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Risky Business: Effectiveness of State Market-Based Health Programs

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Abstract   Since the 1990s, state governments have been leaders of health care reform. Today, approximately 47 million people are without health insurance. As health care costs and uninsurance levels continue to rise, states are pursuing a variety of government- and market-based strategies to address this growing social problem. Health care research has indicated that state-based programs have proven to be successful in extending access to coverage. However, the question remains as to whether the market-based programs have had a positive impact on state health care. Advocates for market-based state health programs argue that the reforms benefit the greater good because they serve an economic development function by improving the economic productivity and overall health of state citizens. Whether market-based policies are accomplishing these goals is a matter of debate. This study examines the effects of the various market-based state policies. The evidence generated by this research sheds light on the societal effectiveness of market-based health care strategies used by state governments. The results of our analysis indicate that programs enacted by states to promote increased access to medical care have developmental effects beyond the client population directly served.

Introduction

Today, most Americans either have health insurance that is publicly sponsored, such as Medicare or Medicaid, or have insurance that is sponsored by their employers. However, a substantial number of people, approximately 47 million, are without public or private health insurance (U.S. Census Bureau 2007). As health care costs continue to increase and the number of people in the United States who do not have health insurance

continues to rise, states are pursuing a variety of government- or market-based strategies to address this growing social problem. For several decades, federal and state policy makers have struggled with and argued over various strategies for filling in the gaps for all or most of the remaining Americans who do not have health insurance coverage, including replacing the current "patchwork" system with a single, or national, universal health insurance system.

However, while national health insurance reform is a hotly debated and researched topic, the states have quietly passed health insurance reform without much fanfare. Since the 1990s, states have taken an incremental approach to expanding health care that brings the uninsured into the fold (Barrilleaux and Brace 2007). They categorize the majority of these programs as being either market-based or state-based.[1] The state-based, redistributive programs, such as extending state-only Medicaid to the uninsured and establishing pre – State Children's Health Insurance Program (SCHIP) child health insurance programs, use the state as the primary insuring agent. Market-based, developmental programs, such as purchasing alliances and rating restrictions use incentives for individuals and businesses to purchase health insurance (ibid.).

Taken across the states, the state-based programs have proven to be successful in extending access to coverage to millions of uninsured adults (Sloan and Conover 1998). However, the question remains as to whether the market-based programs have had positive impacts on state health care problems. Certainly, as Sloan and Conover (ibid.) and Hall (2000) found, market-based reforms have been less successful in extending health insurance coverage. While these reforms have been successful in encouraging businesses to offer health insurance to their employees (Hall 2000), there has not been an increase in the number of employees opting for the coverage (Sloan and Conover 1998; Jensen and Morrissey 1999).

Many advocates of market-based reforms contend that we are missing the point of these reforms. Proponents argue that these policies to expand health care are, in fact, successful in providing tangible economic benefits for the rest of society (National Academies 2003; Hadley 2003; Mullahy and Sindelar 1993) because they provide businesses with health care assistance, which in turn serves an economic development function by improving the economic productivity and overall health of state citizens (Battistella and Kuder 1993).

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1. Clearly, as Barrilleaux and Brace (2007) point out, states may use a mix of state-based and market-based reforms to accomplish their health policy goals. But for our purposes, the categorization is a theoretical and practical distinction.

Whether this patchwork of market-based policies is accomplishing the goal of economic development is a matter of debate. It is this issue we address. This study examines the developmental effects of the various market-based state policies, using an index of the following five market-based programs instituted at the state level: (1) high-risk pools, (2) limited-benefit plans, (3) group purchasing arrangements, (4) reinsurance programs, and (5) Health Insurance Flexibility and Accountability (HIFA) waivers. The impact of the programs included in this index will be measured against a number of economic and health care indicators. This study examines whether the level of effort put forth by states in implementing these market-based health expansion programs has meaningful effects on social and economic indicators such as mortality per capita, gross state product, and percentage of state spending on health care. The evidence generated by this research sheds light on the societal effectiveness of market-based health care strategies used by state governments.

Review of the Literature

Economic and Health Consequences of Uninsurance

In this research, we seek to address the idea proposed by previous researchers (Battistella and Kuder 1993) that market-based approaches to expanding health insurance coverage provide business assistance and serve an economic development function. Efforts to expand health insurance coverage are promoted on a number of grounds. One is the humanitarian argument that in a nation as wealthy as the United States all citizens should have access to basic health care. However, expansion advocates may be better served by the more tangible argument that expanding coverage would provide benefits to society as a whole. These benefits can be translated into dollar amounts in the form of reduced economic losses and better health outcomes (Hadley 2003; Hadley and Holahan 2004).

Citizens' lack of access to health care can have substantial costs for state and local governments. State and local governments make payments to hospitals through tax appropriations that the Medicare Payment Advisory Committee considers reimbursement for treatment of uninsured patients. It is estimated that state and local governments spent $3.1 billion in tax appropriations in 2001 to reimburse hospitals for the uncompensated care of uninsured patients. State and local governments bear additional finan-

cial burden from uncompensated care of the uninsured through funding of indigent care programs (Hadley and Holahan 2003).

With regard to health outcomes for a state, people who are uninsured for a full year receive approximately 55 percent of the medical care of those who did have coverage, even with uncompensated care taken into account. Specifically, uninsured people receive less preventive care; are diagnosed with more advanced diseases; and, once diagnosed, do not receive adequate care and have higher mortality rates (Hadley and Holahan 2004). Looking at health outcomes as they relate to infant mortality (a common measure of health outcomes), Currie and Gruber (1996) found that a 15.1 percentage increase in children eligible for Medicaid between 1984 and 1992 is estimated to have decreased child mortality by 5.1 percent. Levy and Meltzer (2001) found consistent evidence through quasi-experimental studies that health insurance improves health, although the effect is considerably more pronounced for lower-income people than higher-income individuals.

Looking at the economic impacts of the lack of health insurance, several studies have demonstrated that impaired health is related to absenteeism and reduced productivity. Updating previous estimates of lost economic productivity due to uninsurance, Hadley and Holahan (2004) found that dollars lost nationally as a result of uninsurance amount to approximately $103 billion annually, substantially more than the estimated $48 billion the government would need to spend to provide coverage. This additional $48 billion would go toward Medicare, Medicaid, and tax subsidies for private insurance, which would constitute less than 3 percent of total personal health care spending in the United States and would only increase the share of GDP going to health care costs by 0.4 percent.

Studies have also found that poor health reduces annual personal earnings by 15 to 30 percent. Depending on the measure of health used, either improving a person's health status from "poor or fair" to "good or excellent" or reducing the prevalence of a particular condition could increase personal annual earnings by 15 to 20 percent. In addition to finding a direct link between poor health and reduced personal income and wealth among Americans aged fifty-one to fifty-nine, poor health has also been cited as the primary issue leading to people leaving the workforce prematurely (Hadley 2003).

Specific Insurance Expansion Strategies

A number of incremental, market-based strategies have been employed at the state level to address the problem of uninsurance. States are in a unique position to be health care innovators, notably because of their wider latitude to experiment with policy (Patel and Rushefsky 1999). About ninety-eight thousand people have gained new coverage through waivers under the Health Insurance Flexibility and Accountability Act (Mann, Artiga, and Guyer 2003). While these are waivers generally associated with allowing states more flexibility for expanding their Medicaid programs, the waivers also contain important elements that attempt to encourage people to pursue coverage in the private market. Owcharenko (2002) cites the guidelines provided by the Department of Health and Human Services for implementing the HIFA waivers: "The Administration puts a particular emphasis on broad statewide approaches that maximize private health insurance coverage options and target Medicaid and SCHIP resources to populations with income below 200 percent of the Federal poverty level." In recent years, a number of states, including Illinois, Idaho, New Mexico, and Oregon, have sought to encourage the purchase of private health insurance by creating or expanding premium assistance programs to try to give the private market a more active role in expanding coverage to the uninsured (Coughlin et al. 2006). Therefore, this effort is classified as a market-based approach for the purposes of this research.

Other strategies a state might rely on would be initiatives like a reinsurance program, a high-risk pool, a group purchasing arrangement, and a limited benefit plan. A reinsurance program can be used to reduce premiums by shifting some of the expenses for high-cost enrollees to a third party (possibly the state). This is designed to lead to lower premiums by reducing incentives for carriers to hold excess reserves. A high-risk pool is typically a state-created, nonprofit association offering comprehensive health insurance benefits to individuals with preexisting health problems. Such programs rely on a number of different funding mechanisms, including client premiums, assessments on insurers in the state, and general revenue dollars. Group purchasing arrangements are public or private efforts to allow more than one small or large employer and/or individuals to collectively purchase health insurance. One more program employed to address the uninsurance problem is the limited-benefit plan. Limited-benefit plans are designed to decrease premiums by limiting the number of covered services in comprehensive health benefit plans (State Coverage Initiatives 2007). While these programs do not present a comprehensive

solution to the uninsurance problem, one could make the case that these programs, taken as a whole, provide a fairly comprehensive safety net for the uninsured.

Purpose of the Study

This study seeks to assess the developmental impacts of market-based health care access expansion efforts on state health care spending, the overall health of the state's citizens, and the overall economy of the state. We hypothesize that implementation of these programs leads to lower state health spending, better overall citizen health, and greater economic productivity. If these hypotheses prove to be accurate, it would lend credence to the notion that programs designed to expand health care access to the uninsured will yield tangible economic benefits for the state as a whole.

The Model

Dependent Variables

This research employs three different dependent variables, each of which have been lagged to control for time order issues. The dependent variables for this study were chosen to examine the developmental effects of state health care access expansion programs on state economic and demographic characteristics. The percentage of state spending devoted to health care, as reported in the U.S. Census Bureau's *Statistical Abstract of the United States* (1993–2005), allows us to examine the hypothesis that these programs, by expanding access to private health insurance, will lead to a reduction in the amount of money that a state must mark for health care services to the uninsured or for costs such as those incurred by hospitals forced to provide emergency services to the uninsured.

> *H1   More state effort to expand access to care through the implementation of market-based health care access expansion programs decreases the percentage of state spending devoted to health care*

The second dependent variable considered in our study measures the per capita mortality level as reported in the U.S. Census Bureau *Statistical Abstract* (1993–2005). This variable is intended as a proxy measure for the overall level of health in a state. We again contend that a

state's population with more access to preventive care will exhibit higher overall levels of personal health. As these state programs are designed to increase access to preventive care, we hypothesize that the effect of the programs will be to lower a state's mortality level by reducing preventable deaths. While access to health care through insurance coverage is only one of many factors that could affect health outcomes in a state, previous research has strongly suggested a link between access to health care and quality of health outcomes (Hadley and Holahan 2004; Currie and Gruber 1996; Levy and Meltzer 2001).

> *H2   More state effort to expand access to care through the implementation of state health care access expansion programs will decrease the per capita mortality level*

The economic effects of state health care access expansion programs will be assessed using the gross state product per capita as the dependent variable. This will allow us to measure the productivity of a state while taking into account the significant differences in population between U.S. states. We hypothesize that the presence of these access expansion efforts will increase the overall productivity of a state, as measured by the gross state product per capita, because the programs will lead to greater access to preventive health care, which will result in a healthier, more economically productive workforce. We acknowledge the possibility that the causal link could be reversed, and it could be the case that wealthier states are implementing these programs. We control for this by lagging the effects of the health care expansion programs, as was done for all the dependent variables in the study. This should help us to establish time order so that we can better attribute any economic improvement in the states to the existence of the health programs. The previously cited research noted that the incomes of individuals and businesses suffer significantly due to lost productivity created by the poor health of employees. These programs, we hypothesize, serve to boost the level of health and thus the level of state economic productivity.

> *H3   More state effort to expand access to care through the implementation of state health care access expansion programs will increase the gross state product per capita of a state*

Independent Variables

The primary independent variable of interest in this study is an index of incremental state health expansion programs. This index indicates the degree to which states have implemented the five health expansion programs of interest in the analysis: high-risk pools; limited benefit plans; reinsurance programs; group purchasing arrangements; and one type of Medicaid waivers (HIFA waivers), included because the waivers do contain aspects that encourage people to pursue coverage on the private market. The index measures the presence of the programs on a 0 to 5 index, with 0 indicating that a state has implemented none of the programs and 5 indicating that a state has implemented all of the possible programs. Information regarding the adoption of these programs in the states was reported by the Robert Wood Johnson Foundation (n.d.) Web site State Coverage Initiatives (2007).

We feel that this variable allows us to capture an overall measure of state effort to expand access to coverage to the uninsured in a state through market-based programs. As these programs do use different mechanisms to expand coverage to different populations within a state, fully gauging their impact either on their target populations or the general public would be difficult. However, we are less interested in the specific ways in which these programs expand coverage and their individual success than in a state's overall willingness to use multiple strategies to address the problem of uninsurance and whether this policy effort on the part of the state translates into tangible benefits for the state in terms of reduced spending on health, better overall health outcomes, and higher gross state product.

Another variable of interest in this study is the role of institutional ideology in the effectiveness of these programs. This is a measure of the ideology of a state's government, developed by Berry et al. (1998). There is literature in public policy which presents evidence that programs are more successfully implemented in situations where the government is more ideologically sympathetic to the program being implemented (Hays 1996); that is, more liberal governments more successfully implement liberal programs, while more conservative programs are more successful in implementing programs of a conservative nature. This variable, which is on a scale of 0 (very conservative) to 100 (very liberal), was computed as a weighted average of the AFL-CIO Committee on Political Education Score for the governor and the state congressional delegation.

The size of the problem that these incremental state health expansion programs must confront is controlled for using a measure of the percent-

age of unemployed people in the state as reported in the U.S. Census Bureau *Statistical Abstract* (1993–2005). This variable is included in the analysis as it is expected that the larger the size of the unemployed problem in a state, the more difficult it will be for the incremental health expansion programs to have a meaningful impact on the dependent variables. The majority of Americans, 59.3 percent, still receive health insurance through their employer (U.S. Census Bureau 2007). Therefore, we believe that the greater the level of unemployment in a state, the higher the level of uninsurance in that state. A direct measure of the uninsured level in a state was originally included in the analysis, but it was found to be correlated with other control variables.

In addition to the variable measuring the percentage of unemployment in the state, another variable related to the need for the program is the variable measuring the percentage of nonminorities in the state as reported in the U.S. Census Bureau *Statistical Abstract* (1993–2005). This variable is included in the model as previous studies have found that minorities are more prone to lack access to health care and have greater need for health care due to a higher prevalence of health problems (Longest 2006). States with lower percentages of minority populations would be expected to have less need for health expansion programs and would be expected to naturally have better outcomes for the dependent variables under study.

The model also seeks to account for the level of health infrastructure in the state. The health infrastructure is measured by the number of hospital beds in the state as reported in the American Hospital Association's *AHA Hospital Statistics* (1994/95, 2000, and 2005). For the incremental state health programs to have the hypothesized effects on the dependent variables, a state must have the infrastructure to deliver the services for which the insurance coverage provides access. Therefore, it is hypothesized in this study that the more hospital beds there are in a state, the more effective its health programs will be in providing economic and health care benefits.

Another control variable related to capacity included in the analysis is state employees per capita as reported in the *Book of the States* (Council of State Governments 1993–2005). This variable is included as a measure of administrative capacity. This variable relates to the hypothesis that states with more administrative capacity will be in a better position to implement and regulate their programs in the interest of greater effectiveness. This better implementation and regulation will translate into programs that have greater economic and social effects for the state.

The final control variable included in the analysis is a measure of the

percentage of union membership in a state as reported by the U.S. Census Bureau *Statistical Abstract* (1993 – 2005). This measure serves as a proxy for the level of manufacturing and economic growth taking place in a state. This is important to take into account, as economic growth stands to impact all of the dependent variables included in this study. Unionization has also proven to be a significant variable in previous models of economic development (Brace 1993).

This study stands to make a significant contribution to the literature, as extensive research has been done on the societal and economic effects of uninsurance but little done to examine the actual economic and societal effects of programs designed to combat uninsurance. This is an important area of research, because a significant argument in favor of health expansion programs is that they will not only help those who lack access to health care but provide larger benefits for society as a whole. It is an important assumption to test, as we continue to explore policy alternatives to expand access to health care, including state and federal universal health care plans. Evidence that these programs do have wider benefits could serve to make them more attractive to the general public, which may be dubious of government involvement in health care. On the other hand, evidence that these programs do not have larger economic and societal benefits may signal to policy makers the need to reform their approach to health policy making and provide some guidance in how to do so.

Research Methodology

This study uses a pooled cross-sectional ordinary least squares (OLS) regression model with panel-corrected standard errors, a methodology most notably advocated by Beck and Katz (1995). They noted that the use of OLS in the analysis of time series panel data could lead to correlated errors and problems of heteroscedasticity (ibid.: 634). Beck and Katz suggest using panel-corrected standard errors in place of OLS standard errors. Panel-corrected standard errors "pool information across clusters to estimate error variances" (Johnson 2004: 3). These panel-corrected standard errors allow for accurate analysis of either panel heteroscedasticity or contemporaneous correlation of the error terms. This helps to correct the issue raised by Stimson (1985) that standard OLS will often treat cases in pooled data as independent of each other, even though they are in fact related. The analysis was to control for autocorrelation of residuals within panels, as we do not anticipate a great deal of autocorrelation

between panels. Further, the standard errors are calculated independently for each panel.

Beck and Katz (1995: 645) note that researchers using time series cross-sectional data should address temporal issues with the data through the use of lagged dependent variables or by using a transformation procedure to eliminate serial correlation. The effectiveness model employed in the article uses the Prais-Winston transformation, in addition to lagged dependent variables. This is a generalized least squares estimator that is used in the presence of first order autocorrelation. In this process, the first observation is transformed so that it does not have to be censored (StataCorp n.d.). The dataset for this analysis is composed of the fifty U.S. states for the years 1994–2003. The total number of cases included in the analysis is five hundred. In our study, all of the dependent variables are lagged to control for time order effects.

Analysis

The tables in this section report the regression results of three different models relating to the economic impacts of state health expansion policies. For each of the models, the independent variables are the same, with the key independent variable being the index of state market-based health expansion programs. Each of the three models has a different dependent variable that examines the developmental effects of state health care access expansion programs on state economic and demographic characteristics.

The first model focuses on the relationship between the health care access expansion efforts and the percentage of state spending devoted to health care. The results are presented in table 1.

In this model focused on state health spending, the index of state health expansion programs was not found to be significant at the 0.05 level. This finding may reflect the fact that, while these programs seek to reduce state health spending by increasing access to preventive care, they have characteristics that may cause them to have the opposite effect. The programs included in the index seek to expand access to health care to those previously uncovered, including those who are considered high risk and likely to be in need of extensive and expensive medical care. Providing coverage to such individuals may serve to increase state health spending in some areas, even though it was hypothesized that more effort to expand coverage should lead to lower health spending.

Another control variable in this study, the variable for institutional ideology, was found to be statistically significant in the analysis. The variable

Table 1 Dependent Variable—Percentage of State Spending Devoted to Health Care (1994–2003)

	Coefficient	Standard Error	z	$P > |z|$
% nonminority	-.050	.011	-4.42	0.000
% unemployed	-.030	.054	-0.56	0.579
Institutional ideology	-.007	.003	-2.09	0.036
Hospital beds	.0000169	.0000840	2.02	0.044
State employment (per capita)	-.002	.003	-0.54	0.588
% union membership	-.041	.016	-2.54	0.011
Market-based health index	.252	.145	1.73	0.084
Constant	13.09	1.30	10.06	0.000

Notes: Wald χ^2 (7) = 63.44; $P > \chi^2 = 0.0000$

was found to have a negative relationship to the percentage of state spending devoted to health care, as was hypothesized. It is notable that many would argue that state spending on health care could be expected to increase under a more liberal government. However, this finding could be seen to support the idea that programs can be better implemented by governments that are sympathetic to programmatic aims. If, as literature suggests, liberals are more supportive of efforts to expand access to health care, then they may more effectively implement and regulate expansion efforts. The negative relationship between the liberalism of government and the level of health spending in a state could be seen as evidence of this.

Three other control variables used in the analysis were found to be significant as well. The variable measuring the level of nonminorities in a state was found to be statistically significant and negative. This fits with the previously cited literature which notes that minorities suffer from both a higher prevalence of health problems and lower levels of access to health care (Longest 2006). Therefore, it would be anticipated that the lower the level of minorities in the state population, the lower the state's level of health spending.

The control variable measuring the number of hospital beds was found to be significant and in the positive direction. As the variable for hospital beds was intended as a proxy for the strength of the medical infrastructure in a state, this finding suggests that the more medical resources a state has, the higher its health spending. This runs counter to the hypothesis, which proposed that a stronger medical infrastructure in a state would translate into lower levels of state health spending. However, this may be indicative that states with more resources also treat more patients and therefore spend more money on health care, including uncompensated charity care.

Another possibility may be that states are experiencing some savings from health expansion programs and, rather than cutting spending, are investing their savings in other initiatives.

The control variable for the percentage of union membership in a state was found to be statistically significant and negative with regard to the level of health spending in the state. As this variable was included as a measure of manufacturing and economic growth, it indicates that the higher the level of these measures in a state, the lower the level of spending on health care in a state. This may be indicative of the fact that higher levels of manufacturing and economic growth in a state result in higher levels of insurance and greater access to health care. Thus, people are less likely to avail themselves of uncompensated emergency care, thereby reducing the level of spending required by the state government for health care.

In the next model, which examines the relationship between the level of mortality in the state and market-based health programs (results of the model are presented in table 2), the variable for the index of state health expansion programs was found to be statistically significant and negative. The significance of this variable indicates that the effort of states to expand access to health care helps increase the overall level of health in a state, as evidenced by a lower mortality rate. This lends credence to the notion that greater access to health care through these programs translates into better health outcomes through greater access to preventive care and other health services.

The variable for the percentage of nonminorities in a state was significant in this model, although not in the hypothesized direction. The variable for nonminorities was found to have a positive relationship to the level of mortality in a state. This suggests that a higher level of nonminorities in a state actually increases the level of mortality. This finding may be due to the nonminorities variable being related to other factors such as advanced age.

Another counterintuitive finding in the analysis was for the control variable for the percentage of unemployed in a state. This variable was included in the analysis as a proxy for the percentage of uninsured in the state. Thus, it was hypothesized that there would be a positive relationship between unemployment and mortality in a state. However, unemployment was actually found to be negatively related to mortality. As in the case of the variable for nonminorities, this may be due to the unemployment being correlated with other variables related to the demographics of the population. More research should be conducted in this area.

Table 2 Dependent Variable—State Mortality Rate per 100,000 (1994–2003)

	Coefficient	Standard Error	z	$P > |z|$
% nonminority	.8133041	.2741206	2.97	0.003
% unemployed	-3.486785	1.258926	-2.77	0.006
Institutional ideology	.1397446	.076489	1.83	0.068
Hospital beds	-.0000528	.0002617	-0.20	0.840
State employment (per capita)	-.6392107	.0821081	-7.78	0.000
% union membership	.1313602	.4416063	0.30	0.766
Market-based health index	-13.58833	3.798003	-3.58	0.000
Constant	937.0552	35.27636	26.56	0.000

Notes: Wald χ^2 (7) = 208.84; $P > \chi^2 = 0.0000$

The variable for state employees per capita was also found to be significant and in the hypothesized direction. The level of per-capita state employment, which was included in the analysis as a proxy for state administrative capacity, was found to have significant negative relationship to mortality. This is evidence that more state administrative capacity can contribute to the effectiveness of market-based state health expansion programs or the quality of state health care in general.

The third and final model examines the relationship between the index of market-based state health programs and gross state product. Table 3 presents the results of this model. Our key variable of interest, the health program index, was statistically significant and positive in this model. This indicates that more effort put forth by states in terms of the adoption of state health expansion programs translates into economic benefits for the state as a whole.

The level of institutional or governmental liberalism was also found to have a significant and positive relationship on gross state product. This supports the contention that a more liberal government can serve to increase a state's economic productivity by better implementing and regulating market-based health expansion efforts or implementing other kinds of social welfare efforts. Going along with this finding, the control variable for the percentage of union members within a state's population was also found to be statistically significant, although not in the hypothesized direction. The level of unionization was found to have a negative relationship with gross state product. This is counterintuitive, as the unionization variable was included as a proxy for economic growth, and we would anticipate that economic growth would necessarily lead to growth in the

Table 3 Dependent Variable—Gross State Product (1994–2003)

	Coefficient	Standard Error	z	$P > |z|$
% nonminority	-.5414269	.1331347	-4.07	0.000
% unemployed	.6825093	.5907609	1.16	0.248
Institutional ideology	.0992988	.0377803	2.63	0.009
Hospital beds	.0084687	.0001801	47.03	0.000
State employment (per capita)	-.0711001	.0455448	-1.56	0.118
% union membership	-.7864824	.2094016	-3.76	0.000
Market-based health index	6.825217	2.088192	3.27	0.001
Constant	44.75092	18.87635	0.018	0.018

Notes: Wald χ^2 (7) = 4123.37; $P > \chi^2$ = 0.0000

gross state product. However, this finding could be seen as evidence that the rules and regulations promulgated by unions may have a negative relationship to economic productivity.

The variable for hospital beds was also significant and positive in the model, indicating that a stronger medical infrastructure in a state helps to foster better economic conditions. While one could argue that states with greater levels of economic productivity could also be expected to have stronger medical infrastructures as a result, it is important to note that the effects of the market-based programs are lagged to control for time-order effects. With that in mind, the finding for the variable for beds per capita indicates that a stronger health infrastructure in a state contributes to a more favorable economic climate through a better quality of care.

The control variable for the percentage of nonminorities in a state was also found to be significant in the model, although not in the hypothesized direction. A higher percentage of nonminorities in a state was actually found to have a negative relationship to the gross state product. As in the previous model, we suspect that this may be due to the nonminorities variable being correlated with other demographic variables. More research should be done in this area.

Discussion

State legislators are increasingly focused on health care reform. Escalating health care costs, state deficits, rising numbers of uninsured, and federal inaction have forced them to take up the challenge of changing state law, restructuring flawed state health insurance markets, and overhauling existing health care financing and delivery. This has often forced

states to consider and adopt market-based initiatives as tools to solve their health care policy problems. In many states, legislators are committed to introducing free-market principles of consumer choice and competition into the health care system. Because the circumstances in each state are so radically different, there is no neat, nationally applicable formula for market-based reforms.

Market-based reforms aim for private insurance-based health reform that encourages competition, expands access to private coverage, and strengthens the market as a way to discipline health care costs. Researchers in the area of health policy, including Barrilleaux and Brace (2007), have questioned whether these market-based reforms to expand access to health insurance coverage do indeed have larger societal and economic benefits, beyond lowering the uninsurance rate. The results of the preceding analyses indicate that programs enacted by states to promote increased access to medical care have beneficial effects beyond the client population that is directly served. This was found to be the case in the models focusing on the level of mortality in a state and on gross state product, where the presence of market-based health initiatives was found to have a beneficial effect at the 0.05 level. We would suggest that these programs have beneficial effects on the overall health of a state and the economy of a state by allowing greater access to preventive care and creating a healthier, more productive workforce.

Our hypothesis regarding the market-based program index was not confirmed in the model focused on state health care spending. In that model, the presence of market-based initiatives was found not to be significant but was positively associated with state spending. A possible explanation may be that, given the ever-present and consistently growing cost of health care, savings created in one area may not actually result in lower health care spending but instead results in funding being diverted to other areas. The significant findings in the study could have potentially important policy implications, particularly as efforts toward national health care are pursued at the federal level. Not only do the findings lend credence to the idea that expanding access to health care is a worthwhile endeavor for economic as well as humanitarian reasons, but they also suggest that positive results can be created without bypassing the private market.

Most states use some combination of market-based and state-based health policy efforts. This study seeks to examine the effects of greater state effort with regard to market-based health policy efforts on selected indicators and does not seek to disentangle these effects from those of state-based programs. Prior research (Bernick and Myers 2008) found

that the effects of tax incentives and even state-based direct coverage pro-grams were obscured by the effects of Medicaid, still the major force for health insurance provision in the states. Thus, this study sought to test for the effects of market-based programs in the absence of these other programs. This study also did not include fixed effects for variables such as region. While regional differences can certainly impact the effective-ness of programs such as these, in this first effort our primary concern was to investigate whether these programs have meaningful effects at the state level in light of the presence of the control variables included in the model. Future studies should seek to distinguish between the effects of market-based versus state-based programs, controlling for factors such as regional differences.

It is important to note that the purpose of the index was to attempt to measure the level of effort a state had put forth to adopt market-based ini-tiatives to expand health care access. Actually assessing the individual and cumulative effects of the programs is complicated by the many different forms and characteristics the programs take on from state to state. How-ever, disentangling the different programs would certainly be worthy of future research. Suggested from this research is the proposition that, while market-based initiatives to expand access to health care may not have a statistically significant effect on the uninsurance rate and other measures, states that make a greater effort to try a number of different approaches to market-based reform do show statistically significant progress. This may serve as an indication that these different programs are taking bites out of different portions of the uninsured problem and that this patchwork of dif-ferent programs does represent a more effective safety net than previously thought. Further study of the success of the individual programs could serve to strengthen this net by determining which programs are effective and which remaining gaps need to be addressed.

Today, a variety of market- and state-based policies are being imple-mented. Massachusetts and Vermont passed laws in 2006 to achieve universal (or nearly universal) coverage while also addressing cost and quality. Covering all uninsured children is the goal of many states. Other states have adopted more incremental reforms to focus on the eight-in-ten uninsured Americans in working families, many of whom work for small businesses that cannot afford coverage (Kaiser Commission on Medicaid and the Uninsured 2008). Some states are targeting coverage for young adults—a large segment of the uninsured population (Freking 2008).

Fueled by the increasing number of uninsured Americans, the declining number of employers offering insurance to their employees, unstable fiscal

conditions in the states, and the lack of federal action, states are leading the way in health care reform. Market-based initiatives, Medicaid and SCHIP expansions, and public-private partnership are popular tools used by states to increase access to and affordability of insurance. While one cannot dismiss the success of government-based programs like Medicaid and SCHIP in expanding access to health care, all market-based and government initiatives to increase access to care should be given fair consideration as part of the incremental movement for expanding health care.

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