tracting choices made by states in the last decade. While the phrase 'contracting out' may be familiar to many, how states contract Medicaid may not be clear because of the multiple ways that are available. These contracting choices typically revolve around the types of managed care arrangements and the use of for-profit health plans and not-for-profit plans (Smith & Moore, 2008; Kaiser, 2010). We model two distinct policy choices the states have made from 1997-2007 which include the percentage of a state's Medicaid population enrolled in all forms of managed care (Table 1) and the percentage of a state's Medicaid beneficiaries who receive their care from for-profit managed care organizations (Table 2).

States not only vary by utilizing a wide variety of contracting mechanisms, but also vary by the type and percentage of the contracting services employed (Kaiser, 2011). In particular, some states use for-profit commercial health plans more than other contracting mechanisms. Table 1 shows the percentage of each state's Medicaid population that is served by all forms of managed care arrangements. States can also use different types of managed care arrangements beyond commercial for-profit firms, including nonprofit Medicaid-only managed care and a variety of hybrid arrangements.

Table 2 shows the percentage of for-profit managed care arrangements used by states in 2007. The two tables presented below, while appearing to be similar, in fact are quite distinct; each shows the variation in the use of managed care by both type and use of for-profit managed care arrangements. For-profit arrangements are of particular interest since a principal rationale by state Medicaid systems is that these types of arrangements promote efficiency and assist in controlling health care utilization (Duggan, 2004; Smith and Moore, 2008). Given that for-profit MCOs are expected to yield efficiency and cost savings, why is there variation among state Medicaid agencies in their use of for-profit contracting? That question is the main focus of this study.

While the types of contracting arrangements may appear to be nuanced, they are different in their financial and operational attributes (Kaiser, 2010). States have created specific Medicaid-only nonprofit health plans and only allow those entities to serve beneficiaries; as contrasted with states that allow commercial for-profit firms to deliver Medicaid benefits. Obviously, for-profit firms have a different motive than non-profit firms, and, thus, this difference is an important construct of the two distinct dependent variables used in the models contained herein. The distinctions in the use of managed care arrangement are worth exploring as states are increasingly turning to managed care to

serve the Medicaid population. In a recent *Health Affairs* publication, Iglehart (2011) suggests that the use of managed care by state Medicaid systems is likely to *increase* as a result of PPACA. As a result of this trend, I suggest that understating the influences associated with the policy choice and

variation of each Medicaid contracting type has taken on added importance as states begin to implement one of the central policy initiatives of PPACA and thus the potential impact these policy choices will have on an estimated 16 million new Medicaid beneficiaries.

Table 1. All forms of medicaid managed care contracting as a percentage of Medicaid (2007)

State	Percentage	State	Percentage
United States	70.90	Montana	36.00
Alabama	66.00	Nebraska	84.80
Alaska	0.00	Nevada	82.90
Arizona	90.50	New Hampshire	77.60
Arkansas	80.40	New Jersey	72.10
California	51.60	New Mexico	62.00
Colorado	96.40	New York	65.40
Connecticut	65.30	North Carolina	66.90
Delaware	63.70	North Dakota	58.30
Florida	63.30	Ohio	71.50
Georgia	91.90	Oklahoma	87.60
Hawaii	79.10	Oregon	91.20
Idaho	83.40	Pennsylvania	81.10
Illinois	55.40	Rhode Island	61.90
Indiana	71.40	South Carolina	93.80
Iowa	81.60	South Dakota	98.80
Kansas	83.80	Tennessee	10.00
Kentucky	90.80	Texas	69.60
Louisiana	68.70	Utah	85.70
Maine	63.10	Vermont	91.00
Maryland	72.70	Virginia	62.70
Massachusetts	60.30	Washington	89.30
Michigan	88.10	West Virginia	45.60
Minnesota	62.40	Wisconsin	52.30
Mississippi	72.40	Wyoming	0.00
Missouri	97.30		

Source: Kaiser Family Foundation, State Health Facts at [www.statehealthfacts.org](http://www.statehealthfacts.org); and CMS at [www.cms.gov](http://www.cms.gov).

Table 2. Medicaid commercial for-profit managed care organization (MCO) contracting as a percentage (2007)

State	Percentage	State	Percentage
Alabama	0	Montana	0
Alaska	0	Nebraska	15
Arizona	0	Nevada	46
Arkansas	0	New Hampshire	0
California	41	New Jersey	25
Colorado	0	New Mexico	46
Connecticut	53	New York	18
Delaware	0	North Carolina	1
Florida	24	North Dakota	0
Georgia	0	Ohio	0
Hawaii	55	Oklahoma	0
Idaho	0	Oregon	7
Illinois	4	Pennsylvania	61
Indiana	0	Rhode Island	26
Iowa	2	South Carolina	0
Kansas	0	South Dakota	0
Kentucky	0	Tennessee	33
Louisiana	0	Texas	19

Table 2 (cont.). Medicaid commercial for-profit managed care organization (MCO) contracting as a percentage (2007)

State	Percentage	State	Percentage
Maryland	0	Vermont	0
Massachusetts	12	Virginia	38
Michigan	17	Washington	47
Minnesota	59	West Virginia	46
Mississippi	0	Wisconsin	35
Missouri	12	Wyoming	0

Source: Kaiser Family Foundation, State Health Facts at [www.statehealthfacts.org](http://www.statehealthfacts.org); and CMS at [www.cms.gov](http://www.cms.gov).

There are numerous and diverse independent variables that previous scholarship has shown that help to explain state-specific policy choices. We theorize that there are a range of control variables that explain the observed policy choice variation, including state interest group environments, the role of the bureaucracy and its capacity to implement policy, demographic and state spending variables, and the composition of private insurance markets.

The measurement of specific concentrations of interest groups is achieved through examining the number of legislative agents employed by firms and organizations directly interested in Medicaid policy outcomes. This measure includes hospitals, physician groups, health plans (insurers) and advocacy groups. All 50 states were surveyed to include specific counts of lobbyists employed by firms and organizations over the 1997 to 2007 time period.

We measure interest groups by counting the number of legislative agents registered to advocate on behalf of clients or organizations with a specific interest in Medicaid. This measure improves on the work by other scholars (i.e., Morehouse, 1981; Gray and Lowery, 1996, 1999, 2001; Gray et al., 2004) by examining specific concentrations and counts of interests who are specifically interested and vested in the outcome of Medicaid policy choices. Due to the fact that Medicaid is a large program, an array of health care providers and insurers have a vested interest in program spending and reimbursement rates, which are implemented through different contracting mechanisms (Smith and Moore, 2008). The data for the range of health care interests associated with Medicaid were obtained from a variety of sources, including the Center for Public Integrity, which maintains a state database of registered legislative agents, as well as individual state websites that have lobbyist registration arranged by categories. In addition, individual state level data were collected by phone in those states where data were available from public sources.

Benz et al. (2008) supplied data from the 1996 to 2006 election cycles that track health care Political Action Committee (PAC) expenditures in the states, which were used as a measure of political spending

by interests associated with state Medicaid spending. This measure was coded as a categorical variable with states that have a high political giving as 4, states with moderately high PAC spending as 3, and states in the middle to low range of political giving coded as 2 and states in the lowest range coded as 1<sup>1</sup>. In this study, we expect to find a significant and positive relationship between Medicaid types of contracting, including for-profit managed care and all forms of managed care, and the interest group populations associated with the Medicaid program. In addition, I expect to find a significant and positive relationship between political giving and the contracting choices that states make. Finally, I expect to show a positive relationship between concentrations of interest groups, higher relative levels of political giving and increased use of for-profit Medicaid managed care organizations.

The measurement of bureaucratic capacity is constructed using employment within state Medicaid agencies and staffing levels in state Medicaid contracting offices. As indicated in Table 4, information on the staffing for Medicaid contracting offices was collected from a variety of sources and reflects expertise, staff directly responsible for program contract implementation, and overall state staffing within state Medicaid agencies. Due to data limitations, the number of contracting staff within state Medicaid agencies was collected in two-year increments that reflect the majority of states' appropriation and budgeting cycles<sup>2</sup>. As an example, in California, there are over 60 staff members responsible for contracting oversight and procurement for the 23 health plans under contract with the state agency. In contrast to other measures of state agency capability (i.e., Government Performance Project), the measure constructed for this study is specific to Medicaid

<sup>1</sup> The data supplied from Benz had missing values and years. The ordinal measure is a best fit based upon the data supplied and, thus, a general representation of political contributions by interests associated with the Medicaid program. The coding of the created categorical value was based upon supplied data and extrapolated for the years 1997-2007. As an example, when only 1998 and 2004 data were available, 1998 coded data was used for years 1998-2003 and 2004 data was used for 2004-2007.

<sup>2</sup> Data collection for specific staffing arrangements was obtained from individual state websites, the National Governors Association, and the State Medicaid Officers Association based in Washington, DC.

agencies and standardized to reflect the attributes associated with implementing Medicaid based upon the populations served and hence unique.

Consistent with the definitions of bureaucratic capacity used by Bowman and Kearney (1988) and Huber and McCarthy (2004), staffing levels in state Medicaid agencies is used as my measure of bureaucratic capacity that reflects the capability and quantifiable expertise associated with implementing and administering the program. State and agency specific staffing levels over time were gathered from the U.S. Census Bureau, National Governors Association and the State Medicaid Officers Association based in Washington, DC. The state personnel data were used to construct a measure of bureaucratic capacity measure or BCM. The staffing levels are standardized based upon the relationship between a state's overall population and Medicaid population. In addition, other measures related to the expertise of the bureaucracy were also collected that included specific numbers of Medicaid agency staff dedicated to all forms of managed care contracting.

The Bureaucratic Capacity Measure (Table 4) is constructed using Medicaid state agency staffing levels and the population of Medicaid beneficiaries served in a given year. This ratio is standardized against the mean value for the year. As an example, California has a BCM value of 175.8, which finds that the state is 75.8% higher than the average state for 2007. Values below 100 indicate that the state is less than the average for a given year. As a test of validity of the measure, a correlation of the BCM and all variables used in the model was performed. The data provide confirmation of the measure since state spending per capita is highly correlated with the BCM (.43). Meier (1993) suggests that staffing levels and hence state spending are indicative of highly capable state bureaucracies.

The composition and control of state political institutions such as the governor and state legislatures are an important factor in explaining state policy choices (Beyle, 1996; Squire, 1992; Squire and Hamm, 2005). Governors have been found to exert influence on state spending and policy choices as a result of the powers and authority they have under state constitutions and can often serve as a check on legislative spending priorities (Bails and Tieslau, 2000). Equally as important, political control of state institutions has also been found to contribute to the understanding of state policy choice and is utilized in the models that follow (Barrilleaux and Berkman, 2003; Plotnick and Winters, 1985). The dual role of politics and institutions is considered in the context of how they assist in explaining state Medicaid variation and contracting choices.

The role of the governor in state policy making has been found to greatly vary based upon the power given to them by state constitutions and how that power is exercised across policy types. Numerous scholars have found that the governor is a significant policy player in explaining state policy choices (Barrilleaux and Berkman, 2003; Beyle, 1968). Governors vary in the amount of institutional power they have over the political and policy processes of their states, including the budgetary process (Beyle, 2008). As an example, Barrilleaux and Berkman (2003) developed a budget powers index in order to measure the relative power of the governor over the state budgetary process versus the legislature. Given the powers associated with state governors and their role in making budgetary decisions, the relative strength of the governor's powers is an important variable to use in explaining Medicaid policy choices. We use Beyle's (2008) index of gubernatorial strength in the models as a variable since this index provides a composite score based upon numerous factors including gubernatorial powers related to spending, appointment of state officials, and powers granted to governors under their state constitutions.

Higher Beyle index scores are associated with 'strong' governors and lower scores are associated with 'weak' governors. The index is constructed on a scale of 0 to 5 for each component and a composite score is produced based upon the factors described above. As an example, governors with strong appointment powers would have a score of 4 of 5 for the appointments power component. The range of composite index scores used in the models is from 2.7 to 4.1. Further, we suggest that when we observe 'strong' governors there is greater likelihood of state Medicaid agencies contracting out services and specifically utilizing for-profit managed care organizations.

Governors with greater budgetary powers tend to limit funding for major state expenditures and often serve as a check against legislative spending (Bails and Tieslau, 2000; Dearden and Husted, 1993). Governors may also divert funds away from one spending area and toward other policy areas. Hendrick and Garand (1991) found that governors with greater powers were more willing to engage in expenditure tradeoffs between programmatic areas of state budgets. The importance of state spending choices is thus a necessary consideration especially since Medicaid has become the largest appropriation states make in budget cycles and is expected to grow dramatically in the coming decade (Kaiser, 2010). Thus, we include a standardized per capita measure of state Medicaid and education spending since these two items are the largest items state governors deal with in a budget cycle. One would ex-

pect to see a negative relationship between states that choose to spend more per capita on Medicaid versus education spending because of the tradeoff concept described above.

Equally as important as institutions of state government, legislative bodies play relevant roles in the policy process. A useful dynamic in understanding state legislatures is between the capabilities and professional abilities of state lawmakers and their staffs. Legislative professionalism is generally defined as the extent to which state legislatures embody the attributes of the U.S. Congress such as high staffing levels, annual compensation, and time in session (Squire, 1992). Fiorina (1994) found that Democrat-controlled legislatures were much more likely to be more professional and other studies have found that professionalism is associated with greater policy innovation (Squire and Hamm, 2005; Rosenthal, 1990) and increased spending in general (Squire and Hamm, 2005). Also of interest is if term limit restrictions on state lawmakers affect policy choices and specifically Medicaid policy choices. Kouser (2005) suggests in his text that term limits are an important factor and states that have enacted limits tend to spend less and also cede greater authority to the governor and agencies, such as Medicaid. Thus, we use a dichotomous variable if term limits are present in a state to determine if they influence Medicaid contracting choices. This measure is coded '0' if a state does not have term limit restrictions and '1' if term limits are present in a state.

Legislative professionalism is used in the models to determine if any relationship exists between the capabilities of state lawmakers and Medicaid contracting choices. Squire's (1992; 2008) measure is used since it accurately reflects the capabilities of state lawmakers by taking into account legislative staffing, salary, and expertise. The numbers expressed by the measure are a composite index of these factors and reflective of the variation in state lawmaker's capability.

The Squire index is a composite score that relates state legislative attributes to the Congress. As an example, California has dedicated staff, full time state lawmakers, specialized committee staff and extensive expertise. This results in California having the highest score of .626 meaning that the state is most similar to how the Congress functions (Squire, 2008). The range of values associated with the Squire index is from .027 to .626. We expect to find that more professional legislatures will place a greater value on the use of contracting out Medicaid services since past studies that have examined state policy choices have found that more professional legislatures tend to appropriate more (Barrilleaux and Berkman, 2003).

Another question posed by this study is whether political control of the governor or legislative bodies helps to explain the observed variation in Medicaid contracting choices. Various studies have shown that a relationship exists between party strength in governmental institutions and the policy choices of the state. For instance, market-oriented policies have been associated with Republicans, and greater spending on education has been associated with Democrats (McLendon et al., 2006). Most recently, McLendon et al. (2009) and Tandberg (2009) found that a democratic governor was positively associated with appropriations per \$1,000 personal income. Different spending priorities have been associated with shifts in partisan control of the state legislature (Alt and Lowry, 1994). Political control of state institutions is used in the models with specific emphasis on the party affiliation of the governor's office, and if this factor helps to explain Medicaid variation and contracting choices. In this study, a dummy variable is constructed with Democratic governors coded as '0' and Republican governors coded as '1'. Given past research about how governor party affiliation explains spending preferences, we would expect to find that higher levels of Medicaid managed care contracting and the use of for-profit MCOs would be associated with GOP governors.

Equally important in understating how political control affects state policy choices is whether a state has a competitive political environment. Electoral competition is a measure of how competitive elections are for public office within states. When state contests are highly competitive, political leaders will vie for support by catering to interests that assist them in gathering political support (Barrilleaux and Berkman, 2003; Plotnick and Winters, 1985). Plotnick and Winters (1985). Thus, we use a measure of unified political control in the states to test if one party's domination of the governor's office or legislature affects Medicaid contracting choices. A dummy variable is used where lack of unified political control is coded as '0' and unified political control is coded as '1'. We expect to find that if a state has unified political control that they are more likely to contract out Medicaid services since one party domination of state institutions would suggest removal of roadblocks toward policy choices associated with vested interests.

Private health insurance markets have increasingly played a role in state Medicaid policy and are expected to play an even greater role in the next decade (Iglehart, 2011; Smith and Moore, 2008; Duggan, 2004). The use of private firms to deliver services is not a new concept to government, but has increased since World War II as government has become more complex with the provision of a wider

array of benefits and services (Kettl, 1993). As a result, state governments have made the choice to increase their contracting of state Medicaid as beneficiary populations have swelled and the service needs increased (Smith and Moore, 2008). As a central theme of this study, we suggest that private health insurance market characteristics help to explain the policy choices that states have made over time.

In his monograph *Sharing Power*, Donald Kettl (1993) argues that there are multiple reasons and underlying rationales for why governments at all levels privatize services. Kettl presents several case studies from the problem of prairie dogs at the Department of Energy's Rocky Flats facility to how local governments contract out almost every conceivable service. One general observation he finds is that a strong private market alternative is present before the contracting choice is made. In short, there exists a symbiotic relationship between private firms and government choices to use their service.

Government and private organizations can become dependent upon one another, as Evans (1997) found in his review of market-based health care reform, as institutional structures lead to more privatization when the capabilities of government diminish and services are outsourced. Evans (1997) raises a question in his work about the role of private firms in health care and if government is capable of oversight and administration of the private contracts associated with health care delivery. Kettl (1993, pp. 157-158) suggests a potential answer to Evans' (1997) question about the role of institutional structures by giving an analogy to cities with populations over 5,000 that employ only a clerk and an administrator to oversee all private contracts, indicating governments can contract out virtually all services that were once directly provided by the government and government employees. As issues of management capacity and agency expertise diminish, theoretically, state Medicaid programs will become nothing more than the contract administration offices that Kettl (1993) describes.

Further, there is potential for a dramatic increase both in the use of privatization tools for health care services, rehabilitation, and other social services, as well as in the limitations inherent in the management deficiencies in state government (Auger, 1999, pp. 438). Collectively, these works (Kettl, 1993; Evans, 1997; and Auger, 1999) raise questions about the ability of state agencies to effectively administer, oversee and manage the complex programmatic requirements associated with Medicaid and the current drive to add more beneficiaries to the Medicaid rolls (Iglehart, 2011). This study will demonstrate if higher levels of managed care use are associated with diminished bureaucratic capacity

and many other factors associated with the role that private markets play in these decisions.

More recently, Duggan's (2004) case study of California Medicaid privatization over a multiple year time frame examines the use of private, for-profit managed care arrangements by the state. Contrary to the rationale used by state policymakers (and in academic works), California's reliance on the state's managed care entities actually *increased* Medicaid per capita spending over time (Duggan, 2004, p. 2570). Duggan's case study prompts several questions about how the state's heavy reliance on private firms to manage Medicaid spending resulted in *increased* costs to the state. While Duggan (2004) does not directly address the causes of spending, he suggests that additional factors such as interest groups, political composition, state spending, managed care market demographics, and the role of the bureaucracy in shaping the contracting process might explain the policy contradiction. This study is partially motivated by Duggan's work and his suggestion that 'other factors' are at play and can explain why states are increasingly relying on private firms to deliver Medicaid services.

Duggan's (2004) work suggests that private markets are an important determinant and thus we use HMO penetration rates as a measure of private market attributes in a state. HMO penetration rates are the percentage of a state's population enrolled in managed care arrangements and the percentage of the private insurance markets represents the portion of the state's population that receives health care coverage from a licensed state insurance entity (i.e., not from a government source such as Medicare, Medicaid, or the Veteran's Administration). The range of values observed for the period from 1997 to 2007 are from 0 to 59.5 percent of a state's population enrolled in licensed HMOs. The private health insurance percentage represents the portion of an entire state population that is covered by private (non-government) sources of health insurance coverage. The range observed from 1997 to 2007 in all states is from a low of 47.9 percent to a high of 75.3 percent. We theorize that states that have higher levels of Medicaid managed care use (all types and for-profit) that there is a positive relationship to HMO penetration rates and private health insurance coverage.

Consistent with past scholarship, we also include measure of state spending, education spending and Medicaid spending per capita. Tandberg (2009) found that there exists a tradeoff between education spending and Medicaid and Kousser (2002) found that discretionary Medicaid spending was negatively associated with education spending in the states. The per capita measures are used in the models to test if there higher levels of managed care are associated with these

measures of per capita spending. Unemployment rates have also been found to be related to Medicaid policy choices and spending (Schneider, 1997; Grogan, 1994) and I expect to find that higher levels of managed care use in the state positively associated with higher unemployment levels. Finally, we expect to find a negative relationship between higher use of Medicaid con-

tracting which would be consistent with past research that demonstrates that state policy makers make spending tradeoffs to favor their policy priorities.

Table 3 contains the descriptive statistics for the independent variables described above and used in the models presented and specified below.

Table 3. Descriptive statistics for dependent and independent variables (1997-2007)

Variable	Range Min	Range Max	Mean	SD
Dependent variables				
Commercial Medicaid MCOs*	0	61	14.50	19.21
All Medicaid MCOs*	0	100	69.95	20.33
Interest Group Measures				
Medicaid Interest group pop.	2	88	21.00	17.20
Health PAC Strength	1	4	2.3	.98
Institutions and capacity				
Bureau. Cap Measure (BCM)(t-1)*	10.9	282.5	100.02	49.52
Gubernatorial Strength	2.7	4.10	3.46	.39
Squire Legislative Professionalism	.027	.626	.18	.11
Med. Spending Per Capita**	231.00	2113.00	780.00	289.00
Edu. Spending Per Capita**	735.00	2052.00	1145.00	242.00
State Spending Per Capita**	2404.00	11023.00	4045.00	1200
Political control				
Term Limits	0	1	.24	.42
Unified Party Control	0	1	.43	.49
Governor's Office party	0	1	.52	.50
Markets and demographics				
HMO Penetration Rates*	0	59.50	19.80	12.96
Private Insurance Percent*	47.9	75.3	62.8	5.97
Unemployment*	2.20	7.70	4.86	1.15

Note: \*is a percentage, \*\*is in dollar amounts.

Table 4. Bureaucratic capacity measure, standardized values, as a percentage relationship to state Medicaid Agency Employment and total Medicaid population (2007)

State	Percentage	State	Percentage
Alabama	73.3	Montana	232.3
Alaska	207.3	Nebraska	63.2
Arizona	23.1	Nevada	130.5
Arkansas	122.0	New Hampshire	92.6
California	175.8	New Jersey	56.6
Colorado	66.8	New Mexico	78.6
Connecticut	67.8	New York	109.2
Delaware	129.5	North Carolina	104.1
Florida	45.4	North Dakota	190.8
Georgia	80.4	Ohio	72.31
Hawaii	68.8	Oklahoma	132.3
Idaho	113.5	Oregon	181.0
Illinois	58.2	Pennsylvania	110.9
Indiana	67.7	Rhode Island	166.0
Iowa	83.4	South Carolina	95.0
Kansas	19.0	South Dakota	126.0
Kentucky	88.6	Tennessee	85.0
Louisiana	78.2	Texas	58.8
Maine	97.1	Utah	97.5
Maryland	54.5	Vermont	122.3
Massachusetts	80.2	Virginia	58.4

Table 4 (cont.). Bureaucratic capacity measure, standardized values, as a percentage relationship to state Medicaid Agency Employment and total Medicaid population (2007)

State	Percentage	State	Percentage
Michigan	45.9	Washington	158.9
Minnesota	73.2	West Virginia	92.4
Mississippi	87.7	Wisconsin	52.2
Missouri	49.5	Wyoming	231.3

Source: US Census Bureau, State Government Employment and Kaiser Family Foundation, Centers for Medicare and Medicaid Services (CMS) for state Medicaid population data.

## 2. Methods and approach

The tool we use to analyze the theorized relationship between Medicaid managed care use in the states and the various factors outlined in this chapter is a pooled, cross sectional time series analysis (Says, 1989). By using a set of cross-sections over time, the inquiry can produce more robust results than using a cross-section at one particular point in time. Panel data have a number of advantages including corrections for heterogeneity in the micro units, alleviating multicollinearity problems, and

$$Y_t = \partial_1 + \partial_1 \text{ Medicaid Interest Group} + \partial_2 \text{ Health PAC} + \partial_{3(t-1)} \text{ Bureaucratic Capacity Measure} + \partial_4 \text{ Gubernatorial Strength} + \partial_5 \text{ Legislative Professionalism} + \partial_6 \text{ Medicaid Spend Per Capita} + \partial_7 \text{ State Spending Per Capita} + \partial_8 \text{ Term Limits} + \partial_9 \text{ Unified Party Control} + \partial_{10} \text{ Party Governor} + \partial_{11} \text{ HMO Penetration Rate} + \hat{\partial}_{12} \% \text{ Private Insurance} + \partial_{13} \text{ Unemployment Rate},$$

where  $Y_t$  is the dependent variable expressed as a percent of Medicaid population enrolled in various forms of managed care arrangements, over time).

The use of a pooled cross-section of data over time does present several challenges that may violate regression assumptions. Problems encountered with the design can include correlated error terms and heteroscedasticity. Since we want to have errors to be uncorrelated, we want to make corrections to model to account for these issues. It is possible to overcome these challenges through corrections in the panel data error terms (Beck and Katz, 1996). The statistical program STATA is used to analyze the cross-sections over time and make adjustments related to the error terms, thus correcting for regression assumption violations (Hamilton, 2006).

The analysis is further complicated by the fact that many of the independent variables have little variation over time; while others remain constant. As an example, political control of state houses will often be the same for decades, as is the case with the 1997-2007 time period. This situation leads to a problem with data becoming autocorrelated and heteroskedastic. Diagnostic tests were conducted and we found that there exists first order autocorrelation among independent variables. To alleviate these issues, a linear regression with the assumption of panel-correlated errors is used. The parameters are estimated using a Prais-Winsten regression that assumes the panel data is

the examination of issues that are otherwise ignored in standard time-series and cross-sectional data (Stoutenborough and Beverlin, 2008). Panel data are also more robust since the use of time specific data provides additional explanatory power versus using just a single year or cross section. In addition, this method is capable of analyzing multiple units (states) for multiple points in time (years) (Stimson, 1985). The paneled linear regression model can be summed in the following equation:

heteroskedastic and correlated across panels (STATA, 2007, pp. 330-339). This technique is used to explain the percentage of a state's Medicaid population enrolled in all forms of managed care contracting (Table 1) commercial for-profit managed care (Table 2) by Medicaid agencies from 1997 to 2007.

## 3. Results

The primary goal of this study is to determine what factors help to explain the variation in type and scope of Medicaid contracting policy choices made by the states. We theorize that there are statistically significant relationships between types and variation in Medicaid managed care use and specific relationships between these contracting choices and interest group populations, bureaucratic capacity, political control of institutions and the characteristics of state health insurance markets. Our hypotheses also expect to find a positive and significant relationship between concentrations of interest groups and contracting choices; as well as a negative relationship between greater use of Medicaid contracting choices and levels of bureaucratic capacity.

The paneled regression analysis produced interesting and contrary results to the stated hypotheses about the influences associated with state Medicaid contracting choices. The results and subsequent discussion are arranged based on the key areas of this study and include interest groups, bureaucratic

and institutional capacity, political control, and private market characteristics. Of particular interest are the variables associated with measures of Medicaid interest group populations and bureaucratic capacity that shed new light on the nature of Medicaid contracting in the states<sup>1</sup>.

The results in Tables 5 and 6 allow us to draw a series of interesting conclusions about the nature of contracting choices that states have made since 1997<sup>2</sup>. The results in Table 5 clearly show a negative and statistically significant relationship between the bureaucratic capacity measure (BCM) and all forms of Medicaid contracting. The negative relationship between Medicaid contracting staffing as expressed by the BCM is consistent with the hypothesis that states with higher levels of bureaucratic capacity tend to be states that place less reliance on the managed care industry. The findings suggest that as bureaucratic capacity decreases by one percent, we can expect to see a decrease in state reliance on all forms of managed care. As an example, if there is a one standard deviation increase (49.3) in our bureaucratic capacity measure, we could expect to see all forms of Medicaid managed care use increase by 2.13 percent.

The results contained in Table 5 are also consistent with the formal models advanced by Huber and McCarthy (2004). These models suggest that when bureaucratic capacity is 'low,' there is a greater reliance on the presumed expertise and capability of private firms to serve the Medicaid populations. Further, this factor is evidence of a symbiotic relationship (as Kettl (1993) suggested) between the state and its outside interests and contracting mechanisms that together make up for the state's diminished capacity.

Contrary to our expected findings, there is not a significant relationship between the use of for-profit managed care firms and bureaucratic capacity as indicated in Table 6. We suggest the evidence for this contradiction lies in the presence of interest groups in the states and not necessarily the capacity of Medicaid bureaucracies. Table 6 shows a positive and highly significant relationship between state use of for-profit managed care and concentrations of interests associated with Medicaid appropriations. In addition, there is a positive and significant relation-

ship between Health PAC strength in a state and the use of for-profit firms as shown in Table 6.

This finding is consistent with Gray et al. (1996, 2001, and 2004) and their concepts of interest group density and the relationship to policy choices in the states. As interests concentrate their efforts to persuade policymakers, including the governor and the bureaucracy, they are able to overwhelm them to achieve their goals. As state interest group populations increase by a single standard deviation (17.04) we can expect to observe a 4 percent increase in state Medicaid use of commercial managed care plans. In addition, the results in Table 6 show that as political giving increases there is corresponding increase use of commercial firms to serve Medicaid beneficiaries. We suggest this is tangible evidence that rent seeking activity and the employment of lobbyists in state capitals represents real revenue (and results) to for-profit managed organizations that serve the Medicaid population.

It is also important to emphasize that political giving was found to have an equally important affect on the use of commercial for profit Medicaid managed care arrangements. This finding compliments the positive relationship between the hiring of lobbyists and concentrations of vested interest in states. As political giving increases with greater incremental per lawmaker contributions, there is an associated 3.7 percent increase in state use of for-profit managed care.

The ordinal measures of gubernatorial strength were also found to be significant in both models, but in contrary ways. Higher levels of this measure find that governors have greater powers and authority. Just as lower bureaucratic capacity was found to be negatively related to use of managed care in the states, lower levels of gubernatorial strength were found to be positively related to use of managed care organizations in state Medicaid systems, as Table 6 demonstrates. However, in Table 5 the relationship is reversed since higher levels of gubernatorial strength is positively related to states using higher levels of for-profit managed care organizations. Strong governors have the ability to make decisions more readily than weak governors, as Beyle (1968, 2008) suggests, and thus this finding is consistent with the theorized relationships.

State legislatures and their professionalism were not found to be a significant factor related to any type of managed care use by the states as shown in Tables 5 and 6. This finding was somewhat unexpected since state lawmakers have been found to play significant roles in policy making as Kousser (2005) suggested in his examination of state legislative term limits. However, the presence of term limits in a state was shown in Table

<sup>1</sup> The models presented in Tables 5 and 6 include all 50 states for the time periods indicated. Earlier model iterations included dropped values for some states where data was not available for certain time periods. In the end, no significant difference in the results was observed as a result of dropped state panels or missing data, and thus all 50 states are used in each of the models presented in this chapter.

<sup>2</sup> Analyses of the 2007 cross-section using both logistic and linear regression techniques was used to test the validity of the paneled data models and confirm the statistically significant relationships contained in Tables 5 and 6.

6 to be significant and negatively related to the increased use of for-profit managed care firms. This finding suggests that states without legislative term limits were more likely to prefer using for-profit managed care organizations. This finding suggests that states with long-term state lawmakers were more likely to have a 'cozy' relationship with vested interests as a result of long standing personal relationships and campaign contributions based upon those relationships.

Conversely, in Table 5 there exists a positive relationship between the use of managed care generally and the presence of term limits in a state. This suggests that when term limits are present that power is ceded to the bureaucracy, which would also explain the negative relationship between our measure of bureaucratic capacity and use of all forms of Medicaid managed care. As bureaucratic capacity diminishes and arguably legislative capacity in the form of less tenured and seasoned lawmakers, there is a general greater reliance on services that are contracted out by state Medicaid programs.

The state spending variables used in both models contained in Tables 5 and 6 are significant, but vary in their relationship to the policy choices. The results in Table 5 show that there is a statistically significant negative relationship between total per capita state spending and higher use levels of Medicaid managed care, but there is a positive relationship in Table 6 between higher levels of state spending per capita and higher levels of Medicaid system use of for-profit managed care organizations. This finding suggests that states that have a heavy reliance on for-profit managed care organizations tend to spend more generally. We argue that this finding confirms and supports the findings by Duggan (2004) that the California Medicaid program spent more on Medicaid as a result of reliance on managed care. While MCOs are often touted as a policy tool to control Medicaid costs and utilization, the collective research cited argue that heavy reliance on for-profit firms does not achieve the intended policy goals of reducing Medicaid system costs.

Table 5 shows there is a statistically significant negative relationship between total per capita state education spending and higher levels of Medicaid managed care use. These findings show that increased use of Medicaid managed care are associated with higher levels of overall Medicaid spending, but this outcome is not the case for aggregate state spending or education spending. These results are consistent with past research by Kousser (2002) and Tandberg (2009) who shows that higher levels of Medicaid pharmacy spending is negatively related to education spending. Collectively, the results in both mod-

els confirm the tradeoff between and among spending priorities that state policymakers engage in during appropriation cycles.

The finding suggests that as states make the choice to spend incrementally on education that Medicaid managed care use declines. As an example, if a state spends an additional dollar per capita, there is an associated .053 decrease in overall Medicaid managed care usage. So, if state education spending per capita decreased by \$242 (one standard deviation), we could expect to see a 12.8 percent increase in overall Medicaid managed care use. Given the budget realities that states struggle with, the per capita numbers potentially represent a serious tradeoff between choosing to contract out Medicaid services versus additional per pupil funding for secondary and post-secondary education.

Political control of state institutions was found to be of significance in Medicaid systems use of for-profit managed care organizations. Table 6 shows that the party affiliation of the governor is significant and related to state use of for-profit firms delivering Medicaid services. This suggests that Democratic governors are more likely to be associated with the use of for-profit managed care plans and Republican governors are associated with an associated 3.6 percent decrease in commercial managed care use. However, political control of the governor's office was not significant in explaining the use of all types of managed care use in Table 5.

State specific health insurance market attributes were found to be a statistically significant factor in explaining the variation in all types of Medicaid managed care use and state use of commercial for-profit managed care organizations. In both models, there exists a positive relationship between higher HMO penetration rates in the private market and Medicaid managed care use. This finding suggests that when there is a private market concentration of vested interests that will seek new markets and expanded opportunities in government. For each percentage change in managed care use there is an associated .44 percent increase in commercial managed care use and a .26 percent associated increase with all forms of Medicaid managed care use. As an example, if a state had a greater than average (one standard deviation) managed care penetration rate, we could expect to see a 5.7% increase in commercial for-profit Medicaid managed care use and a 3.4% increase in all forms of Medicaid managed care use in a state. This finding is also consistent with the privatization research that finds that private interests view government as another market to expand their sale of goods and services (Kettl, 1993; Gormley, 1989; Savas, 1987).

Unemployment rates were not found to be a significant factor in either model. A probable reason for this fact may be that unemployment levels were relatively low during the 1997-2007 time periods. Schneider (1997) and Smith and Moore (2008) find that higher levels of unemployment are obviously associated with increased Medicaid populations and spending, thus, as levels of unemployment increase, the increased use of managed care arrangements by states increases as well.

The use of private markets to meet public policy goals through privatization is demonstrated by these results and consistent with theories advanced by Kettl (1993) that suggest a symbiotic relationship between private markets and use of those services by government. Also, these results are consistent with previous single cross-sectional models that show a similar relationship between the policy choices and contracting out the services (Randall and Johnson, 2008).

Table 5. Prais-Winsten regression, heteroskedastic panels, corrected standard errors for percent of state Medicaid population enrolled in all types of managed care organizations (1997-2007)

Changes in variable	Coefficient	SE
Interest group measures		
Medicaid IG Population	-.073	(.054)
Health PAC Strength	-.092	(.874)
Institutions and capacity		
Bureau. Cap Measure (BCM)(t-1)*	-.043***	(.011)
Gubernatorial Strength	-6.83***	(1.89)
Squire Legislative Professionalism	-18.64 **	(7.25)
Medicaid Spending Per Capita	.0158***	(.0023)
Education Spending Per Capita	-.0049**	(.0021)
State Spending Per Capita	-.006***	(.0007)
Political control		
Term Limits	4.44**	(1.77)
Unified Party Control	-.65	(.51)
Governor's Office	2.01	(1.50)
Market and demographics		
HMO Penetration Rates	.265***	(0.7)
Percent Private Ins. Coverage	.106	(.07)
Unemployment	-.277	(.28)
Constant	108.58***	(8.16)
Wald $\chi^2$	234.42***	
R-squared	.8549	
Rho	.8968	

Note: Standard error for each coefficient is in parentheses; \*\*\* $p < .01$ , \*\* $p < .05$ , \* $p < .10$ ;  $N = 50$ ,  $T = 11$ , Observations = 550.

Table 6. Prais-Winsten regression, heteroskedastic panels, corrected standard errors for percent of state Medicaid population enrolled in commercial for-profit managed care organizations (1997-2007)

Changes in variable	Coefficient	SE
Interest group measures		
Medicaid IG Population	.236***	(.076)
Health PAC Strength	3.70***	(1.05)
Institutions and capacity		
Bureau. Cap Measure (BCM)(t-1)*	.0048	(.009)
Gubernatorial Strength	6.17***	(2.06)
Squire Legislative Professionalism	-.812	(5.10)
Medicaid Spending Per Capita	-.0023	(.0016)
Education Spending Per Capita	-.0005	(.0017)
State Spending Per Capita	.0014 ***	(.0005)
Political control		
Term Limits	-10.56***	(1.20)
Unified Party Control	-.309	(.345)
Governor's Office party	-3.61 ***	(1.39)
Market and demographics		
Percent Private Ins. Coverage	-.03	(.052)
Unemployment	.042	(.21)

Table 6 (cont.). Prais-Winsten regression, heteroskedastic panels, corrected standard errors for percent of state Medicaid population enrolled in commercial for-profit managed care organizations (1997-2007)

Changes in variable	Coefficient	SE
Market and demographics		
Constant	-26.71***	(8.46)
Wald $\chi^2$	388.01***	
R-squared, overall	.4664	
Rho	.9392	

Note: Standard error for each coefficient is in parentheses; \*\*\*  $p < .01$ , \*\*  $p < .05$ , \*  $p < .10$ ,  $N = 50$ ,  $T = 11$ , Observations = 550.

## Conclusion

The results provide empirical evidence to support our theorized relationship between interest group populations, bureaucratic capacity and their relationship between state Medicaid contracting choices. First, the results confirm that increased use of state Medicaid for-profit commercial firms are a result of specific concentrations of interest groups and generally higher levels of political giving by those same interests. These findings are consistent with past scholarship (Gray and Lowery, 1996, 1999; Lowery et al., 2010) and show that when there is a dense concentration of interest group populations, policy choices are skewed toward those interests. These two findings contribute to the argument that pluralism is alive and functioning very well in state capitals and consistent with the anticipated outcome regarding the importance and dominance of interests in explaining the respective policy choices.

The results confirm the hypotheses that bureaucratic capacity matters, and when there is significant expertise, agencies can utilize options beyond privatization tools to manage public programs. This conclusion is based upon the results in Table 5 that show that lower levels of bureaucratic capacity help to explain increased state reliance on contracting out Medicaid services to managed care organizations. Importantly, the results empirically support the theoretical models advanced by Huber and McCarthy (2004) that suggest that 'low' levels of state administrative capacity lead to increased reliance on private firms. Finally, the lack of a relationship between state use of for-profit firms and bureaucratic capacity also help to support the importance of the pluralistic model and the role that vested commercial interests play in state policy making.

The models provide an empirical basis for understanding the relationship between the capacity of the bureaucracy and a specific policy choice that contributes to the understanding of state policymaking. While the dynamic of bureaucratic capacity is an important finding in understanding state Medicaid programs, the data yield even more interesting results in what we term the 'black box' of how and why state spending choices are made, who benefits,

and why. The results suggest there are multiple factors, including interest group density and bureaucratic capacity, which are related to the policy choices that states have made over time, but it is also only part of the story relative to the role of interests, the bureaucracy, and politics in the Medicaid process. The modeling provides us with the framework for understanding the dynamics of how states spend their billions of dollars each year on Medicaid.

## Policy implications

The evidence presented in this study indicates that there are many factors that account for variation in Medicaid contracting. The capability of state agencies to implement public policies should be of central concern to elected leaders; especially in the era of continued devolution of programmatic and policy authority to the states from the federal government. Equally as important to capabilities of the bureaucracy is the fact that interest groups are becoming increasingly influential in state capitals. Understanding their role can better assist policymakers in implementing programs that promote both efficiency and effectiveness.

The relevancy of the questions raised by this research has increased as a result of the passage and subsequent implementation of the patient Protection and Affordable Care Act of 2010 and the addition of estimated 16 million new beneficiaries to state Medicaid programs after 2014. Policy scholars and practitioners suggest that managed care organizations will play a vital role with helping states meet the dramatic increase in beneficiary populations (Iglehart, 2011). As a result, states should make certain that they have the bureaucratic capacity to successfully add new enrollees and have the management and information systems to make policy choices not for the benefit of vested interest but for the efficient management of the Medicaid system. Duggan's (2004) findings of increased use of managed care in the California Medi-Cal system and higher costs should also be noted in the context of the findings of this research. A broad array of policy choices should be considered to deal with the increased population with an emphasis on seeking cost effective contracting options.

The intersection of politics, private markets, and vested interests is often a misunderstood aspect of political science and public policy research. It is my hope that the information presented in this study will help to illuminate the 'black box' nature of the range

and types of influences that explain public policy choices so that future policymakers and researchers can learn from the evidence put forth. A better understanding of the policy process can contribute to improved public policies for all citizens.

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