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### The Impact of State Partisanship on Affordable Care Act Implementation and Access to Health Insurance

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The Impact of State Partisanship on Affordable Care Act Implementation and Access  
to Health Insurance

By

Kate Fraley

A Thesis Submitted to the Department of Economics  
of Trinity College in Partial Fulfillment of the  
Requirements for the Bachelor of Science Degree

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## Abstract

In this project, I use a mediation analysis to examine how the partisanship of a state affects how the state implements the Affordable Care Act (ACA), and, as a result, constituents' access to health insurance. I construct an annual panel dataset from 2010 to 2015. Controlling for state demographic variables, states with Democrat governors and legislatures are more likely to implement the Medicaid expansion component of the law and a state-based exchange. States that implement the Medicaid expansion experience additional pre to post-ACA decreases in the uninsured rate and the proportion of people who get their insurance through a direct purchase and additional increases in the proportion of people covered through Medicaid than non-expansion states. Partisanship does not have a direct effect on pre to post-ACA health insurance outcomes changes; any effect partisanship has strictly comes indirectly through its effect on implementation of the ACA.

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## **I. Introduction**

Throughout history, there has been a great deal of debate about how much economic policies differ between Republicans and Democrats. On one hand, Republicans supposedly tend to prefer lower tax rates, less deficit spending, free market competition with little government regulation, and less entitlement spending (Republican National Committee 2017). On the other hand, Democrats are said to favor more government regulation in the economy, progressive taxation (higher tax rates for higher income brackets), universal government healthcare, and greater entitlement spending (Democratic National Committee 2016). Based on these historical trends, my motivating question for this project is how much does economic policy actually differ when Democrats are in power versus when Republicans are? Furthermore, how do these possible differing policies affect economic outcomes?

For my research, I choose to focus on healthcare, which is one of the most expensive sectors of the economy. In 2015, the federal government alone spent 1.05 trillion dollars of the nation's 3.8 trillion dollar federal budget (27.42 percent) on healthcare. This amount was second only to spending within the category of social security, unemployment, and labor and was also greater than federal spending on the next three largest categories—military, interest on debt, and veteran's benefits—combined (National Priorities Project 2016). Moreover, adding federal spending with consumer spending, US total healthcare spending accounted for 17.8 percent of the nation's Gross Domestic Product (GDP) in 2015. Total healthcare spending was equal to 3.2 trillion dollars, which is an average of approximately



9,990 dollars per person (Centers for Medicare & Medicaid Services 2016). Within the healthcare sector, I choose to examine state-level variation in the Patient Protection and Affordable Care Act (ACA). I choose the ACA because although it is a federal economic policy, states have control over how they choose to implement it. Each state can decide whether or not it wants to implement the Medicaid expansion component of the law and what type of state exchange (federally-facilitated, state-based, or partnership) it wants to operate. The specific question I attempt to answer is how does the executive and legislative partisanship of a state affect how the state implements the Medicaid expansion and state exchange components of the law and, as a result, constituents' access to health insurance?

To begin, the ACA was first passed and signed into law by Barack Obama on March 23, 2010. The primary goal of the law is to decrease the number of US citizens who are uninsured. The first way in which the law addresses this goal is by requiring states to establish and operate exchanges where individuals and small businesses can purchase health insurance. Although the federal law requires that states set up these exchanges, it gives each state the authority to choose whether it wants to implement a federally-facilitated, state-based, or partnership exchange (McAuliff et al. 2012). All three types of exchanges are required to perform the four core functions of an exchange, which include overseeing eligibility and enrollment, plan management, consumer assistance, and financial management. The only difference between each type is which functions the state's government performs and which the federal government performs (Noh and Krane 2016). In a state-based exchange, the state is responsible for performing each of the four functions.

This means that individual consumers and small business employers and employees enroll in coverage through marketplace websites that are established and run by the state. In a federally-facilitated exchange, the US Department of Health and Human Services (HHS) performs all four core functions. As a result, individual consumers and small businesses and their employees must apply for and enroll in coverage through the federal government's website, [healthcare.gov](http://healthcare.gov). A partnership exchange is a hybrid of the state-based and federally-facilitated exchanges, with the state's government performing the plan management and consumer assistance functions and the federal government performing the financial management, eligibility, and enrollment functions. Because the federal government performs the eligibility and enrollment functions, consumers and small business employers and their employees apply for and enroll in coverage through [healthcare.gov](http://healthcare.gov) (Henry J. Kaiser Family Foundation 2017).

The ACA also stipulates that exchanges must offer four types of plans, which are categorized into metal-tiers. These plans are offered in both the individual and small business markets. The main difference between each metal-tier is the cost sharing of the total plan price between the individual and his or her insurance company. The quality of care is consistent across all plans, as they each provide the same essential health benefits. In the bronze metal-tier, the insurance company covers approximately 60 percent, while the individual pays 40 percent of the total healthcare costs. The insurance company covers approximately 70 percent of the cost for a silver-tier plan, 80 percent for gold, and 90 percent for platinum. Bronze plans tend to have a low monthly premium and high costs when individuals need

care, while gold and platinum plans have a high monthly premium and low costs when individuals need care. Silver plans have both moderate premiums and deductibles (Healthcare.gov 2014). Furthermore, catastrophic plans are also available to certain individuals. Individuals who qualify for this type of plan are those who are under the age of thirty or those of any age who qualify for a hardship or affordability exemption from the individual mandate component of the ACA. Catastrophic plans are only available to individuals, not small businesses. Moreover, they provide coverage of the same essential health benefits that the metal-tier plans do in addition to covering three primary care visits for year before an individual has met his or her deductible (Healthcare.gov 2014).

The second way in which the ACA addresses its goal of reducing the uninsured rate is through a Medicaid expansion. Medicaid is a federal-state health insurance program that covers poor individuals of all ages who are unable to afford their own insurance. It also covers low-income individuals with disabilities (McAuliff et al. 2012). Prior to the ACA, states had control over eligibility for and levels of funding put towards the program. When the ACA was first passed in 2010, however, it required that all states expand their Medicaid programs to provide coverage to all individuals, including children, pregnant women, parents, and adults without dependent children, also known as “childless adults,” who are under the age of 65 and have incomes up to 138 percent of the federal poverty line (FPL). Childless adults were not eligible for the program prior to its expansion under the ACA. Moreover, the law stated that if a state did not expand its program, it would lose all federal Medicaid funding (McAuliff et al. 2012). Many states found it unfair

that the federal government could take away their Medicaid funding if they did not expand their Medicaid programs. In fact, 27 states filed or were part of lawsuits that challenged this component of the law. The legal challenge eventually reached the Supreme Court in the 2012 case, *National Federation of Independent Business v. Sebelius*. The Supreme Court came to the decision that the federal government could not take away Medicaid funding from states that did not want to expand their programs. In other words, the Supreme Court's decision granted states the ability to choose whether or not they want to implement the Medicaid expansion component of the law (Noh and Krane 2016).

For my research, I examine the Medicaid expansion and state exchange components of the ACA because, as mentioned above, they are the two primary components of the law that states have control over how they choose to implement. Both components took effect on January 1, 2014. Two other components of the ACA that are essential, but states do not have control over, are the individual mandate and premiums and cost-sharing subsidized by tax credits to help low-income persons obtain insurance. The individual mandate states that all legal residents of the United States must obtain health insurance. If a person does not obtain insurance, he or she receives a tax penalty that is based on income. The tax penalty either ranges from 695 dollars to 2085 dollars per year (it increases as income increases) or, for high-income earners, is worth 2.5 percent of household income (Frean Gruber, and Sommers 2016). In Medicaid expansion states, premiums and cost-sharing subsidized by tax credits are available to individuals who both fall between 138 and 400 percent of the FPL and purchase their insurance through the

state's federally-facilitated, state-based, or partnership exchange. In non-Medicaid expansion states, premiums and cost-sharing subsidized by tax credits are available to citizens who both fall between 100 and 400 percent of the FPL and purchase their insurance through the state's exchange (Noh and Krane 2016). Tax credit values are based on the second lowest cost silver plan in the state and are also tied to income. For example, the tax credit is 2 percent of a person's income if he or she makes up to 138 percent of the FPL and 9.5 percent if he or she makes between 300 and 400 percent (Henry J. Kaiser Family Foundation 2013).

I begin this paper with a summary and analysis of past literature on differences in Republican and Democratic economic policy, state-level implementation of the ACA, and post-ACA health insurance outcomes. I then use a mediation analysis that allows me to examine my central question: does state executive and legislative partisanship affect health insurance outcomes? Completing a mediation analysis allows me to examine how ACA Medicaid expansion and exchange implementation choices mediate the relationship between state partisanship and health insurance outcomes. Moreover to complete this mediation analysis, I break my central question into three parts. First, does state executive and legislative partisanship affect a state's implementation of the ACA? Second, does implementation of the exchange and Medicaid expansion components of the law affect health insurance outcomes? Third, does partisanship have an additional effect on changes in pre and post-2014 health insurance outcomes beyond its influence on the implementation decisions, which then affect health insurance outcomes?

I find that both state executive and legislative partisanship affect how a state implements the exchange and Medicaid expansion components and that implementation does in fact affect health insurance outcomes. I also find that the way in which a state implements the two components of the law has a significant effect on the changes in pre to post-ACA health insurance outcomes. Partisanship also affects differences in pre and post-ACA health insurance outcomes; however, this effect that partisanship has only comes through implementation decisions. In other words, a state's partisanship affects how the state chooses to implement each of the two components of the ACA. The way in which the two components of the ACA are implemented then affects health insurance outcomes. Partisanship does not have an additional effect on health insurance outcomes beyond its influence on the implementation decisions, which then affect health insurance outcomes.

## **II. Literature Review**

Throughout this section, I complete an in depth review of several published studies that relate to my own. These papers examine a variety of topics, including the influence of political parties on implementation of non-ACA health insurance programs, the importance of political parties and non-political factors in ACA implementation, and the effect of ACA implementation on health insurance outcomes. Before focusing on health insurance and ACA-related studies, however, I begin my review with two papers that look at how economic policies and outcomes differ under Democrats and Republicans.

In his article, "Estimating the Impact of Gubernatorial Partisanship on Policy Settings and Economic Outcomes: A Regression Discontinuity Approach," Leigh (2008) finds that there are few, but still some differences in both economic policy and outcomes despite whether a governor is Democrat or Republican. For his research, Leigh (2008) uses panel data from all US states between 1941 and 2002. He drops the first year of each gubernatorial term from his dataset because policies do not take effect immediately and often do not have an impact until the following year after they are implemented. Moreover, he completes an analysis that controls for state and year fixed effects that could have an impact on the policies and outcomes he is examining. In this analysis, Leigh (2008) conducts the same five regressions for each policy or outcome. In all five of the regressions, his dependent variable is the economic policy or outcome. The three policy and outcome categories he examines are pure policy variables, such as the minimum wage or tax rates, outcomes that are a result of both policy choices and economic conditions, such as expenditure or transfer programs, and welfare variables, such as incomes and unemployment. His independent variable is the executive partisanship of the state. This variable is a dummy variable, with one equaling a Democrat governor and zero equaling an Independent or Republican governor. Regressions one through four are ordinary least squares regressions.

In the first regression, Leigh (2008) simply includes his dependent variable, independent variable, and the state and year fixed effects. His second regression is the first regression plus a variable accounting for time-varying characteristics of the state. Adding this variable controls for the fact that the demographic characteristics

of the state could have an effect on the governor's policy choices or economic outcomes. The third regression is the second regression plus two measures of legislative partisanship that control for any partisan affiliation of a governor that may be correlated with the partisan composition of the legislature. Both legislative measures are dummy variables, with the first equaling one if Democrats control both the state's house and senate in a given year and the second equaling one if Republicans control both the state's house and senate in a given year. The fourth regression is the third regression plus the Poole-Rosenthal score for the state's house of representatives. The Poole-Rosenthal score measures the ideology of the state's house of representatives, which Leigh (2008) believes is a reflection of the ideology of the state's voters and, therefore, can be used to control for state voter ideology. Finally, the fifth regression is a regression discontinuity estimation. This estimation is nearly identical to the fourth regression; however, Leigh (2008) drops states that had non-contested elections from his dataset. Non-contested elections are defined as elections in which one party won 80 percent or more of the vote or elections in which one of the top two candidates was an Independent. This allows him to only examine states that had similar values of the vote share, but different values of the independent variable, executive partisanship. For example, a state could have a voter share that is 49 percent to 51 percent in a Republican's favor or in a Democrat's favor. In both cases, the vote share is nearly the same, yet executive partisanship is completely different.

Leigh (2008) finds that Democrat governors prefer higher minimum wages. Specifically, the minimum wage is approximately 0.9 percent higher under a



Democrat governor than under a Republican one. This result was significant in his first two regressions. He also finds that the fraction of the state population on welfare is approximately 1 to 2 percent higher under Democrat governors, with this result being significant in the third and fourth regressions. Third, he finds that median post-tax incomes are precisely 1 percent higher and post-tax inequality is 1/3 of a Gini point lower under Democrat governors. Both of these results are significant in the second, third, and fourth regressions. Fourth, using the regression discontinuity estimation, he finds that Democrats generally preside over lower unemployment rates, approximately 0.2 to 0.3 percentage points lower than under a Republican governor, and over slightly lower state revenues. Finally, Leigh (2008) concludes that tax rates, pre-tax incomes and inequality, and spending policies do not significantly differ between Republican and Democrat governors.

Similar to Leigh (2008), in his paper “Democrats, Republicans, and Taxes: Evidence that Political Parties Matter,” Reed (2006) examines the influence of state partisanship on economic outcomes. In addition to legislative partisanship, Reed (2006) also includes executive partisanship as an independent variable. For legislative partisanship, he includes variables for a Democratic legislature and a Republican legislature, the omitted legislative partisanship variable being when the legislature is split. For executive partisanship, he includes a variable for a Democrat governor, the omitted categories being when the governor is Republican or Independent. Furthermore, instead of focusing on a variety of economic outcomes, as Leigh (2008) does, Reed (2006) solely uses state tax burdens as his dependent variable. State tax burdens are the ratio of total state and local tax revenues to state

personal income. Reed (2006) uses a change in the state's tax burden as an indicator of a political party influence on taxes. The data used in the model is state-level data from 1960 to 2000 for the included 45 states. Alaska and Hawaii are dropped from the dataset because they are not part of the Contiguous United States, Nebraska and Minnesota are dropped because they had a unicameral, non-partisan, legislature for some or all of the time period being examined, and Wyoming is dropped because there were data collection issues in the composition of its tax burden variable. Finally, the unit of observation that Reed (2006) uses is state-5-year-period. Because Reed (2006) groups his data into five-year periods, the Democrat legislature and Republican legislature variables are defined as the percentage of years during the five year period that Democrats or Republicans, respectively, controlled both chambers of the state legislature. The Democrat governor variable is defined as the percentage of years during the five-year period that the state had a Democrat governor. Because economic outcomes are often reflections of policies implemented in the previous year, all three partisanship variables are lagged by one year.

Reed (2006) runs four primary regressions; the first two are ordinary least squares and the other two are two-stage least squares. In all four regressions, he controls for state and voter characteristic variables, including the percentage of a state's population over 65, the percentage of the state's population who are African American, the percentage of the state's population who are female, the percentage of the state's citizens who are at least twenty-five and have completed at least a college degree program, the percentage of nonagricultural wage and salary employees who

are union members, the percentage of a state's personal income attributed to farm and manufacturing sectors, the ratio of a state's population to its land area, and the Americans for Democratic Action variable, which controls for the influence of voters' policy preferences on the implementation of public policy by the state's federal legislators. These variables are controlled for because past research has shown that populations that are older, more educated, and more agriculturally-based tend to prefer lower taxes, while populations that are more urban, unionized, and have greater percentages of African Americans and females prefer higher ones. He also controls for the initial tax burden at the beginning of the five-year period being examined and each regression includes state and time fixed effects. He includes these fixed effects because state tax burdens showed cyclical behavior over his sample period. Similar to the partisanship variables, all control variables are lagged by one year.

In one of the ordinary least squares regressions and one of the two-stage least squares regressions, Reed (2006) also controls for omitted variable bias by including interactive time effects for the following state and voter characteristic variables: percent union, population density, farm share, and the initial tax burden. Reed (2006) chooses this combination of variables because using these specific variables in his regression gives him the best regression according to the Akaike Information Criterion score, a score that measures the relative quality of several specifications for a given dataset. Finally, Reed (2006) chooses to use two-stage least squares regressions in addition to the ordinary least squares regressions to address the potential confound of endogeneity, which means that an independent

variable could be correlated with the dependent variable's error terms in the specification. Reed (2006) believes that the variables that could be endogenous in his regression are: percent elderly, percent female, percent black, percent college-educated, percent union, population density, log of real per capita personal income, farm share, and manufacturing share. In the two-stage least squares regressions, each endogenous variable's instrument is the initial value the variable takes at the beginning of the 5-year subset of data being examined. For example, if Reed (2006) is examining the time period of 1960 to 1965, the instrument variable for percent elderly is the value of percent elderly in 1960.

All four regressions lead Reed (2006) to conclude that political parties have a significant impact on state tax policy. State tax burdens are greater under Democrats. Moreover, the two-stage least squares regressions indicate an even larger increase in state tax burdens under Democrats and a greater decrease in state tax burdens under Republicans than the ordinary least squares regressions do. Specifically, the two-stage least squares regression with the interactive variables yields the result that tax burdens are approximately 0.315 to 0.542 percentage points higher when Democrats control the state legislature. Finally, he finds that the political party of the governor has little effect on tax burdens. He hypothesizes that this is the case because each state's governor has to satisfy the policy preferences of his or her state's median voter, whereas each legislator only needs to satisfy the median voter in his or her respective district, which could be more polarized than the entire state itself.

Focusing more specifically on health insurance, several studies looking at how political parties influence various degrees of health insurance program implementation have been completed. In their article, "The Social Environment and Medicaid Expenditures: Factors Influencing the level of State Medicaid Spending," Buchanan, Cappelleri, and Ohsfeldt (1991) use data for 47 states between 1977 and 1987 to create a two-stage least squares model. Their model examines how a variety of economic, political, and administrative factors affect state Medicaid expenditures in each of the years being examined. The factors examined for each state include personal income per capita in terms of real 1967 dollars, a liberal index used to measure the state's political alignment, an index used to measure the state's political competition, the number of patients' care physicians per 1000 persons, the percentage of Medicaid expenditures paid for by the federal government, the previous year's Medicaid expenditures, the number of Medicaid recipients, and a variable that reflects which level of government (state or local) is administering the Medicaid program. The authors hypothesize that states with higher per capita incomes, greater political competition, a greater number of physicians per 1000 persons, higher numbers of Medicaid recipients, and higher Medicaid expenditures in the previous year will all have higher Medicaid expenditures in the present year. They also predict that Medicaid expenditures will be higher in states that have a greater percentage of their Medicaid expenditures being paid by the federal government and are more liberal.

One issue with the variables being used in the model is that one of the independent variables, the previous year's Medicaid expenditures, is the same

variable as the dependent variable, the only difference being that it is lagged by one year. In other words, the independent variable is Medicaid expenditures at time  $t-1$  and the dependent variable is Medicaid expenditures at time  $t$ . The authors choose to use a two-stage least squares model because it can address this issue. In the first stage, the authors create an instrumental variable by regressing the log of the dependent variable (Medicaid expenditures at time  $t$ ) on all of the independent variables. In the second stage of the regression, this new instrumental variable, which is the predicted value of log expenditures lagged by one year, is used instead of the original independent variable and the equation is re-estimated using ordinary least squares.

The authors find that economic factors have the greatest influence on how much the state spends on Medicaid. As real personal income per capita increases, the real dollar amount of the current year's Medicaid expenditures also increases. In other words, wealthier states spend more on Medicaid than poor states do. Moreover, as the real dollar amount of Medicaid expenditures for the previous year increases, so does the real dollar amount of Medicaid expenditures for the current year. Second, the authors find that implementation factors have the second greatest influence. States who administer their Medicaid programs through local-level governments spend more on the program than those that administer the Medicaid program through the state-level government. Finally, Buchanan, Cappelleri, and Ohsfeldt (1991) find that there is not a relationship between the liberal ideology index and Medicaid spending, meaning that more liberal states are not necessarily

more likely to spend more on Medicaid. They find the same type of results for the relationship between interparty competition and Medicaid spending.

Similarly, Daniel Tope and Lisa N. Hickman (2012) look at which factors influence how a state implements, and how much a state spends on the Children's Health Insurance Policy (CHIP) in "The Politics of Children's Health Insurance Policy." As Tope and Hickman (2012) explain, CHIP was passed as part of the federal Balanced Budget Act of 1997. It mandated that states create medical insurance programs to cover children who would not otherwise be able to receive insurance. Similar to the ACA, CHIP is a federally sponsored program, with state leaders being given control over how they want to implement it. This means that they can choose how much they want to spend, what children qualify, and what resources are allocated towards the program. Tope and Hickman (2012) hypothesize that political factors, fiscal capacity, bureaucratic development, prior policy spending, and race composition can influence how the state implements CHIP.

To examine their question, the authors use a panel data set with data from 1998 to 2008, where their unit of analysis is one of 48 states—they exclude Hawaii and Alaska—in one of the given years. They run their analysis using two regressions. The first regression they run is a simple linear regression with panel-correlated standard errors. The second regression is an ordinary least squares with random effects. They primarily use this second regression as a robustness test. To measure political factors, the authors use a dummy variable equaling one if the governor of the state is a Republican and zero otherwise; they also measure the

percentage of Republicans in each state legislature. To measure fiscal capacity, state debt is divided by tax revenue for each year. To measure bureaucratic development, the authors use a ten-point scale for each component of a state's development of the program: compensation level, time in session, and staff size. To measure prior policies, a policy legacy indicator of "best case" states for welfare policy development is used. The authors use the percentage of African Americans and Hispanics in each state to measure the influence of the state's racial and ethnic composition. Finally, the authors control for several variables, including the ratio of the number of uninsured children to the total population, the ideological leanings of state populations, and the median age of the state population.

Using both regressions, which produced similar results, Tope and Hickman (2012) find that having a Republican governor and legislature, higher African American population, and older population each decrease CHIP spending. On the other hand, they find that professionalized state legislatures, higher financial capacities, and prior welfare spending each increase CHIP spending. Moreover, they conclude that state legislatures that are more developed or bureaucratized are better equipped to study and develop policy, therefore increasing CHIP spending. Finally, they find that the more uninsured children a state has, the more likely it is to spend on CHIP.

Along with articles that study how political parties influence general health insurance policies, there have also been several studies that examine how political parties influence ACA implementation. In their article "The Politics of Need: Examining Governors' Decisions to Oppose the 'Obamacare' Medicaid Expansion,"



Barrilleaux and Rainey (2014) examine the Medicaid expansion component of the ACA. The authors hypothesize that political ideology, state economic conditions, public opinion of the ACA, and the needs of citizens are all factors in determining whether a governor decides to enact the Medicaid expansion component. To test their hypothesis, Barrilleaux and Rainey (2014) use data from 2012 to 2014 for all 50 states and a logistic regression model. In the model, the independent variables for each state are the partisanship of the governor (a dummy variable where a Republican governor equals one is used), the partisanship of the legislature (a dummy variable that equals one if the legislature is controlled by Republicans is used), the estimated percentage of the population that has a favorable view of the ACA, the percentage of the state's population that is uninsured, and Disproportionate Share Hospital (DSH) payments to hospitals. DSH payments are federally required payments that state Medicaid programs make to hospitals that primarily treat either individuals who are uninsured or insured through Medicaid. The dependent variable is the state's executive opposition to the Medicare expansion, with executive opposition equaling one if the governor opposes the Medicaid expansion. Four primary state-level control variables are also used in the model, including the percentage of African Americans and the percentage of the population living in a metropolitan area. Barrilleaux and Rainey (2014) explain that both of these controls are included because non-whites and people living in cities are more likely to enroll in Medicaid. The third control included is the measure of the state's fiscal health, and, therefore, ability to pay for Medicaid. This is equal to the ratio of the state's year-end reserves to their total spending. The final control is

the state's current Medicaid multiplier, which is used to measure the attractiveness of the new Medicaid funds that would come from implementing the Medicaid expansion relative to the current rate of funds the state is putting towards the program.

The authors find that a governor's partisanship and state legislative control each have a larger effect on a state's decision to oppose the Medicaid expansion than the effects the needs of citizens, public opinion, or state economic conditions do. Having a Republican governor increases the probability of executive opposition by 49 percentage points, and having a Republican legislature in a state with a Republican governor increases the chance of executive opposition by 36 percentage points. In states that have Democrat legislatures, having a Republican governor increases the chance of executive opposition by approximately 9 percentage points. Public opinion of the ACA and measures of need, including urbanization, DSH payments to hospitals, and the percentage of the population that is uninsured, do not have a significant effect on a governor's decision to oppose the Medicaid expansion.

In a similar study to that of Barrilleaux and Rainey (2014), Rigby (2012) examines whether political or economic factors play more of a role in determining the degree to which a state will resist the ACA in her article, "State Resistance to 'ObamaCare.'" She also focuses on the Medicaid expansion component of the law. To begin, Rigby explains that there are three ways in which a state can resist implementing the law: through filing a lawsuit that challenges it, implementing legislation that opposes it, or rejecting federal implementation funds. Using state-

level data from 2010 and 2011, she constructs a state resistance index that gives each state a rating from zero to three, depending on how many of the measures the state took to resist the law. Rigby (2012) then uses a multivariate logistic regression model to compare the reasons for state resistance to the Medicaid expansion. First, she uses an ordered logit regression to predict how several predictors affect the probability of each level of resistance. One regression is run for each predictor. The predictor used to measure public opinion is the percentage of the public opposed to the expansion. To measure party control, the predictors are the percentage of the legislature that is Republican and whether or not the governor is a Republican. Legislative professionalism, per capita income, and budgetary shortfalls are each predictors used to measure state capacity. Medicaid enrollment increases, the cost of a Medicaid increase, reductions in the percentage of people uninsured, and uncompensated care savings are each predictors used to measure the magnitude of a policy change. After running one regression for each individual predictor, she then runs another regression, which includes all ten of the predictor variables together.

Similar to Barrilleaux and Rainey (2014), Rigby (2012) finds that the most influential factor in determining whether a state resists the ACA is the partisanship of the state. She also finds that both the state's legislative and executive branches are influential in determining whether a state resists the ACA. If Republicans control at least one of the two branches, then the state is more likely to resist the ACA. Finally, she finds that both public opinion and economic factors do not affect a state's resistance.

In a similar project completed two years later, Rigby and Haselswerdt (2014) instead look at the state health insurance exchange component of the law and attempt to determine whether economic, ideological, or partisan factors play the largest role in determining how and when a state implements a state health insurance exchange. They first explain that there are three steps a state can take to show that they will establish a state exchange: they can express their intentions in an application for a federal exchange establishment grant, declare their intent to establish, or submit a blueprint to the federal government requesting certification of a state-based or a partnership exchange. Using data on each state's progress in establishing a health insurance exchange between March 2011 and December 2012, the authors run a conditional risk-set duration model. This model helps them to determine the likelihood of a particular state, at a particular time point, moving to a higher level of implementation of one of the three types of exchanges (federally-facilitated, state-based, or partnership), which is signified by the state taking one of the aforementioned three steps. This model is based on the assumption that if a state takes one of these three steps to establish an exchange, then the state supports the ACA.

Rigby and Haselswerdt (2014) find that ideological and partisan factors play the largest role in determining how a state implements the exchange component of the law. Moreover, they find that liberal states, meaning those with a Democrat governor and Democrat legislature, will generally agree with the policy objectives of the ACA and will choose to implement their own state-based health exchanges instead of a partnership or federally-facilitated one. On the other hand,

conservative states will avoid implementation, eventually establishing their own exchanges to maintain policy autonomy and avoid the consequence of having the federal government step in to establish a federally-run exchange.

In another project that examines the state exchange component of the law, Jones, Bradley, and Oberlander (2013) examine the decision-making process that states with Republican governors went through when deciding whether or not to implement an exchange during the time when the exchange component of the law was under debate in the Supreme Court in 2012. The authors determine that Republicans face a dilemma when deciding whether or not to implement an exchange because they want to maintain policy autonomy, which would be accomplished through implementing an exchange, but they do not want to give into a law they oppose. Jones, Bradley, and Oberlander (2013) compare this dilemma to Pascal's Wager.

Pascal's Wager is an idea proposed by seventeenth-century philosopher Blaise Pascal. It states that when a person is uncertain as to whether or not God exists, the safest way to live is by assuming that God is real and that he will judge you in the afterlife. The way in which Republicans dealt with dilemma of whether or not to implement an exchange before the exchange component of the law was upheld by the Supreme Court is similar to Pascal's Wager because a large part of the dilemma was based on whether or not Republican states believed the exchange component of the law would survive. Some Republicans took the same approach as suggested by Pascal in his Wager, meaning that they assumed that the law would stand and its deadlines would be enforced, just as Pascal assumed that God existed

and would judge one in the afterlife. Others, however, decided to interpret the law as if it did not exist.

Instead of using an econometric model, as seen in similar projects, Jones, Bradley, and Oberlander (2013) solely examine Republican-governed states. In each state they examine, they conduct interviews between June 2011 and February 2013 with state policy makers and leaders. They find that a state's decision to implement the state-based exchange did not depend on which political party was governing the state, as Rigby and Haselswerdt (2014) found. Instead, they find that a state's decision depended on whether it thought the Supreme Court would uphold the law, what the outcome of the November 2012 elections would be, and whether or not it wanted to retain policy autonomy.

In their article "Why States Expand Medicaid: Party, Resources, and History," Jacobs and Callaghan (2013) look for factors, beyond state party control, that influence whether or not a state implements the Medicaid expansion. They recognize that political party control does in fact play a role in determining whether or not a state implements the Medicaid expansion; however, they also emphasize that although Democrat-controlled states are more likely to embrace reform, there several Republican states have also implemented or taken steps to implement the reform. For this reason, Jacobs and Callaghan (2013) hypothesize that factors such as state economic conditions, decision-making processes and outcomes toward previous policies similar to Medicaid, and what states can do administratively may also influence the decision.

Jacobs and Callaghan (2013) measure Medicaid expansion implementation in three ways. Their first form of measurement is gubernatorial statements, budgets, or collective decisions of the governor indicating a Medicaid expansion. A state is given 3 points if it expanded, -3 if it did not, and 0 if it failed to act. The second measurement looks at state planning steps. For this measurement, the authors tracked receipts of federal grants to the state. If a state received federal support, it meant the state was seriously considering expanding. The authors measure Medicaid expansion by examining changes in Medicaid policy that each state took in 2013. These changes included the expansion of benefits, changes in the application and renewal process, and decreases in co-payments. State economic conditions were measured using per capita state income. To measure the past policy decisions, the authors tracked whether, and to what degree, past decisions expanded healthcare to pregnant women, working parents, the medically needy, childless adults, and more than 90 percent of children. Finally, administrative capacity included looking at how well the state determined eligibility for its citizens, how quickly it processed enrollments, how strict it was in confirming ensured payments were made, and how well the it monitored the quality of care it provided through Medicaid.

Using an OLS regression, the authors find that the states with the highest per capita income are moving towards Medicaid expansion implementation, while those with the lowest are not. Furthermore, they find that state decisions to move ahead with implementation are well correlated with past policy decisions to increase healthcare access. Finally, they find that states that have stronger administrative

structures are further along in the implementation process than those with weaker ones.

In addition to these studies regarding how ACA implementation differs under Republicans and Democrats, a limited number of studies have also been completed on how ACA implementation affects health insurance outcomes. In their article “Implementing the Affordable Care Act Health Insurance Exchanges: State Government Choices and Policy Outcomes,” Noh and Krane (2016) examine whether the type of exchange that a state implements affects citizens’ decisions to enroll in the exchange and whether health insurance premiums vary depending on which level of government (federal, state, or a combination of both) administers the exchange. Instead of coding exchanges as federally-facilitated, state-based, or partnership, Noh and Krane (2016) code them based on which of the four core functions of an exchange (eligibility and enrollment, plan management, consumer assistance, and financial management) the state had implemented at the time of the research. The more core functions a state chooses to implement, the more the state-based the exchange is. The authors use several dummy variables to measure state involvement in exchanges. For one dummy variable, any states implementing all four core exchanges are coded as one and the states implementing anything less are coded as zero. For another dummy variable, states implementing the plan management and consumer assistance functions are coded as one and any other combination of the functions are coded as zero. Finally, a third dummy variable defines one as equaling states that implement only the plan management function and zero otherwise.



To measure citizen enrollment in exchanges, the authors look at the percentage of eligible individuals who obtained insurance through the exchanges in the 2014 and 2015 enrollment periods, which is calculated using the proportion of the number of enrolled persons in the exchanges divided by the number of eligible individuals who could potentially obtain coverage through the exchanges. Noh and Krane (2016) also measure state involvement based on whether or not a state implements the Medicaid expansion component of the ACA; however, they do not measure this decision with a simple yes or no answer. Instead, they measure the Medicaid expansion using the percent of uninsured persons eligible for tax credits in each state. In states that have not implemented the Medicaid expansion, tax credits are available to citizens who fall between 100 and 400 percent of the federal poverty level (FPL) and also purchase their insurance through the exchange the state has chosen to implement. If the state has implemented the Medicaid expansion, tax credits are only available to citizens who fall between 138 and 400 percent of the FPL and also purchase their insurance through the state's exchange. Citizens with an income between 100 and 138 percent of the FPL are covered by Medicaid under the expansion, and, therefore, are not covered through exchange plans that are subsidized by tax credits. Because of these policies, if a state has not enacted the expansion, there will likely be more individuals who are eligible for tax credits. Finally, the authors measure premium prices as the monthly silver and bronze premiums for a 40-year-old non-smoker making \$30,000 per year before tax credits in 2014 and 2015 enrollment periods.

Noh and Krane (2016) use an ordinary least squares regression model with state exchange and Medicaid implementation as their independent variables, and premiums and citizen enrollment as the dependent variables. They find that states that implemented all four core functions of an exchange enrolled a higher percent of eligible individuals than states that did not implement any of the core functions. They found this conclusion to be the case in 2014, while there was no difference between states that implemented all four core functions and those that do not in 2015. The authors attribute the 2015 results to the fact that states likely promoted their exchanges when they were first implemented in 2014, but then did not do so as much in 2015 once the exchanges had been in place for a year. Next, they find that implementation of both the financial management and eligibility and enrollment core functions influenced premium levels, but implementing any other combination of functions did not. Finally, they conclude that the percentage of individuals eligible for tax credits in 2014 and 2015 was positively associated with increased enrollment; this relationship was statistically significant. This result shows that state officials' decisions on whether or not to expand Medicaid affect the number of individuals eligible for tax credits, which further influences whether citizens purchase insurance through the exchanges.

In their working paper "Impacts of the Affordable Care Act on Health Insurance Coverage In Medicaid Expansion and Non-Expansion States," Courtemanche et al. (2016), also examine the ACA's effect on insurance outcomes; however, unlike Noh and Krane (2016), they focus on the Medicaid expansion component of the law. They ask whether implementing the Medicaid expansion has

an effect on state insurance rates. To investigate this, they use a difference-in-difference-in-differences model to determine the effects of the ACA with and without implementation of the Medicaid expansion during 2014, the first year it could be enacted. In this type of model, the authors first look at states that implemented the Medicaid expansion in 2014. Within these states, they look at the change between pre-2014 and post-2014 rates in high uninsured areas versus in low uninsured areas. Courtemanche et al. (2016) then examine non-Medicaid expansion states, and again look at the difference between the pre and post expansion year rates in high uninsured areas versus in low uninsured areas. Finally, the authors compare the differences between these two groups of states. In the model, the authors control for several state-level variables including demographic characteristics, such as age, gender, and race, family structure, which includes marital status and the number of children in a household, and economic characteristics, such as education, household income, and unemployment rates. They also include an interaction variable of the post-treatment dummy with an indicator of whether a state set up a state-based exchange. Including this interactive variable controls for the fact that the decision to expand Medicaid might be correlated with other decisions that the state makes in regards to implementing the ACA.

Using data from the 2014 American Community Survey and the Kaiser Family Foundation, the authors find that implementing the Medicaid expansion increased the insurance rate by 2.9 percentage points on its own. Implementing the full ACA increased the proportion of residents with health insurance by 5.9

percentage points. If a state did not implement the Medicaid expansion, the insurance rate only increased by 3.0 percentage points. After running their main difference-in-difference-in-differences regression, Courtemanche et al. (2016) run several other regressions as robustness checks, which further confirm their results.

In their working paper “Premium Subsidies, the Mandate, and Medicaid Expansion: Coverage Effects of the Affordable Care Act,” Frean, Gruber, and Sommers (2016) examine how a variety of ACA policy provisions have each affected insurance coverage rates. Similar to Courtemanche et al. (2016), the authors use data from the American Community Survey and a difference-in-difference-in-differences estimation. Using this type of model allows the authors to examine the effect of differences in the policy variables on changes in insurance rates over time. Their model also includes area (in terms of public use microdata area (PUMA)), year, and income fixed effects, which allows them to utilize the fact that individuals are associated with different policy variables because of their incomes and where they live. The four primary policy provisions the authors examine are new Medicaid eligibility after ACA implementation, premium subsidy rates, the individual mandate penalty, and pre-ACA and early expansion eligibility. New Medicaid eligibility after ACA implementation is simply a measure of the proportion of people that gained Medicaid eligibility after the ACA was implemented. Premium subsidy rate is equal to one minus the percent subsidy ( $\text{Net premium} / \text{unsubsidized premium}$ ) for each health insurance unit (HIU). An HIU is defined as an adult, his or her spouse, and their dependent children living in a household. The unsubsidized premium is calculated based on the area the family resides in and is equal to the sum of

individual premiums for each HIU member. Next, the individual mandate penalty is equal to each family's tax penalty in dollars due to the mandate. Finally, pre-ACA and early expansion eligibility are defined as Medicaid eligibility before the ACA was enacted and eligibility under pre-ACA expansions that occurred between 2011 and 2013 in some states, respectively.

The dataset includes data from 2012 to 2015, which allows the authors to look at two years before and after ACA implementation. The authors estimate one model where they include all of the independent policy variables for the years 2014 and 2015. In other words, there are eight policy variables in the regression. Furthermore, the authors are able to measure the direct effects of each policy variable in all four years of the study by interacting each of them with post-ACA year fixed effects. Each policy variable is interacted with the year 2014 and then again with the year 2015. The dependent variable, the uninsured rate, is measured as the percent of each HIU without insurance at the time when the data was collected. Demographic variables, such as age, race, marital status, citizenship, educational attainment, number of children, and disability are also controlled for. The authors run this regression for both Medicaid expansion and non-expansion states, allowing them to compare the difference in Medicaid eligibility rates in high and low Medicaid eligibility PUMAs for pre and post-2014 ACA implementation in both expansion and non-expansion states.

The authors conclude that the Medicaid expansion component of the law has the largest impact on increasing insurance coverage rates. They find that the ACA's new premium subsidies caused a 0.85 percentage point increase in coverage rates,

and that individual mandate tax penalties did not have a significant effect. The Medicaid expansion, however, caused a 1.0 percentage point increase in coverage, with 0.44 percentage points of the increase being attributed to newly eligible individuals joining the program. In other words, insurance coverage increased more in states that enacted the Medicaid expansion than in those that did not.

In their article “Mortality and Access to Care Among Adults After State Medicaid Expansions,” Sommers, Baicker, and Epstein (2012) not only examine how implementing a pre-ACA Medicaid expansion affected health insurance outcomes, but also health outcomes in three states: New York, Maine, and Arizona. The authors choose these states because they all significantly expanded Medicaid eligibility between 2000 and 2005. Before the ACA, Medicaid typically covered low-income children, parents, disabled persons, and pregnant women. Each of these states also expanded Medicaid to cover “childless adults,” which, again, are non-disabled adults without dependent children. In each of these states, the authors observe adults between the ages of 20 and 64 five years before and after the Medicaid expansions. Data comes from the Compressed Mortality file of the CDC and the Behavioral Risk Factor Surveillance system for the years 1997 to 2007.

The authors use a difference-in-differences regression with multiple variables. The independent variable is the interaction between timing after the Medicaid expansion and expansion state. Using an interaction variable and difference-in-differences model allows them to compare the average difference in the dependent variables five years before and after the Medicaid expansion was enacted in each state. For the dependent variable, the authors use individual-level

uninsured rates, rates of delayed care because of health insurance costs, and self-reported health statuses. As a control, Sommers, Baicker, and Epstein (2012) run the same regression for three other states, which are non-pre-ACA Medicaid expansion states with similar population sizes and demographics to the actual Medicaid-expansion states being examined. New York was compared with Pennsylvania, Maine with New Hampshire, and Arizona with Nevada and New Mexico. The authors compare the change in the dependent variables in each of these control states from before to after the year in which the Medicaid expansion was enacted in the non-control state they are being compared to. Sommers, Baicker, and Epstein (2012) then compare the results of these control regressions to the results of the regressions that use the Medicaid-expansion states.

The authors find that expanding Medicaid decreases all-cause mortality, especially for older adults, non-whites, and residents of poorer counties within the states. Moreover, they find that Medicaid expansions increase Medicaid coverage by 2.2 percentage points, decrease uninsured rates by 3.2 percentage points, decrease rates of delayed care because of costs by 2.9 percentage points, and increase self-reported health status of excellent or very good by 2.2 percentage points. Finally, the authors explain that the overall uninsured rate might have decreased by more than the Medicaid coverage rate increased because of spillover effects and the timing of the Medicaid expansion. On one hand, publicity about the Medicaid expansion might have encouraged uninsured, higher-income elderly persons to seek insurance from other sources, for example, Medicare. On the other hand, they hypothesize that the states examined chose to expand Medicaid when their

economies were booming; economic prosperity can greatly improve both coverage and the number of people who decide they want to obtain insurance.

In conclusion, some general trends can be drawn from the research presented in this section. First, economic policy does tend to slightly differ depending on which political party is in power. Second, state partisanship typically affects how a state implements not only the Medicaid expansion and exchange components of the ACA, but also healthcare policy in general. Finally, the way in which the Medicaid expansion and exchange components of the ACA are implemented often affects health insurance outcomes. Although all of the studies I have reviewed in this section examine one of these topics, none of them link the topics together and examine my central question, how does state executive and legislative partisanship affect health insurance outcomes? In this sense, the research I present in the following sections is both unique and slightly different from research that has been completed in the past.

### **III. Data**

For all of my regressions, I use a panel dataset that I have constructed. This dataset includes data from 2010 to 2015 for all fifty states. I choose to use data from 2010 to 2015 so that I can examine each state before and after the Medicaid expansion and state exchange components of the ACA were implemented in 2014. Furthermore, using a panel dataset allows me to look at each state's individual characteristics in annual intervals from 2010 to 2015. To begin, for each state, I have data on executive and legislative partisanship. Executive partisanship is



simply whether the governor is a Democrat, Republican, or Independent. For legislative partisanship, the data includes whether the entire legislature is Democrat, Republican, or split. A split legislature means either that a different party controls each chamber (house and senate), or one or both of the chambers themselves are split with exactly half of the seats held by Democrats and half held Republicans. It is important to note that in any regression that uses legislative partisanship as one of its variables, Nebraska is dropped from the dataset because its legislature is non-partisan.

Executive partisanship data comes from the National Governors Association, which provides information on each state's past and present governors, the length of their time in office, and the party they affiliate with. The source of the legislative partisanship data is the National Conference of State Legislatures (NCSL). For each year between 2009 and the present, the NCSL offers data on overall state legislative control, along with data on state senate and house control. In addition to presenting data on which party controls a state's overall legislature, senate, and house, the NCSL also offers information on the total number of state legislature seats, which is further broken down into the total number of senate and total number of house seats.

Next, my dataset includes data on how each state implemented the Medicaid expansion and state exchange components of the ACA. Because these components of the law were only enacted in 2014, my implementation data only includes the years 2014 and 2015. For each state, I have data on whether or not it enacted the Medicaid expansion (yes or no) in 2014 or decided to enact it in 2015. This data

comes from “Obamacare Facts,” a website that provides information on the progress each state has made in implementing the ACA, including whether or not it implemented the Medicaid expansion and, if so, what year it was implemented in. The “Obamacare Facts” website is published privately by an independent small business called (dog) Media Solutions. The head author of (dog) Media Solutions, and therefore head author of “Obamacare Facts,” is Tom DeMichele. “Obamacare Facts” retrieves their data from healthcare.gov. For the state exchange component of the law, the dataset includes data on the type of exchange each state implemented (federally-facilitated, state-based, or partnership). This data is from the Henry J. Kaiser Family Foundation, a foundation that collects and provides data on anything related to national health issues, including ACA implementation, health insurance prices, and health outcomes. Their data on state exchanges includes annual state-level information on what type of exchange the state enacted.

My dataset also includes a variety of health insurance outcomes for each state. Four of these outcomes are the proportion of the population that is uninsured, the proportion of the population covered by Medicaid, the proportion of the population covered through an employer, and the proportion of the population covered through a direct purchase (after 2014, this would be a direct purchase made through the state’s exchange). All four of these outcomes are from the US Census Bureau 1-year American Community Surveys. Each year, the US Census Bureau puts out a survey on a variety of topics, including healthcare. When a person fills out the survey, they are asked to indicate how they get their health insurance, for example, if they are covered through Medicaid, an employer, or a direct

purchase. The US Census Bureau then breaks down this information by year and state and puts it into a chart, which is where the data I use comes from. In this chart, the US Census Bureau also includes each state's uninsured rate, which is the ratio of the number uninsured people over the age of 19 to the total number of people over the age of 19.

Besides examining how people are covered and the uninsured rate, my health insurance outcomes data also includes a variety of state-level premium prices. One of these premium prices is the average monthly family premium per enrolled employee for employer-based health insurance. This data is from the Henry J. Kaiser Family Foundation. Unfortunately, it was only available from 2013 to 2015, but is nonetheless still useful because the time frame includes pre and post-ACA implementation years. The other two types of premium price data I include are the monthly silver and bronze premiums for a 40 year-old non-smoker making \$30,000 per year before tax credits. Since these metal-tier plans were introduced with the state-exchange component of the ACA, data for these two outcomes is only from 2014 and 2015. The annual data is from the Henry J. Kaiser Family Foundation.

Finally, my dataset includes several control variables. Each of these variables are used to control for factors other than partisanship that could affect ACA implementation and also factors other than ACA implementation that could affect health insurance outcomes. The first two controls are the proportion of the population below the poverty level and the median household income. Both variables are measures of state population income and are included as controls for

two primary reasons. First, Medicaid is a program that provides insurance to the poor. The greater the number of poor people living in a state, meaning the greater the proportion of people below the poverty level and the lower the median household income, the more likely the state is to implement the Medicaid expansion because implementing the expansion allows it to more easily provide insurance to such people. Second, both variables can also affect the uninsured rate. As the proportion of poor people living in a state increases or the median household income decreases, the uninsured rate might also increase because poor people will have a harder time paying for insurance.

The proportion of people living below the poverty level data comes from the US Census Bureau's annual report (2011, 2013, 2015) on poverty. It was originally collected through the 1-year American Community Surveys before being published by the US Census Bureau. In the report, the data is organized in a table that gives the poverty rate for each state for the current year of the report and the previous year. Because each annual report includes data for the current and previous year, I only use the 2015 (for 2014 and 2015 data), 2013 (for 2012 and 2013 data), and 2011 (for 2010 and 2011 data) reports in my data collection. The median household income data comes from the US Census Bureau's annual Household Income reports and was originally collected through the 1-year American Community Surveys. In each annual report, the US Census Bureau presents a table with the median household income, in dollars, for each state for that year.

The next control I use is the proportion unemployed. This data is from the US Department of Labor Bureau of Labor Statistics, which is a fact-finding agency for

the federal government that deals with labor statistics. For each year, the agency offers a table with the unemployment rate for each state. I include this control because the unemployment rate could affect several of my health insurance outcomes. As the unemployment rate increases, it means that fewer people are getting insurance through their employers, which decreases the proportion of people covered through their employer, but could also increase the proportion of people who are getting insurance through a direct purchase because they can no longer get it through an employer. The unemployment rate could also affect the uninsured rate. If an employed individual who solely obtains his insurance through his employer suddenly becomes unemployed, he will no longer have employer-based insurance and may not have access to affordable insurance from another source, leaving him uninsured. For this reason, the uninsured rate is bound to increase when the unemployment rate increases.

Education may also affect a person's knowledge of health insurance, which is why I also include a variable that controls for a person's education level. By the time a person graduates high school, they should have acquired the knowledge to make informed decisions about their medical needs, including what type of insurance best suits and is affordable to them. Individuals who do not graduate high school may not have such knowledge and therefore might not be able to make informed decisions about where they should obtain their insurance from, what type of insurance they need to suit their medical needs, and how much they should pay for insurance. This education data is from the US Census Bureau American Fact Finder, a fact finder that allows one to easily search through data provided by the US Census

Bureau. The data was originally collected through the 1-year American Community Surveys and is presented in yearly tables by state.

I also control for two health status variables that could affect how much a person's insurance costs. The first is the proportion of adults 18 and older that smoke. I include this control because smoking can increase insurance premium prices. In fact, the ACA permits that smokers can be charged up to 50 percent more for their premiums than non-smokers (Obamacare Facts 2017). Paying the price of a premium plus an additional 50 percent may make insurance unaffordable for smokers, which would then decrease the quantity of insurance demanded by smokers and, in turn, increase the uninsured rate. For the years 2013 to 2015, this data is from the Henry J. Kaiser Family Foundation. For the years 2010 to 2012, it comes from the Centers for Disease Control and Prevention (CDC). The data the Henry J. Kaiser Family Foundation presents for 2013 to 2015 originally comes from the CDC; the Henry J. Kaiser Family Foundation simply organizes and presents it in tables. In other words, one could find the data from the Henry J. Kaiser Family Foundation on the CDC's website, meaning that the data from both sources is comparable, as it is essentially measured and collected the same way. The 2011 and 2012 data comes from the article "State-Specific Prevalence of Current Cigarette Smoking and Smokeless Tobacco Use Among Adults Aged  $\geq 18$  Years- United States, 2011-2013." This article includes a table that has the state-level data for both years. The 2010 data comes from the 5-year report on tobacco control, "Tobacco Control State Highlights 2010." This report is split up by state and the smoking rate for adults 18 and older for each state in 2010 is given.

The second health status control is the proportion of adults 18 and older who are obese (a body mass index of 30 or greater). I include this control because obesity can increase health insurance premiums. According to the ACA, employers can charge employees an extra 30 percent of the total cost of individual or family coverage if they are obese (Ellin 2015). An increase in obesity could therefore directly increase the average monthly family premium per employee for employer-based insurance. Obesity data is from “The State of Obesity,” a website run by the Trust for America’s Health and the Robert Wood Johnson Foundation. Data presented by this website comes from the Behavioral Risk Factor Surveillance System, a state-level system of health survey data that is gathered through phone surveys that are administered with the help of the CDC. The state-level data is presented in annual tables.

My last control is the race composition of each state. My dataset includes the proportion white, proportion African American, proportion American Indian/Alaska native, proportion Asian, proportion two or more races, and proportion Hawaiian. Since all of these categories together are equal to 100 percent, I drop proportion Hawaiian in my regressions. This data is from the US Census Bureau American Fact Finder, which presents the data in annual tables. One reason I include race composition as a control is because racial proportions could affect spending on the ACA. Tope and Hickman (2012) find that having a higher African American population decreases spending on CHIP. Because CHIP is a similar program to the ACA in that it is a federal program that gives state leaders control over implementation decisions, greater proportions of African Americans could

potentially decrease the amount of money states are willing to spend on the ACA. Furthermore, politicians often hold racial biases, which means that they may be more willing to fulfill the needs of certain racial groups of constituents than others. Controlling for race proportions ensures that state leaders are not enacting certain policies simply because enacting such policies will satisfy the group of constituents they “favor.”

Another reason I control for state race proportions is because non-whites have historically not had equal access to employment opportunities and as high paying jobs as whites have. If non-whites hold low-wage, part time jobs, it is less likely that they will be able to get insurance through their employer because such jobs usually do not provide or provide limited access to employer-based insurance. This means that as the proportion of non-whites increases, the proportion of people who get their insurance through their employer will decrease (Henry J. Kaiser Family Foundation 2013). Finally, according to the Henry J. Kaiser Family Foundation, 2/3 of uninsured African Americans and American Indians/Alaska natives had incomes below the Medicaid expansion threshold of 138 percent of the FPL before the ACA was enacted. This statistic could affect a state’s decision to implement the expansion because if a state does not implement it, these groups of people will likely continue to remain uninsured (Henry J. Kaiser Family Foundation 2013).

I present two tables below with descriptive statistics for each of my health insurance outcome, partisanship, and implementation variables. Table 1 provides the mean and standard deviations across all 50 states by year for each of my health



insurance outcomes. As shown in the table, just over half of all people get insurance through their employer. This proportion (approximately 0.55 to 0.56) is quite constant from 2010 to 2015. The proportion of people who get their insurance through a direct purchase is also rather constant from 2010 to 2015, only fluctuating between 0.13 and 0.14. The uninsured rate fluctuates between 0.13 and 0.14 between 2010 and 2013, but then decreases to 0.11 in 2014 and then 0.09 in 2015. The uninsured rate likely drops in 2014 because this is the year when the ACA was implemented. The proportion of people covered through Medicaid also rises from a pre-ACA implementation value of approximately 0.17 to a post-ACA implementation value of 0.19 for the same reason. The average monthly family premium per employee for employer-based insurance gradually increases each year from \$15768.16 in 2013 to \$17136.46 in 2015. Higher monthly silver premium prices than bronze ones reflect the fact that the insurance company pays 70 percent of an individual's health care costs in a silver plan, whereas they only pay 60 percent in a bronze plan.

Table 2 presents annual (from 2010 to 2015) information on my partisanship and implementation variables, including how many states had each type of governor (Democrat, Republican, or Independent), legislature (Democrat, Republican, split), how many states implemented and did not implement the Medicaid expansion, and how many states implemented each type of exchange (federally-facilitated, state-based, or partnership). In 2014 when the Medicaid

**Table 1. Health Insurance Outcomes Descriptive Statistics**

VARIABLE	YEAR					
	2010	2011	2012	2013	2014	2015
Proportion Uninsured	0.14 (0.0414)	0.14 (0.0419)	0.14 (0.0414)	0.13 (0.0386)	0.11 (0.0343)	0.09 (0.0313)
Proportion Covered Through Medicaid	0.16 (0.0358)	0.17 (0.0358)	0.17 (0.0348)	0.17 (0.0356)	0.19 (0.0405)	0.19 (0.0457)
Proportion Covered Through Employer	0.56 (0.0569)	0.56 (0.0580)	0.56 (0.0574)	0.55 (0.0561)	0.55 (0.0544)	0.56 (0.0536)
Proportion Covered Through Direct Purchase	0.134 (0.0253)	0.13 (0.0253)	0.13 (0.0238)	0.13 (0.0243)	0.13 (0.0257)	0.14 (0.0255)
Monthly Avg. Fam. Premium	—	—	—	1314.01 (101.51)	1367.92 (91.33)	1428.04 (95.00)
Monthly Silver Premium	—	—	—	—	270.46 (61.41)	268.48 (67.10)
Monthly Bronze Premium	—	—	—	—	207.16 (52.21)	208.58 (54.73)

*Notes:* This table includes descriptive statistics for the following health insurance outcomes in my dataset: proportion uninsured, proportion covered through Medicaid, proportion covered through employer, average monthly family premium per employer for employee-based insurance, monthly silver premium for 40 year-old non-smoker making \$30,000 per year before tax credits, and monthly bronze premium for 40 year-old non-smoker making \$30,000 per year before tax credits. The mean value of each variable across all 50 states is presented. Standard deviations for each variable across all 50 states are in parentheses.

expansion and state exchange components of the ACA were first enacted, just under

**Table 2. Partisanship and Implementation Descriptive Statistics**

VARIABLE	YEAR					
	2010	2011	2012	2013	2014	2015
Democrat Governor	26	20	20	19	21	18
Republican Governor	24	29	29	30	28	31
Independent Governor	0	1	1	1	1	1
Democrat Legislature	27	16	15	19	19	11
Republican Legislature	14	25	27	26	27	30
Split Legislature	8	8	7	4	3	8
Medicaid Expansion Yes	—	—	—	—	24	27
Medicaid Expansion No	—	—	—	—	26	23
Federally-facilitated	—	—	—	—	28	28
State-based	—	—	—	—	15	15
Partnership	—	—	—	—	7	7

*Notes:* This table includes descriptive statistics for the following variables in my dataset: governor, legislature, Medicaid expansion, and exchange. Each state falls into one category for governor, one category for legislature, one category for Medicaid expansion, and one category for exchange for each year. Presented are the number of states that fall into each category.

half of the states (21) had Democrat governors, while the rest had Republican ones.

Nearly identically, 19 states had Democrat legislatures, while 27 had Republican ones, and 3 had split ones. Medicaid expansion implementation was approximately

evenly split with 24 states implementing and 26 choosing not to. Just over half of the states (28) implemented a federally-facilitated exchange, while only 15 implemented a state-based one, and 7 implemented a partnership one.

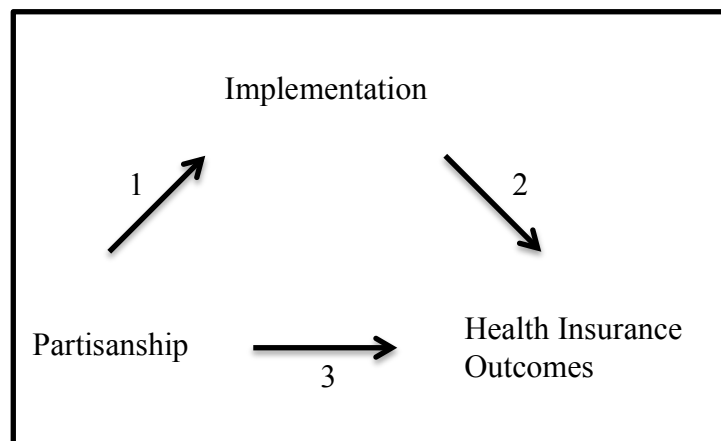
The three states that changed from not implementing the Medicaid expansion in 2014 to implementing it in 2015 were Michigan, New Hampshire, and Pennsylvania. Finally, the six states that changed executive partisanship between 2014 and 2015 were Arkansas, Illinois, Kentucky, Maryland, Massachusetts, and Pennsylvania, while the nine that changed legislative partisanship were Colorado, Maine, Minnesota, Nevada, New Hampshire, New Mexico, New York, Washington, and West Virginia.

#### **IV. Methodology**

The central question I attempt to answer in my research is: does state executive and legislative partisanship affect health insurance outcomes? To begin, partisanship can affect health insurance outcomes in at least one of two ways. It can affect them directly or it can affect them indirectly through the way in which it affects how the Medicaid expansion and exchange components of the ACA are implemented. In order to determine whether the effect of partisanship on health insurance outcomes comes directly or indirectly through implementation, I complete a mediation analysis where implementation is the mediator variable. To do this analysis, I first run a group of regressions that looks at the sum of the direct and indirect effects of partisanship on health insurance outcomes, meaning that implementation is not included as a variable. I call this set of regressions

Partisanship → Health Insurance Outcomes (Without Implementation). In order to determine whether or not partisanship could affect health insurance outcomes indirectly through implementation, I next run two regressions that break this potential indirect effect into two parts. First, I look at how partisanship affects implementation of the Medicaid expansion and exchange components of the ACA. This group of equations, which I name Partisanship → Implementation, is represented by arrow 1 in figure 1 below. I then look at how the implementation affects health insurance outcomes. This group of equations is named Implementation → Health Insurance Outcomes and is represented by arrow 2 in figure 1 below. Finally, I re-run the exact same equations that I run in my Partisanship → Health Insurance Outcomes (Without Implementation) group of regressions, but this time do include implementation as an independent variable to control for the effect that implementation might have on health insurance outcomes. Running this last set of regressions, which I call Partisanship → Health Insurance Outcomes (With Implementation) and are represented by arrow 3 in figure 1 below, allows me to see whether partisanship has a direct effect on health insurance outcomes once its indirect effect through implementation is controlled for. I will either find that partisanship directly affects health insurance outcomes or that partisanship only indirectly affects health insurance outcomes through the help of arrows 1 and 2. I could also potentially find that partisanship neither affects health insurance outcomes directly nor indirectly.

**Figure 1. Mediation Analysis**



In each regression I run, the following controls are included: proportion of people living below poverty, proportion unemployed, median household income, proportion white, proportion black, proportion American Indian/Native Alaskan, proportion Asian, proportion two or more races, proportion high school graduate or higher, proportion of adults who smoke, and proportion of adults who are obese. Instead of listing out each of these controls for each written-out regression specification in this section, I define  $Z_{st}$  as a vector of all of my controls. Although each of my control variables are included in each regression I run, the control variable results are not presented in my results section, but rather available from the author upon request. Furthermore, I use the subscripts  $s$  and  $t$  on each of my variables to denote state and time, respectively. Finally, it is important to note that in all of my groups of regressions, except my Partisanship  $\rightarrow$  Implementation group, I cluster my standard errors by state to adjust for cluster-correlated errors within

states. I will begin with my Partisanship → Health Insurance Outcomes (Without Implementation) group of regressions.

**Equation 1:**

$$\begin{aligned} & \text{Health Insurance Outcome}_{st} \\ &= \beta_0 + \beta_1 \text{Post}_t + \beta_2 \text{DemocratGovernor}_{st} + \beta_3 \text{Post}_t * \text{DemocratGovernor}_{st} \\ &+ \beta_z Z_{st} + \varepsilon_{st} \end{aligned}$$

\*Note: The regression above is specified for partisanship = executive partisanship. When looking at partisanship = legislative partisanship, I simply replace DemocratGovernor<sub>st</sub> with DemocratLegislature<sub>st</sub>.

I first run ten difference-in-differences regressions to examine the effect of partisanship on health insurance outcomes. In these regressions, the implementation mediator variable is not included, which means that the effect of partisanship on health insurance outcomes is the sum of both direct effects and indirect effects through implementation. Using a difference-in-differences regression allows me to examine the change in each health insurance outcome from before to after 2014 (the year both components of the ACA that I examine were implemented) in states that had a Democrat governor (legislature) compared to states that did not. My dependent variables are the following five health insurance outcomes: the uninsured rate, proportion of people covered through Medicaid, proportion covered through an employer, proportion covered through a direct purchase, and average monthly family premium per employee for employer-based insurance. I run one regression (equation 1) for each combination of my partisanship and health insurance outcomes variables. This means that in one

regression for each health insurance outcome, my independent variable is executive partisanship and, in the other, it is legislative partisanship. For executive partisanship, I use a dummy variable called  $\text{DemocratGovernor}_{st}$  that is equal to one if state  $s$  had a Democrat governor at time  $t$  and zero otherwise. Similarly, for legislative partisanship, I use a dummy variable called  $\text{DemocratLegislature}_{st}$  that equals one if state  $s$  had a Democrat legislature at time  $t$  and zero otherwise.

In order to use difference-in-differences equations and compare outcomes from before to after 2014, I create a new variable, which I call  $\text{post}_t$ .  $\text{Post}_t$  is simply a dummy variable for after 2014; if year  $t$  is 2014 or 2015,  $\text{post}_t$  equals one and if year  $t$  is 2010 to 2013,  $\text{post}_t$  equals zero. In these difference-in-differences regressions,  $\text{post}_t$  is a variable of interest because its coefficient tells me how much each health insurance outcome changed from before to after 2014 in states that had Republican or Independent (split) governors (legislatures). I also interact  $\text{post}_t$  with the  $\text{DemocratGovernor}_{st}$  ( $\text{DemocratLegislature}_{st}$ ) to create a  $\text{post}_t * \text{DemocratGovernor}_{st}$  ( $\text{post}_t * \text{DemocratLegislature}_{st}$ ) variable. The coefficient on  $\text{post}_t * \text{DemocratGovernor}_{st}$  ( $\text{post}_t * \text{DemocratLegislature}_{st}$ ) tells me how much more each health insurance outcome changed from pre to post-2014 in states that had Democrat governors (legislatures) than in those that did not. Interpreting the coefficients on each of these variables allows me to compare the pre to post-2014 changes in each health insurance outcome in states with Democrat governors (legislatures) to those with Republican or Independent (split) ones. I will next move on to explaining my next set of regressions, which I call Partisanship  $\rightarrow$  Implementation.



## Equation 2:

$$Implementation_s = \beta_0 + \beta_1 DemocratGovernor_s + \beta_z Z_s + \varepsilon_s$$

\*Note: The regression above is specified for partisanship = executive partisanship. When looking at partisanship = legislative partisanship, I simply replace DemocratGovernor<sub>s</sub> with DemocratLegislature<sub>s</sub>.

My Partisanship → Implementation regressions determine whether there is an effect of partisanship on the implementation of the Medicaid expansion and exchange components of the ACA. For these regressions, I only use the year 2014 from my dataset because implementation decisions were only made once by each state. In other words, implementation decisions were not made in 2014 and then made again in 2015. Furthermore, this means that the variables in these regressions only vary by state *s* and not time *t*. In these regressions, the independent variable is partisanship and the dependent variable is implementation. I run two regressions, following the format of equation 2, for each of the two dependent variables (Medicaid expansion implementation and exchange implementation). In one of the two regressions for each dependent variable, executive partisanship is the independent variable. In the other two regressions for each dependent variable, legislative partisanship is the independent variable. The dummy variable DemocratGovernor<sub>s</sub> is again used for executive partisanship and the dummy variable DemocratLegislature<sub>s</sub> is again used for legislative partisanship. When my implementation variable is the Medicaid expansion, I use a dummy variable, called MedicaidExpansion<sub>s</sub>. If the Medicaid expansion was implemented in state *s* in 2014, the dummy variable equals one. Finally, because the state-exchange

variable can be one of three categories (federally-facilitated, state-based, or partnership), I am unable to use a simple dummy variable. Instead each category of a state exchange takes a different value when state exchange implementation is the dependent variable. 1 equals a federally-facilitated exchange, 2 equals partnership, and 3 equals state-based.

For my Partisanship → Implementation regressions, I use probit and multinomial probit equations. When the dependent variable is MedicaidExpansion<sub>s</sub>, I use a probit model because the dependent variable can only take one of two values. Using a probit model allows me to estimate how partisanship changes the probability that Medicaid will be expanded. My variables of interest in these regressions are the partisanship dummy variables (DemocratGovernor<sub>s</sub> and DemocratLegislature<sub>s</sub>). Because I run a probit regression, I examine the average marginal effects on DemocratGovernor<sub>s</sub> (DemocratLegislature<sub>s</sub>). The average marginal effects tell me how much having a Democrat governor (legislature) changes the probability that Medicaid will be expanded. When the dependent variable is exchange implementation, I must use a multinomial probit equation because there are more than two possible categories that the dependent variable can fall into. Using a multinomial probit model allows me to estimate how many percentage points more likely a Democrat governor (legislature), compared to a Republican or Independent (split) one, is to implement each type of exchange. My variables of interest in these regressions are again DemocratGovernor<sub>s</sub> and DemocratLegislature<sub>s</sub> and, because I run a multinomial probit regression, I again examine the average marginal effect on each one. The average marginal effects tell

me how much having a Democrat governor (legislature) changes the probability that each type of state exchange will be implemented.

Finally, I run one more probit equation (for implementation = Medicaid expansion) and one more multinomial probit equation (for implementation = exchange type) that follow the general form of equation 3 below.

**Equation 3:**

$$\begin{aligned} &Implementation_s \\ &= \beta_0 + \beta_1 DemocratGovernor_s + \beta_1 DemocratLegislature_s + \beta_1 SplitLegislature_s \\ &+ \beta_z Z_s + \varepsilon_s \end{aligned}$$

For each of these equations, I include both executive and legislative partisanship in one equation. I also drop Alaska from my dataset because it was the only state that had an Independent governor in 2014. Because I drop Alaska, and therefore the category of Independent governors from my dataset, I only include the

DemocratGovernor<sub>s</sub> variable for executive partisanship in these equations.

Republican governor is the executive partisanship category I leave out and therefore compare my Democrat governor results to. For legislative partisanship, I include DemocratLegislature<sub>s</sub> and also SplitLegislature<sub>s</sub>. SplitLegislature<sub>s</sub> is a dummy variable that equals one if a state had a split legislature (refer to data section for how a split legislature is defined). Republican legislature is the legislative partisanship category I leave out and therefore compare my Democrat and split legislature results to. The next group of regressions I run are called my

Implementation → Health Insurance Outcomes regressions. Equations 4, 5, and 6 below are each part of this set of regressions.

**Equation 4: For Implementation = Medicaid expansion:**

$$\text{Health Insurance Outcome}_{st} = \beta_0 + \beta_1 \text{MedicaidExpansionNew}_s + \beta_2 \text{Post}_t + \beta_3 \text{Post}_t * \text{MedicaidExpansionNew}_s + \beta_z Z_{st} + \varepsilon_{st}$$

**Equation 5: For Implementation = Federally-facilitated or state-based exchange:**

$$\begin{aligned} \text{Health Insurance Outcome}_{st} \\ = \beta_0 + \beta_1 \text{FederallyFacilitatedNew}_s + \beta_2 \text{StateBasedNew}_s + \beta_3 \text{Post}_t \\ + \beta_4 \text{Post}_t * \text{FederallyFacilitatedNew}_s + \beta_5 \text{Post}_t * \text{StateBasedNew}_s + \beta_z Z_{st} + \varepsilon_{st} \end{aligned}$$

**Equation 6: For Implementation = Medicaid expansion and federally-facilitated or state-based exchange:**

$$\begin{aligned} \text{Health Insurance Outcome}_{st} \\ = \beta_0 + \beta_2 \text{MedicaidExpansionNew}_s + \beta_2 \text{FederallyFacilitatedNew}_s \\ + \beta_3 \text{StateBasedNew}_s + \beta_4 \text{Post}_t + \beta_5 \text{Post}_t * \text{MedicaidExpansionNew}_s \\ + \beta_6 \text{Post}_t * \text{FederallyFacilitatedNew}_s + \beta_7 \text{Post}_t * \text{StateBasedNew}_s + \beta_z Z_{st} + \varepsilon_{st} \end{aligned}$$

In my Implementation → Health Insurance Outcomes group of regressions, I look at how the implementation of each of the two components of the law affects a variety of health insurance outcomes. I run two regressions for each health insurance outcome. In one regression, represented by equation 4, the independent variable is the Medicaid expansion implementation. In the other regression, represented by equation 5, the independent variables are a federally-facilitated exchange and a state-based exchange. My omitted category is the partnership exchange. For most of my health insurance outcomes, I use a difference-in-differences specification, which allows me to examine the change in the health

insurance outcome from before to after 2014 (the year both components of the law were implemented) in states that implemented the Medicaid expansion compared to in states that did not implement it. Similarly, I am able to look at the change in the health insurance outcome in states that implemented either federally-facilitated or state-based exchange in 2014 compared to states that instead opted for a partnership exchange.

In this set of regressions, I again use the  $post_t$  variable that I used in Partisanship  $\rightarrow$  Health Insurance Outcomes (Without Implementation) regressions.  $Post_t$  is a variable of interest in this Implementation  $\rightarrow$  Health Insurance Outcomes set of regressions, as its estimated coefficient tells me how much health insurance outcomes change from pre to post-2014 in states that do not enact the Medicaid expansion (when implementation is the Medicaid expansion) and that do not enact either a federally-facilitated or state-based exchange, meaning that they enact a partnership exchange (when implementation is state exchange type). I also create a new implementation variable, which I call  $ImplementationNew_s$  (for example  $MedicaidExpansionNew_s$ ) for each implementation variable. Similar to my  $MedicaidExpansion_{st}$  variable, my  $MedicaidExpansionNew_s$  variable is also a dummy variable that is equal to one if the expansion is implemented and zero if it is not. The difference between  $MedicaidExpansion_{st}$  and  $MedicaidExpansionNew_s$ , however, is that for  $MedicaidExpansionNew_s$ , I code each state's Medicaid expansion implementation from 2010 to 2015 based on its implementation in 2014 when the law was enacted. This means that whether or not a state implements the Medicaid expansion cannot change over time  $t$ . For example, if state  $s$  implemented the

Medicaid expansion in 2014, the state is coded as an expansion state in every year  $t$  from 2010 to 2015. There were only three states (Michigan, New Hampshire, and Pennsylvania) that changed from not expanding in 2014 to expanding in 2015; however, they are coded as non-expansion states in both years.

Similar to  $\text{MedicaidExpansionNew}_s$ , my new state exchange variables are also dummy variables. For each type of exchange, the dummy variable is equal to one if the state implemented that type of exchange and zero otherwise. For example, if a state implemented a federally-facilitated exchange, the  $\text{FederallyFacilitatedNew}_s$  variable is equal to one and if it implemented a state-based or partnership exchange, the variable is equal to zero. Also similar to  $\text{MedicaidExpansionNew}_s$ , I code each state's exchange type for the years 2010 to 2015 based on the type of exchange it implemented in 2014 when the law was enacted. This means that the type of exchange a state implements does not change over time  $t$ . Unlike for  $\text{MedicaidExpansionNew}_s$ , none of the states are miscoded because none of them changed the type of state exchange they implemented between 2014 and 2015. I create all of these new implementation variables and code them from 2010 to 2015 because in order to use a difference-in-differences model, I must have data for each of my variables from before and after 2014. Furthermore, note that the subscript  $t$  is no longer included on any  $\text{ImplementationNew}_s$  variables in the written-out specifications because each of these variables is no longer changing over time.

I also interact my  $\text{ImplementationNew}_s$  variable (which  $\text{ImplementationNew}_s$  variable I use depends on the regression) with my  $\text{post}_t$  variable. The coefficient on these interactive variables tells me how much more the health insurance outcome

changed from pre to post-2014 in states that implemented a Medicaid expansion, federally-facilitated exchange, or state-based exchange than in those that did not. Moreover, because the coefficient on my  $\text{post}_t$  variable tells me how much pre to post-2014 health insurance outcomes changed in states that did not implement the Medicaid expansion (federally-facilitated or state-based exchange) and the coefficient on my  $\text{post}_t * \text{MedicaidExpansionNew}_s$  ( $\text{post}_t * \text{FederallyFacilitatedNew}_s$  or  $\text{post}_t * \text{StateBasedNew}_s$ ) tells me how much the pre to post-2014 health insurance outcomes change in states that did implement the Medicaid expansion (federally-facilitated or state-based exchange), I am able to compare pre to post-2014 changes in the health insurance outcomes in each group of states.

Along with running one equation for each type of implementation variable, I also run one equation (equation 6) that includes all three of my implementation variables:  $\text{MedicaidExpansionNew}_s$ ,  $\text{FederallyFacilitatedNew}_s$ , and  $\text{StateBasedNew}_s$ . All three of these implementation variables interacted with post are also included in the equation. Including all three implementation variables in one equation allows me to control for the fact that the pre to post-2014 changes in health insurance outcomes that I am seeing as a result of exchange implementation may be correlated with the Medicaid expansion and vice versa. For example, in my equation that only includes the  $\text{FederallyFacilitatedNew}_s$  and  $\text{StateBasedNew}_s$  variables, I might find a significant estimated coefficient on the  $\text{post}_t * \text{FederallyFacilitatedNew}_s$  or  $\text{post}_t * \text{StateBasedNew}_s$  variable, but there is not a way for me to determine if this significant coefficient is coming only from the way in which the state implemented the federally-facilitated or state-based exchange or if it could be

coming from whether or not the state implemented the Medicaid expansion.

Including all three implementation variables in one equation allows me to control for this.

**Equation 7: For Implementation = Medicaid expansion:**

$$Health\ Insurance\ Outcome_{st} = \beta_0 + \beta_1 Medicaid\ Expansion_{st} + \beta_z Z_{st} + \varepsilon_{st}$$

**Equation 8: For Implementation = Federally-facilitated or state-based exchange:**

$$Health\ Insurance\ Outcome_{st} = \beta_0 + \beta_1 FederallyFacilitated_{st} + \beta_2 StateBased_{st} + \beta_z Z_{st} + \varepsilon_{st}$$

**Equation 9: For Implementation = Medicaid expansion and federally-facilitated or state-based exchange:**

$$Health\ Insurance\ Outcome_{st} = \beta_0 + \beta_1 MedicaidExpansion_{st} + \beta_2 FederallyFacilitated_{st} + \beta_3 StateBased_{st} + \beta_z Z_{st} + \varepsilon_{st}$$

There are two health insurance outcome variables for which there is no data from before 2014 because these variables are only defined under the ACA. These two variables are the monthly silver and bronze premiums for a 40 year-old non-smoker making \$30,000 per year before tax credits. Because I do not have data from before 2014, there are not any pre-2014 outcomes to compare the post-2014 outcomes to, and I therefore cannot use a difference-in-differences estimation for the two regressions that use these variables. Instead, I have to use an ordinary least squares (OLS) estimation, represented by equations 7 and 8 above. When implementation is the Medicaid expansion, I once again use the MedicaidExpansion<sub>st</sub> dummy variable that I used in my Partisanship → Implementation regressions. The



estimated coefficient on this variable allows me to determine how much each premium price changes when the Medicaid expansion is implemented compared to when it is not. When implementation is a federally-facilitated or state-based exchange (I omit partnership exchange), I use two dummy variables.  $FederallyFacilitated_{st}$  equals one if state  $s$  implemented a federally-facilitated exchange at time  $t$  and zero otherwise.  $StateBased_{st}$  equals one if state  $s$  implemented a state-based exchange at time  $t$  and zero otherwise. The coefficient on  $FederallyFacilitated_{st}$  tells me how much each premium price changes when a federally-facilitated exchange is enacted compared to a partnership and the coefficient on  $StateBased_{st}$  tells me how much each premium price changes when a state-based exchange is enacted compared to a partnership one. Similar to my other health insurance outcomes, I also run one equation for each monthly metal-tier premium that includes all three implementation variables (equation 9).

Including my controls in these OLS regressions is especially important in helping to reduce omitted variable bias. If I were to only examine the effect of implementation on each of the premium prices, it would be extremely hard to attribute changes in the premium prices solely to implementation. For example, suppose that a state that implemented the Medicaid expansion also had a high proportion of people living below the poverty line. Lower premium prices cannot solely be attributed to the Medicaid expansion implementation in this case because premium prices might have already been lower so that they could be more affordable. Including these control variables in each OLS regression ensures that anything that could affect either the monthly silver or bronze premium prices,

besides ACA implementation, is controlled for and that I am not over estimating the effect of either of my implementation variables on either of the two premium prices. The OLS estimation is nearly identical to the difference-in-differences one, but does not include the  $post_t$ ,  $ImplementationNew_s$ , or  $post_t * ImplementationNew_s$  variables.<sup>1</sup> The final group of regressions I run are called my Partisanship → Health Insurance Outcomes (With Implementation) regressions. Equations 10 and 11 below are part of this set of regressions.

**Equation 10: When Implementation = Medicaid Expansion:**

$$Health\ Insurance\ Outcome_{st} = \beta_0 + \beta_1 MedicaidExpansionNew_s + \beta_2 Post_t + \beta_3 Post_t * MedicaidExpansionNew_s + \beta_4 DemocratGovernor_{st} + \beta_5 Post_t * DemocratGovernor_{st} + \beta_z Z_{st} + \varepsilon_{st}$$

**Equation 11: When Implementation = Federally-facilitated or State-based Exchange:**

$$Health\ Insurance\ Outcome_{st} = \beta_0 + \beta_1 FederallyFacilitatedNew_s + \beta_1 StateBasedNew_s + \beta_3 Post_t + \beta_4 Post_t * FederallyFacilitatedNew_s + \beta_5 Post_t * StateBasedNew_s + \beta_6 DemocratGovernor_{st} + \beta_7 Post_t * DemocratGovernor_{st} + \beta_z Z_{st} + \varepsilon_{st}$$

\*Note: Each regression above is specified for partisanship = executive partisanship. When looking at partisanship = legislative partisanship, I simply replace “DemocratGovernor<sub>st</sub>” with “DemocratLegislature<sub>st</sub>.”

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<sup>1</sup> I also consider running my Implementation → Health Insurance Outcomes regressions using state fixed effects. Using state fixed effects allows me to control for characteristics of each state that could affect health insurance outcomes, but are omitted from my specifications. Similar to reasons why I have to run OLS regressions for the monthly silver and bronze premium prices, I choose not to use my fixed effects regressions because I do not have enough data. Since the Medicaid expansion and state exchanges were not implemented until 2014, the only data I am able to use for my fixed effects regressions comes from 2014 and 2015. There is little variation within states between these two years, which is why using a state fixed effects regression is not appropriate to use with the amount of data I have.

For this last group of regressions, I re-run nearly the same equations that I used in my Partisanship → Health Insurance Outcomes (Without Implementation) group of regressions. The only difference is that I now examine how partisanship affects health insurance outcomes using implementation as a mediator variable, which means that equations 10 and 11 are essentially the same as equation 1, the only difference being that they include implementation variables. Equation 10 (implementation = Medicaid expansion) includes the MedicaidExpansionNew<sub>s</sub> and Post<sub>t</sub>\*MedicaidExpansionNew<sub>s</sub> and equation 11 (implementation = state exchange) includes the FederallyFacilitatedNew<sub>s</sub>, Post<sub>t</sub>\*FederallyFacilitatedNew<sub>s</sub>, StateBasedNew<sub>s</sub>, and Post<sub>t</sub>\*StateBasedNew<sub>s</sub> variables. Using implementation as a mediator variable, and therefore controlling for implementation, allows me to determine whether partisanship has a direct effect on pre to post-2014 changes in health insurance outcomes, or whether the effect partisanship has is strictly coming indirectly through its effect on the implementation of Medicaid expansion and exchange components of the ACA. I run four difference-in-differences regressions for each of the following five health insurance outcomes: proportion uninsured, proportion covered through Medicaid, proportion covered through employer, proportion covered through direct purchase, and average monthly family premium per employee for employer-based health insurance. I use four regressions to allow for each combination of partisanship and implementation variables.

## **V. Results**

### *V. A. Partisanship → Health Insurance Outcomes (Without Implementation) Results*

As explained in the methodology section, the first group of regressions I run examines the overall effect (sum of direct and indirect effects) partisanship has on health insurance outcomes. I first use DemocratGovernor<sub>st</sub> for my partisanship variable. In examining the estimated coefficients on the post<sub>t</sub> variables presented in table 3, I find that the uninsured rate and proportion of people covered through an employer decrease by 1.9 percentage points and 2.6 percentage points, respectively, from pre to post-2014 in states that have a Republican or Independent governor. Both of these results are highly significant with p-values of 0.000. I also find that the proportion of people covered through Medicaid increases by 2.8 percentage points and the average monthly family premium per employee for employer-based insurance increases by 86.78 dollars from before to after 2014 in states that have a Republican or Independent governor. Both of these results are also highly significant with p-values of 0.000. None of the estimated coefficients on the post<sub>t</sub>\*DemocratGovernor<sub>st</sub> variables presented in table 3 are significant, which means that having a Democrat governor does not significantly additionally affect the changes in any of the five health insurance outcomes from pre to post-2014.

Although none of the estimated coefficients on my post<sub>t</sub>\*DemocratGovernor<sub>st</sub> variables are significant, it is important to note that the standard error on my post<sub>t</sub>\*DemocratGovernor<sub>st</sub> is 17.17 dollars when my health insurance outcome is the average monthly family premium per employee for employer-based insurance. This value is quite economically significant. Adding two times this standard error (2 \* 17.14 dollars) to my estimate (11.89 dollars) gives me an upper-bound value of

**Table 3. Executive Partisanship and Health Insurance Outcomes**

INDEPENDENT VARIABLES	HEALTH INSURANCE OUTCOMES				
	Proportion Uninsured	Proportion Medicaid	Proportion Employer	Proportion Direct Purchase	Avg. Monthly Family Premium
DemocratGovernor <sub>st</sub>	-0.016** (0.0073)	0.016** (0.0076)	0.003 (0.0071)	0.002 (0.0038)	11.02 (26.45)
Post <sub>t</sub>	-0.019*** (0.0055)	0.028*** (0.0077)	-0.026*** (0.0059)	0.003 (0.0036)	86.78*** (12.93)
Post <sub>t</sub> *DemocratGovernor <sub>st</sub>	-0.004 (0.0071)	0.009 (0.0093)	-0.005 (0.0045)	-0.003 (0.0036)	11.89 (17.14)
R <sup>2</sup>	0.652	0.371	0.773	0.511	0.589
Sample Size	300	300	300	300	150

*Notes:* This table presents the estimated coefficients for each variable with standard errors in parentheses. \*\*\* Significant at the one percent level. \*\* Significant at the 5 percent level. \* Significant at the 10 percent level. Control variable results available upon request from the author.

46.17 dollars for a 95 percent confidence interval. Subtracting two times the standard error (2\*17.14 dollars) from my estimate gives me a lower-bound value of -22.39 dollars for a 95 percent confidence interval. In other words, I can be 95 percent confident that the effect of a Democrat governor on the average monthly family premium is not larger than 46.17 dollars and not smaller than -22.39 dollars, but it could be anywhere within this range. I can be nearly certain that a Democrat governor does not have an extremely large effect, but this confidence interval still includes fairly large effects. Moreover, 0 dollars is included in the confidence interval, which would mean that a Democrat governor could possibly not effect pre to post-2014 changes in family premium prices at all. I cannot not determine the

exact effect a Democrat governor actually has simply because I do not have enough data. My data on this health insurance outcome only ranges from 2013 to 2015 and, if I had more data, I might be able to get a better estimate of what the effect truly is.

For the two OLS regressions, neither of the estimated coefficients on my DemocratGovernor<sub>st</sub> variable are significant. This means that controlling for all of the control variables in vector Z<sub>st</sub> (refer back to methodology section for a list of these variables), having a Democrat governor does not significantly change either the monthly silver or monthly bronze premium price. These results are summarized in table 4.

I next use DemocratLegislature<sub>st</sub> as my partisanship variable. In examining the estimated coefficients on the post<sub>t</sub> variables presented in table 5, I find similar results to when the partisanship variable is DemocratGovernor<sub>st</sub>. I find the uninsured rate and proportion of people who get their insurance through their employer decrease by 1.8 and 2.7 percentage points, respectively, from pre to post-2014 in states that have Republican or split legislatures. Both of these results are significant with p-values of 0.004 and 0.000, respectively. The proportion of people covered through Medicaid increases by 2.4 percentage points from pre to post-2014, this result being significant with a p-value of 0.003. I also find that the average monthly family premium per employee for employer-based health insurance increases by 84.06 dollars from pre to post-2014 in states that have Republican or split legislatures. This result is significant with a p-value of 0.000.

In contrast to my results where the partisanship variable is DemocratGovernor<sub>st</sub>, I do find that two of my estimated coefficients for the

**Table 4. Executive Partisanship and Metal-Tier Premium Prices**

INDEPENDENT VARIABLES	HEALTH INSURANCE OUTCOMES	
	Monthly Silver Premium	Monthly Bronze Premium
DemocratGovernor <sub>st</sub>	15.97 (14.81)	7.90 (12.69)
R <sup>2</sup>	0.284	0.240
Sample Size	100	100

*Notes:* This table presents the estimated coefficients for each variable with standard errors in parentheses. \*\*\* Significant at the one percent level. \*\* Significant at the 5 percent level. \* Significant at the 10 percent level. Control variable results available upon request from the author.

post<sub>t</sub>\*DemocratLegislature<sub>st</sub> are significant. I find that having a Democrat legislature significantly additionally increases the proportion of people who get their insurance through Medicaid by 1.7 percentage points. This result is highly significant, as it yields a p-value of 0.003. I also find when the health insurance outcome is the proportion of people who get their insurance through a direct purchase, the estimated coefficient on post<sub>t</sub>\*DemocratLegislature<sub>st</sub> is also significant with a p-value of 0.013; however, the sign on this estimated coefficient is negative, whereas the coefficient on post for the proportion of people who get their insurance through a direct purchase health insurance outcomes is positive. The sum of the coefficients is not significant, meaning that having a Democrat legislature does not additionally change the proportion of people who get their insurance through a direct purchase from pre to post-2014. These results lead to the question of whether the additional change in the proportion of people who are covered through Medicaid from before to after 2014 is coming indirectly from a difference in the way

**Table 5. Legislative Partisanship and Health Insurance Outcomes**

INDEPENDENT VARIABLES	HEALTH INSURANCE OUTCOMES				
	Proportion Uninsured	Proportion Medicaid	Proportion Employer	Proportion Direct Purchase	Avg. Monthly Family Premium
DemocratLegislature <sub>st</sub>	-0.021** (0.0080)	0.027*** (0.0092)	0.003 (0.0074)	-0.002 (0.0052)	3.49 (30.16)
Post <sub>t</sub>	-0.018*** (0.0060)	0.024*** (0.0079)	-0.027*** (0.0062)	0.005 (0.0040)	84.06*** (13.69)
Post <sub>t</sub> *DemocratLegislature <sub>st</sub>	-0.003 (0.0043)	0.017*** (0.0054)	-0.004 (0.0049)	-0.007** (0.0027)	-4.46 (20.67)
R <sup>2</sup>	0.660	0.433	0.772	0.495	0.579
Sample Size	294	294	294	294	147

*Notes:* This table presents the estimated coefficients for each variable with standard errors in parentheses. \*\*\* Significant at the one percent level. \*\* Significant at the 5 percent level. \* Significant at the 10 percent level. Control variable results available upon request from the author.

Democrats versus Republicans or split legislatures implement either the Medicaid expansion or state exchange components of the ACA, or if there is some other difference between Democrats and Republican or split legislatures that leads to a difference in these health insurance outcomes. Based on the fact that it is the proportion of people who are covered through Medicaid that significantly additionally increases when a Democrat legislature is in power versus when a Republican or split one is, I hypothesize that this change is coming through the way in which Democrat legislatures implement the Medicaid expansion. Historically, Medicaid has been a liberal policy, so I hypothesize that Democrat legislatures are more likely to favor and implement the expansion, which is why I am seeing an



additional pre to post-2014 change in the proportion of people who are covered through Medicaid under Democrat legislatures.

I do not find any other significant estimated coefficients on my  $\text{post}_t * \text{DemocratLegislature}_{st}$  variable which means that I find that having a Democrat legislature does not significantly additionally change any of my other health insurance outcomes from before to after 2014. It is important to note however, that when the health insurance outcome is the average monthly family premium, the standard error on the  $\text{post}_t * \text{DemocratLegislature}_{st}$  variable is 20.67 dollars, which is quite economically significant. As described previously, I cannot determine the exact effect a Democrat governor actually has on this price simply because I have a small amount of data. I can be 95 percent confident, however, that the effect falls within a range of -45.80 and 36.88 dollars.

For the two OLS regressions, neither of the estimated coefficients on my  $\text{DemocratLegislature}_{st}$  variable are significant. This means that controlling for all of the control variables in vector  $Z_{st}$  (refer back to methodology section for a list of these variables), having a Democrat legislature does not significantly change either the monthly silver or monthly bronze premium price. These results are summarized in table 6.

Given that I do not see a significant overall effect of partisanship on health insurance outcomes in all of my regressions, but one, the next question I ask is does this mean that partisanship does not directly or indirectly affect health insurance outcomes at all? I hypothesize that partisanship does affect at least the implementation of the Medicaid expansion component of the law and that

**Table 6. Legislative Partisanship and Metal-Tier Premium Prices**

INDEPENDENT VARIABLES	HEALTH INSURANCE OUTCOMES	
	Monthly Silver Premium	Monthly Bronze Premium
DemocratLegislature <sub>st</sub>	4.75 (17.40)	7.69 (14.82)
R <sup>2</sup>	0.276	0.240
Sample Size	98	98

*Notes:* This table presents the estimated coefficients for each variable with standard errors in parentheses. \*\*\* Significant at the one percent level. \*\* Significant at the 5 percent level. \* Significant at the 10 percent level. Control variable results available upon request from the author.

implementation affects health insurance outcomes. If this is true, partisanship must at least significantly indirectly be affecting health insurance outcomes through implementation. I might not be seeing significant results in the group of regressions above simply because the indirect effect of partisanship on outcomes through implementation is too small to detect compared to other factors that affect health insurance outcomes.

#### *V. B. Partisanship → Implementation Results*

For my probit regressions that use the Medicaid expansion as the dependent variable and executive or legislative partisanship as the independent variables, my results confirm my hypothesis that states under Democrat executive and legislative control are more likely to implement the expansion. In examining the average marginal effects on my DemocratGovernor<sub>s</sub> and DemocratLegislature<sub>s</sub>,

variables presented in table 7, I find that having a Democrat governor increases the probability of a Medicaid expansion by 31.8 percentage points. This result is significant, as the p-value equals 0.001. Having a Democrat legislature increases the probability of a Medicaid expansion by an even greater amount, 49.8 percentage points. This result is highly significant, with the p-value equaling 0.000. To confirm the robustness of my probit regression results, I also run OLS regressions for each independent variable. My OLS regressions yield the same results that I find with my probit regressions: a Democrat governor (legislature) is more likely to implement the Medicaid expansion than a Republican or Independent (split) governor (legislature).<sup>2</sup>

**Table 7. Partisanship and Medicaid Expansion Implementation**

INDEPENDENT VARIABLES	PARTISANSHIP = DEMOCRAT GOVERNOR	PARTISANSHIP = DEMOCRAT LEGISLATURE
DemocratGovernor <sub>s</sub>	0.318*** (0.0965)	————
DemocratLegislature <sub>s</sub>	————	0.498*** (0.0910)
Pseudo R <sup>2</sup>	0.460	0.611
Sample Size	100	98

*Notes:* This table presents marginal effects for each variable with standard errors in parentheses. \*\*\* Significant at the one percent level. \*\* Significant at the 5 percent level. \* Significant at the 10 percent level. Control variable results available upon request from the author.

<sup>2</sup> I also consider running both of these probit regressions using a one-year lag on the DemocratGovernor<sub>st</sub> and DemocratLegislature<sub>st</sub> variables because the Medicaid expansion was implemented on January 1, 2014, which means that the 2013 governor or legislature decided what policy would be implemented. After examining my data, however, I found that Virginia was the only state that changed executive partisanship and also the only state that changed legislative partisanship between 2013 and 2014. Because only one state changed executive and legislative partisanship, using a partisanship lag would not significantly change my results.

It is no surprise that Democrats are more likely to implement the Medicaid expansion component of the law, as Medicaid is historically a liberal policy. Liberals believe that every individual should have access to healthcare and nobody should be crowded out or rejected from being able to obtain it. Moreover, they are willing to use federal spending to help groups that are not as easily able to access it, such as the poor, obtain it. This is why President Obama wanted and was willing to expand Medicaid. Democrat governors and legislatures are more willing to expand Medicaid than Republican ones for the same reasons.

Another explanation for why Democrat governors and legislatures are more likely to enact the expansion could be because they do not want to go against a policy that their most influential party leader, President Obama, designed and strongly supported. If Democrat state leaders disagree with a Democrat president's policy, they may receive backlash from other party members and Democrat constituents within their own states who expect them to uphold the policies of the most influential party leader. Furthermore, if Democrat state leaders go against a Democrat president's and historically liberal policies, they may lose campaign funding, donations, and votes from their constituents in the future. The same explanation is true for Republicans that would choose to agree with a Democrat president's policy, a policy that does not align with typical conservative principles. Both explanations I present for why Democrat governors and legislatures are more likely to implement the Medicaid expansion are credible; however, I find the second explanation to be more likely because politicians are usually looking to move up in their respective parties. Especially when they start at the state level, politicians are

always looking for ways to get re-elected and possibly even eventually move up to the national party level. If Democrat state leaders go against a Democrat president's and historically liberal policies and do end up losing campaign funding and votes from their constituents in the future, their ability to move up within their party could be hampered. Independents are typically harder to judge than Democrats and Republicans. There was only one state (Alaska) with an Independent governor at the time the Medicaid expansion was enacted. Alaska chose not to implement the Medicaid expansion, but since it was the only state with an Independent governor, I am unable to draw any conclusions about how Independent governors choose to act.

It is also important to note that my regressions yield the results that a Democrat legislature is even more likely to implement the Medicaid expansion than a Democrat governor is. One reason for this result could be because state legislatures are more knowledgeable about state budgets than governors are. Governors are required to submit their budget proposals to the state legislature. In order for the budget to be passed, the state legislature will review it, change it, and then pass it, assuming the governor does not veto the changes it has made. Because one of the state legislature's main tasks is to deal with the budget, legislatures have a better idea of how to divide up the state's money than governors do (National Governors Association 2015). Relating to the Medicaid expansion, a Medicaid expansion does cost the state money and a legislature will have a better idea than the governor of how much money the state has available and whether that money is enough to implement the expansion.

Similar to Jones, Bradley, and Oberlander (2013) I also find that a state's decision about which type of exchange to implement does not depend on its executive partisanship. In contrast to these authors, however, I find that legislative partisanship does have an effect on the implementation of the state exchange component of the law. The average marginal effects on the DemocratGovernor<sub>s</sub> variable, presented in table 8 on the following page, first tell me that having a Democrat governor does not significantly change the probability of the implementation of a federally-facilitated, state-based, or partnership exchange. Turning to look at the average marginal effects on the DemocratLegislature<sub>s</sub> variable, I find that a Democrat legislature decreases the probability of a federally-facilitated exchange by 38.6 percentage points and increases the probability of a state-based exchange by 29.8 percentage points. These results are significant with p-values of 0.001 and 0.000, respectively. Having a Democrat legislature does not significantly affect the probability of a partnership exchange. One reason some of my results are different than those of Jones, Bradley, and Oberlander (2013) could be because these authors use pre-2014 preliminary data on what type of exchange each state intended to implement, whereas I use post-2014 data, which is data on which type of exchange each state actually implemented in 2014.

I conjecture that having a Democrat governor and Democrat legislature each increase the likelihood of a state implementing a state-based exchange because Democrats generally support the ACA, as it is a law that was introduced by a Democrat president. The ACA calls for states to implement their own state exchanges. If they choose not to, they can opt for a federally-facilitated or

partnership one. Essentially, if a state implements a state-based exchange, it means they are choosing to construct their own exchange where individuals and small companies can shop for insurance coverage. In other words, they are choosing to

**Table 8. Partisanship and Exchange Implementation**

INDEPENDENT VARIABLES	DEPENDENT VARIABLE: STATE EXCHANGE TYPE		
	Federally-facilitated	State-based	Partnership
Panel A. Sample Size: 100			
DemocratGovernor <sub>s</sub>	-0.722 (0.6075)	0.134 (0.1271)	0.588 (0.6998)
Panel B. Sample Size: 98			
DemocratLegislature <sub>s</sub>	-0.386*** (0.1206)	0.298*** (0.0823)	0.088 (0.1154)

*Notes:* This table presents marginal effects for each variable with standard errors in parentheses. Panel A represents the multinomial probit regression where the independent variable is executive partisanship and Panel B represents the multinomial probit regression where the independent variable is legislative partisanship. \*\*\* Significant at the one percent level. \*\* Significant at the 5 percent level. \* Significant at the 10 percent level. Control variable results available upon request from the author.

implement the law’s preferred type of exchange. As Jones, Bradley, and Oberlander (2013) describe it, they are “giving into” implementing the law. Similarly, having a Democrat governor and Democrat legislature each decrease the probability of a federally-facilitated exchange because Democrats do support the ACA’s components and are eager to implement the ACA and their own exchanges rather than waiting for the federal government to come in and operate an exchange.

Only seven states implemented a partnership exchange: Arkansas, Delaware, Illinois, Iowa, Michigan, New Hampshire, and West Virginia. Arkansas had a Democrat governor and Republican legislature, Delaware, Illinois, and West Virginia

had both Democrat, Iowa had a Republican and split, Michigan had both Republican, and New Hampshire had a Democrat and split. One reason states that had both a Democrat governor and legislature could have implemented the partnership exchange was because they did not have the government administrative capacity to fully implement their own state-based exchange and needed assistance from the federal government. This reasoning is similar to one of the factors Tope and Hickman (2012) reference in their analysis of how states decided to implement CHIP. Tope and Hickman (2012) conclude that states that are more bureaucratized are better able to study and develop policy, therefore increasing CHIP funding. The same could be true for the state exchange component of the ACA, which is why a state that is not as administratively developed as others, but still under Democrat executive and legislative control, might opt for a partnership exchange; they need federal assistance, but would still prefer to implement and run at least part of their own exchange.

States with different executive and legislative partisanships, such as Arkansas, Iowa, and New Hampshire might have chosen to implement a partnership exchange because the two branches of government could not agree on either the federally-facilitated or state-based one. If Democrats are more likely to implement a state-based and Republicans a federally-facilitated exchange, middle-ground is a partnership exchange, as it is a hybrid of the two. Finally, one reason a fully Republican state, such as Michigan, might have chosen to implement a partnership exchange is because it did not want to “give into” the ACA and implement its own exchange as the law calls for, but it still wanted to maintain some of its policy



autonomy, as Jones, Bradley, and Oberlander (2012) hypothesize. Again, implementing a partnership exchange is the middle ground between these two options.

For my regressions that include executive and legislative partisanship variables, I find that having a Democrat legislature instead of a Republican one increases the probability of a Medicaid expansion by 49.8 percentage points. This result is highly significant with a p-value of 0.000. Furthermore, I find that having a Democrat governor instead of a Republican one and having a split legislature instead of a Republican one does not significantly change the probability of a Medicaid expansion. These results are summarized in table 9.

**Table 9. Medicaid Expansion Implementation, Executive, and Legislative Partisanship**

INDEPENDENT VARIABLES	PROBABILITY OF A MEDICAID EXPANSION
DemocratGovernor <sub>s</sub>	0.119 (0.0926)
DemocratLegislature <sub>s</sub>	0.498 (0.1301)
SplitLegislature <sub>s</sub>	0.142 (0.1084)
Pseudo R <sup>2</sup>	0.600
Sample Size	96

*Notes:* This table presents marginal effects for each variable with standard errors in parentheses. \*\*\* Significant at the one percent level. \*\* Significant at the 5 percent level. \* Significant at the 10 percent level. Control variable results available upon request from the author.

Turning to exchange implementation, having a Democrat governor decreases the probability of a federally-facilitated exchange by 20.3 percentage points and increases the probability of a partnership exchange by 12.9 percentage points. These results are significant with p-values of 0.005 and 0.019, respectively. Having a Democrat legislature decreases the probability of a federally-facilitated exchange by 37.1 percentage points and increases the probability of a state-based exchange by 26.4 percentage points. Both of these results are highly significant with p-values of 0.000. Finally, having a split legislature decreases the probability of a federally-facilitated exchange by 43.8 percentage points and increases the probability of a state-based exchange by 37.5 percentage points. Both of these results are also highly significant with p-values of 0.000. These results are summarized in table 10.

**Table 10. Exchange Implementation, Executive, and Legislative Partisanship**

INDEPENDENT VARIABLES	DEPENDENT VARIABLE: STATE EXCHANGE TYPE		
	Federally-facilitated	State-based	Partnership
DemocratGovernor <sub>s</sub>	-0.203*** (0.0728)	0.074 (0.0524)	0.129** (0.0549)
DemocratLegislature <sub>s</sub>	-0.371*** (0.0771)	0.264*** (0.0630)	0.107 (0.0704)
SplitLegislature <sub>s</sub>	-0.438*** (0.1182)	0.375*** (0.0955)	0.063 (0.0708)
Sample Size	96		

*Notes:* This table presents marginal effects for each variable with standard errors in parentheses. \*\*\* Significant at the one percent level. \*\* Significant at the 5 percent level. \* Significant at the 10 percent level. Control variable results available upon request from the author.

#### *V. C. Implementation → Health Insurance Outcomes Results*

In this set of regressions, I first run the regressions that use MedicaidExpansionNew<sub>s</sub> as my implementation (independent variable). By examining the estimated coefficients on the post<sub>t</sub> and post<sub>t</sub>\*MedicaidExpansionNew<sub>s</sub>, variables in table 11 below, I am first able to conclude that the uninsured rate decreases by 1.2 percentage points from before to after 2014 in non-expansion states. It decreases by an additional 1.2 percentage points from pre to post-2014 in states that implement the expansion. These results are significant with p-values of 0.016 and 0.005, respectively. I also find that the proportion of people covered by Medicaid increases by 1.5 percentage points from before to after 2014 in non-expansion states. It increases by an additional 2.9 percentage points from pre to post-2014 in states that implement the expansion. Both of these results are significant with p-values of 0.044 and 0.000, respectively. Finally, I find that the proportion of people covered through their employer decreases by 2.6 percentage points from pre to post-2014 in non-expansion states. It decreases by an additional 0.7 percentage points from pre to post-2014 in states that implement the expansion. Both of these results are significant with p-values of 0.000 and 0.046, respectively.

Even in non-expansion states, one reason why the uninsured rate decreases the proportion of people who get their insurance through Medicaid increases, and the proportion of people who get their insurance through an employer decreases is because of the individual mandate penalty established by the ACA. The individual mandate states that all legal residents of the United States must obtain health insurance. If a person does not obtain insurance, they receive a tax penalty (Frean

Gruber, and Sommers 2016). In other words, more people will obtain insurance out of the fear that they will receive a tax penalty if they do not, which in turn means that the uninsured rate will decrease. Furthermore, before the individual mandate was enacted, there might have been individuals who were eligible for Medicaid, but did not enroll in the program because they were not required to have insurance.

**Table 11. Medicaid Expansion Implementation and Health Insurance Outcomes**

INDEPENDENT VARIABLES	HEALTH INSURANCE OUTCOMES				
	Proportion Uninsured	Proportion Medicaid	Proportion Employer	Proportion Direct Purchase	Monthly Avg. Family Premium
MedicaidExpansionNew <sub>s</sub>	-0.026*** (0.0075)	0.022** (0.0101)	0.012 (0.0088)	0.003 (0.0063)	-28.73 (25.45)
Post <sub>t</sub>	-0.012** (0.0048)	0.015** (0.0071)	-0.026*** (0.0053)	0.006 (0.0036)	81.40*** (14.31)
Post <sub>t</sub> *MedicaidExpansionNew <sub>s</sub>	-0.012*** (0.0042)	0.029*** (0.0043)	-0.007** (0.0031)	-0.008*** (0.0024)	21.42 (16.17)
R <sup>2</sup>	0.713	0.467	0.779	0.515	0.589
Sample Size	300	300	300	300	150

*Notes:* This table presents the estimated coefficients for each variable with standard errors in parentheses. \*\*\* Significant at the one percent level. \*\* Significant at the 5 percent level. \* Significant at the 10 percent level. Control variable results available upon request from the author.

Once the mandate was enacted, these individuals might have decided that they wanted to obtain their Medicaid insurance in order to avoid the tax penalty, in turn increasing the proportion of people covered through Medicaid. The proportion of

people getting insurance through their employer might decrease because of the increased demand for insurance through Medicaid.

Another explanation for the pre to post-2014 decrease in the uninsured rate in non-expansion states could also be the newly ACA-implemented subsidized premiums for private insurance purchased on the exchanges. If individuals realize that they will be able to purchase insurance at a cheaper price, they will be more likely to purchase it, which could decrease the uninsured rate. A final explanation that applies to the pre to post-2014 non-expansion state increase in the proportion of people covered through Medicaid could be a greater general awareness about health insurance. When the ACA was passing through the White House, it received a lot of publicity. Especially when the Medicaid expansion component of the law was under debate and in the news, it is possible that there was a group of individuals who did not realize they qualified for Medicaid and, because of a greater awareness about health insurance, decided to investigate their eligibility and eventually enroll in Medicaid, even if their state did not expand.

One explanation as to why the uninsured rate would decrease and proportion of people covered through Medicaid increase even more in states that implement the Medicaid expansion than in those that do not is because the Medicaid expansion expands coverage to all those with incomes below 138 percent of the FPL. Before the expansion, Medicaid only covered low-income children, elderly individuals, pregnant women, disabled individuals, and some parents, but coverage did not include some categories of adults, such as childless adults. Furthermore, state Medicaid thresholds usually did not extend as far up as 138 percent of the

poverty line (Wachino, Artiga, and Rudowitz 2014). By extending coverage to incomes below 138 percent of the FPL and several new categories of adults, such as childless adults, it is only inevitable that the uninsured rate will decrease and proportion of people covered through Medicaid will increase in states that enact the expansion more than in those that do not. In other words, expanding Medicaid allows for a greater group of individuals to be covered, which is why the uninsured rate decreases and proportion of people covered through Medicaid increases. The Medicaid expansion also makes it easier for people to enroll in Medicaid, as the ACA mandates that all states must allow for individuals to enroll in the program by phone, email, or online, options that were not necessarily available in all states before the expansion (Wachino, Artiga, and Rudowitz 2014). If individuals are more easily able to enroll in the program, it means more people will choose to enroll, and the uninsured rate will decrease and proportion of people covered through Medicaid will increase.

I also find that the proportion of people who get their insurance through a direct purchase increases by 0.6 percentage points (0.006 is the estimated coefficient on the  $post_t$  variable) in non-expansion states from pre to post-2014. This result makes sense, as the proportion of people who are covered through a direct purchase could have increased because of other aspects of the ACA, such as the fact that each state had to establish some type of exchange where individuals could purchase insurance. Having these newly established exchanges post-2014 likely made it easier for individuals to directly purchase insurance from providers, therefore increasing the proportion of people who get their insurance through a

direct purchase. Although the estimated coefficient on my  $\text{post}_t$  variable is positive, the estimated coefficient on the  $\text{post}_t * \text{MedicaidExpansionNew}_s$  variable is -0.008. This coefficient is negative with a bigger magnitude than the  $\text{post}_t$  variable is positive, which means that the proportion of people who get their insurance through a direct purchase actually decreases by 0.1 percentage points in expansion states from pre to post-2014. Although a decrease of 0.1 percentage points in the proportion of people who get their insurance through a direct purchase in expansion states is not significant (p-value = 0.588), this result does show that some individuals who were getting their insurance through a direct purchase before the expansion switched to obtaining their insurance through Medicaid once the expansion was enacted. Many of these individuals were likely ones that did not qualify for Medicaid before the expansion, but did qualify for it under the expansion, causing their demand to obtain insurance through a direct purchase to decrease, while increasing their demand for obtaining insurance through Medicaid. This result is also consistent with my other result that Medicaid coverage increases more than the uninsured rate decreases.

Although I do not find that implementing the Medicaid expansion has a significant additional effect on the change in the average monthly family premium per enrolled employee for employer-based health insurance, I do find that the estimated coefficient on the  $\text{post}_t$  variable is significant when the dependent variable is this health insurance outcome. I find that the average monthly family premium per enrolled employee for employer-based health insurance increases by 81.40 dollars from pre to post-2014. This result is highly significant with a p-value

of 0.000. Although I do not find this estimated coefficient on my  $\text{post}_t^* \text{MedicaidExpansionNew}_s$  variable to be significant when monthly average premium per enrolled employee for employer-based health insurance is my dependent variable, the standard error on this estimated coefficient is economically significant at 16.17 dollars. As previously described, I cannot determine the exact effect a Medicaid expansion actually has on this price simply because I have a small amount of data. I can be 95 percent confident, however, that the effect falls between -10.92 and 53.76 dollars.

In both of my OLS regressions, I find that the estimated coefficient on the  $\text{MedicaidExpansion}_{st}$  variable is not significant, which means that implementing a Medicaid expansion does not significantly change monthly silver and bronze premium prices when controlling for all of the variables in vector  $Z_{st}$ . The estimated coefficients on  $\text{MedicaidExpansion}_{st}$  are presented in table 12 below.

**Table 12. Medicaid Expansion Implementation and Metal-tier Premium Prices**

INDEPENDENT VARIABLE	HEALTH INSURANCE OUTCOMES	
	Monthly Silver Premium	Monthly Bronze Premium
$\text{MedicaidExpansion}_{st}$	-14.87 (21.40)	-7.01 (18.65)
$R^2$	0.283	0.239
Sample Size	100	100

*Notes:* This table presents the estimated coefficients for each variable with standard errors in parentheses. \*\*\* Significant at the one percent level. \*\* Significant at the 5 percent level. \* Significant at the 10 percent level. Control variable results available upon request from the author.



In expansion states, people with low incomes are covered by Medicaid, which means that people purchasing insurance through exchanges and insurance providers are likely higher-income people who are more likely to be healthier because they have an easier time affording health insurance when they are ill. If the group of people purchasing insurance through providers in expansion states becomes primarily high-income people who are generally healthier after the expansion, providers can lower their premiums (meaning that the estimated coefficients on the premium prices will be negative) because these high-income people demanding insurance will need fewer health services. Because my estimated coefficients are not significant, I cannot conclude whether or not this hypothesis is in fact true. One reason I might not be seeing significant results is simply because my sample size only contains two years, meaning that it is too small to yield any significant results.

When my implementation variables are `FederallyFacilitatedNews` and `StateBasedNews`, looking at the estimated coefficients on `postt` variables presented in table 13 allow me to conclude the following results. First, from before to after 2014, the uninsured rate decreases by 2.0 percentage points in a state that does not implement a federally-facilitated or state-based exchange, but rather implements a partnership exchange. This result is significant, yielding a p-value of 0.011. I also find that the proportion of people who get their insurance through Medicaid increases by 3.5 percentage points from pre to post-2014 in a state that implements a partnership exchange, this result being highly significant with a p-value of 0.002. Third, the proportion of people who get their insurance through their employer

significantly decreases by 3.0 percentage points from before to after 2014 in a state that implements a partnership exchange (p-value = 0.000).

The coefficients on my  $\text{post} \times \text{FederallyFacilitatedNew}_s$  variable when my health insurance outcomes are the proportion of people covered through Medicaid and the proportion of people covered through a direct purchase are both significant; however, each of these coefficients has an opposite sign from the  $\text{post}_t$  coefficient in the same regression. For the proportion of people who get their insurance through Medicaid, the coefficient on  $\text{post}_t$  is 0.035 and the coefficient on  $\text{post} \times \text{FederallyFacilitatedNew}_s$  is -0.017. Adding these two coefficients together, the proportion of people who get their insurance through Medicaid in a state that implements a federally-facilitated exchange instead of a partnership one actually additionally increases by 1.8 percentage points and this result is significant with a p-value 0.008. The sum of the coefficients on  $\text{post}_t$  and  $\text{post} \times \text{FederallyFacilitatedNew}_s$  is not significant, meaning that implementing a federally-facilitated exchange instead of a partnership one does not significantly additionally change the proportion of people who get their insurance through a direct purchase from pre to post-2014. None of the estimated coefficients on the  $\text{post}_t \times \text{StateBasedNew}_s$  variable are significant in any of these regressions. This means that implementing a state-based exchange instead of a partnership one does not significantly additionally change the uninsured rate, the proportion of people covered through Medicaid, or the proportion of people covered through their employer from pre to post-2014.

The significant results described above could be attributed to a variety of explanations, one being the Medicaid expansion. The Medicaid expansion increases

the number of individuals eligible for Medicaid. Some of these newly-eligible individuals might not have had insurance before the expansion because they could not afford it. The expansion provides them with an affordable way to obtain insurance and therefore decreases the overall uninsured rate and also increases the proportion of people who get their insurance through Medicaid. Moreover, the Medicaid expansion expands Medicaid coverage to more people, demand for insurance through other sources, such as an employer, decreases.

**Table 13. Exchange Implementation and Health Insurance Outcomes**

INDEPENDENT VARIABLES	HEALTH INSURANCE OUTCOMES				
	Proportion Uninsured	Proportion Medicaid	Proportion Employer	Proportion Direct Purchase	Monthly Avg. Family Premium
FederallyFacilitatedNew <sub>s</sub>	0.014* (0.0084)	-0.019** (0.0089)	-0.009 (0.0108)	0.003 (0.0057)	14.76 (32.59)
StateBasedNew <sub>s</sub>	-0.006 (0.0114)	-0.005 (0.0109)	-0.004 (0.0125)	0.016** (0.0061)	48.00 (37.71)
Post <sub>t</sub>	-0.020** (0.0077)	0.035*** (0.0106)	-0.030*** (0.0067)	-0.003 (0.0047)	105.18*** (21.66)
Post <sub>t</sub> *FederallyFacilitatedNew <sub>s</sub>	0.008 (0.0061)	-0.017* (0.0089)	0.004 (0.0041)	0.007* (0.0036)	-24.50 (21.40)
Post <sub>t</sub> *StateBasedNew <sub>s</sub>	-0.006 (0.0077)	0.014 (0.0099)	-0.001 (0.0041)	-0.002 (0.0040)	6.98 (23.59)
R <sup>2</sup>	0.671	0.421	0.775	0.542	0.605
Sample Size	300	300	300	300	150

*Notes:* This table presents the estimated coefficients for each variable with standard errors in parentheses. \*\*\* Significant at the one percent level. \*\* Significant at the 5 percent level. \* Significant at the 10 percent level. Control variable results available upon request from the author.

I also find a significant result when my health insurance outcome is the average monthly family premium per enrolled employee for employer-based health

**Table 14. Exchange Implementation and Metal-tier Premium Prices**

INDEPENDENT VARIABLE	HEALTH INSURANCE OUTCOMES	
	Monthly Silver Premium	Monthly Bronze Premium
FederallyFacilitated <sub>st</sub>	21.99 (20.42)	11.93 (19.61)
StateBased <sub>st</sub>	-18.44 (26.01)	-27.84 (22.52)
R <sup>2</sup>	0.317	0.291
Sample Size	100	100

*Notes:* This table presents the estimated coefficients for each variable with standard errors in parentheses. \*\*\* Significant at the one percent level. \*\* Significant at the 5 percent level. \* Significant at the 10 percent level. Control variable results available upon request from the author.

insurance. First, in interpreting the estimated coefficient on the  $post_t$  variable, I can conclude that the average monthly family premium per enrolled employee for employer-based health insurance increases by 105.18 dollars from before to after 2014 in a state that implements a partnership exchange. This result is significant with a p-value of 0.000. Neither the estimated coefficient on the  $post_t * FederallyFacilitatedNew_s$  nor the estimated coefficient on the  $post_t * StateBasedNew_s$  variable is significant in this regression, which means that implementing a federally-facilitated or state-based exchange instead of a partnership one does not additionally change the average monthly family premium from pre to post-2014. It is worth noting, however, that the standard errors of the

estimated coefficients on the  $\text{post}_t \text{ * FederallyFacilitatedNew}_s$  and  $\text{post}_t \text{ * StateBasedNew}_s$  variables are both quite large and economically significant at 21.40 and 23.59 dollars, respectively. As previously described, although I cannot determine the exact effect of either type of exchange, having such large standard deviations means there could potentially be negative effects, zero effects, or positive effects. Finally, as summarized in table 14, I do not find any significant results when my health insurance outcomes are the metal-tier premium prices.

When all three implementation variables are included in one regression, the only significant coefficients that I find are on the  $\text{post}_t \text{ * MedicaidExpansionNew}_s$  variable, as shown in table 15 below. I do not find any significant estimated coefficients on either the  $\text{post}_t \text{ * FederallyFacilitatedNew}_s$  or  $\text{post}_t \text{ * StateBasedNew}_s$  variables in any of my regressions. When the health insurance outcome is the uninsured rate, I find that implementing a Medicaid expansion additionally decreases the uninsured rate by 0.7 percentage points. This result is moderately significant with a 0.054 p-value. I also find that implementing a Medicaid expansion increases the proportion of people covered through Medicaid by 1.9 percentage points, this result being highly significant with a p-value of 0.000. Recalling my previous results, when the health insurance outcome was proportion covered through Medicaid and only  $\text{FederallyFacilitatedNew}_s$  and  $\text{StateBasedNew}_s$  were included as implementation variables, there was a significant estimated coefficient on the  $\text{post}_t \text{ * FederallyFacilitatedNew}_s$  variable. Because I do not find any significant coefficients on my  $\text{post}_t \text{ * FederallyFacilitatedNew}_s$  or  $\text{post}_t \text{ * StateBasedNew}_s$  variables in this new regression with all three implementation variables, I can

conclude that once I control for Medicaid expansion implementation, implementing a federally-facilitated or state-based exchange instead of a partnership one does not significantly additionally affect pre to post-2014 changes in any of my health insurance outcomes. The estimated coefficient on  $post_t * FederallyFacilitatedNew_s$  in my regression with only the  $FederallyFacilitatedNew_s$  and  $StateExchangeNew_s$  was

**Table 15. Medicaid Expansion Implementation, Exchange Implementation, and Health Insurance Outcomes**

INDEPENDENT VARIABLES	HEALTH INSURANCE OUTCOMES				
	Proportion Uninsured	Proportion Medicaid	Proportion Employer	Proportion Direct Purchase	Monthly Avg. Family Premium
MedicaidExpansionNew <sub>s</sub>	-0.025*** (0.0076)	0.020 (0.0155)	0.013 (0.0110)	-0.002 (0.0083)	-3.20 (26.68)
FederallyFacilitatedNew <sub>s</sub>	0.000 (0.0085)	-0.008 (0.0139)	-0.001 (0.0122)	0.002 (0.0080)	13.22 (31.20)
StateBasedNew <sub>s</sub>	-0.005 (0.0104)	-0.006 (0.0101)	-0.005 (0.0125)	0.016** (0.0061)	47.99 (39.15)
Post <sub>t</sub>	-0.012 (0.0075)	0.017 (0.0111)	-0.027*** (0.0067)	-0.000 (0.0073)	107.31** (24.91)
Post <sub>t</sub> *MedicaidExpansionNew <sub>s</sub>	-0.007* (0.0036)	0.019*** (0.0032)	-0.006 (0.0043)	-0.003 (0.0043)	2.24 (18.16)
Post <sub>t</sub> *FederallyFacilitatedNew <sub>s</sub>	0.001 (0.0063)	-0.003 (0.0082)	0.001 (0.0045)	0.004 (0.0054)	-26.27 (21.25)
Post <sub>t</sub> *StateBasedNew <sub>s</sub>	-0.009 (0.0079)	0.016 (0.0095)	-0.001 (0.0053)	-0.002 (0.0038)	6.74 (24.87)
R <sup>2</sup>	0.718	0.479	0.779	0.544	0.605
Sample Size	300	300	300	300	150

*Notes:* This table presents the estimated coefficients for each variable with standard errors in parentheses. \*\*\* Significant at the one percent level. \*\* Significant at the 5 percent level. \* Significant at the 10 percent level. Control variable results available upon request from the author.

likely significant because the results were correlated with the Medicaid expansion. I also do not find any significant results when my health insurance outcomes are the metal-tier premium prices, as shown in table 16 below.

**Table 16. Medicaid Expansion Implementation, Exchange Implementation and Metal-tier Premium Prices**

INDEPENDENT VARIABLE	HEALTH INSURANCE OUTCOMES	
	Monthly Silver Premium	Monthly Bronze Premium
MedicaidExpansion <sub>st</sub>	2.96 (28.21)	9.98 (22.36)
FederallyFacilitated <sub>st</sub>	23.78 (27.29)	17.96 (22.79)
StateBased <sub>st</sub>	-18.24 (25.77)	-27.20 (22.30)
R <sup>2</sup>	0.317	0.295
Sample Size	100	100

*Notes:* This table presents the estimated coefficients for each variable with standard errors in parentheses. \*\*\* Significant at the one percent level. \*\* Significant at the 5 percent level. \* Significant at the 10 percent level. Control variable results available upon request from the author.

#### *V. D. Partisanship → Health Insurance Outcomes (With Implementation)*

For my final group of regressions that examine how partisanship affects health insurance outcomes, using implementation as a mediator variable, I find that adding the MedicaidExpansionNew<sub>s</sub> as the implementation variable in my regressions does not drastically affect any of my previous results. The first change I see is that in my regression where the health insurance outcome is the proportion of people who get their insurance through a direct purchase, the partisanship variable

is DemocratLegislature<sub>st</sub>, and the implementation variable is MedicaidExpansionNew<sub>st</sub>, the coefficient on post<sub>t</sub> is now significant, whereas it was not in my Partisanship → Health Insurance Outcomes (Without Implementation) regressions. The other change I see is that for in my regressions where the health insurance outcome is the proportion of people who get their insurance through an employer, the implementation variable is MedicaidExpansionNew<sub>st</sub>, and partisanship is either DemocratGovernor<sub>st</sub> or DemocratLegislature<sub>st</sub>, the coefficient on Post<sub>t</sub>\*MedicaidExpansionNew<sub>s</sub> is no longer significant, whereas it was in my Implementation → Health Insurance Outcomes regressions. The results for the regressions where the implementation variable is MedicaidExpansionNew<sub>s</sub> and the partisanship variable is DemocratGovernor<sub>st</sub> are summarized in table 17 below and the results for the regressions where the implementation variable is MedicaidExpansionNew<sub>s</sub> and the partisanship variable is DemocratLegislature<sub>st</sub> are summarized in table 18 below.

As shown in tables 17 and 18 I do not find significant estimated coefficients on either my post<sub>t</sub>\*DemocratGovernor<sub>st</sub> or post<sub>t</sub>\*DemocratLegislature<sub>st</sub> variables in any of my regressions where MedicaidExpansionNew<sub>s</sub> is my implementation variable. This allows me to conclude that when I control for the indirect effect partisanship has on health insurance outcomes through Medicaid expansion implementation, having a Democrat governor or a Democrat legislature does not directly additionally affect pre to post-2014 changes in any of my health insurance outcomes. Furthermore, because I control for Medicaid expansion implementation and find that pre to post-2014 changes in health insurance outcomes are not coming



directly from partisanship, it means the changes in the health insurance outcomes must be coming through some other source. One example of another source that these changes could be coming from would be exchange implementation. For example, I am likely seeing a significant pre to post-2014 increase in the proportion

**Table 17. Executive Partisanship, Medicaid Expansion Implementation, and Health Insurance Outcomes**

INDEPENDENT VARIABLES	HEALTH INSURANCE OUTCOMES				
	Proportion Uninsured	Proportion Medicaid	Proportion Employer	Proportion Direct Purchase	Avg. Monthly Family Premium
MedicaidExpansionNew <sub>s</sub>	-0.023*** (0.0076)	0.018 (0.0108)	0.013 (0.0086)	0.002 (0.0070)	-45.47* (23.64)
DemocratGovernor <sub>st</sub>	-0.008 (0.0070)	0.011 (0.0080)	-0.002 (0.0064)	0.001 (0.0044)	35.11 (25.77)
Post <sub>t</sub>	-0.013*** (0.0043)	0.016** (0.0069)	-0.026*** (0.0053)	0.0056 (0.0038)	81.12*** (13.80)
Post <sub>t</sub> *MedicaidExpansionNew <sub>s</sub>	-0.013** (0.0052)	0.032*** (0.0054)	-0.006 (0.0044)	-0.009*** (0.0032)	30.51 (18.26)
Post <sub>t</sub> *DemocratGovernor <sub>st</sub>	0.001 (0.0073)	-0.005 (0.0078)	-0.001 (0.0064)	0.002 (0.0042)	-8.52 (18.94)
R <sup>2</sup>	0.719	0.477	0.779	0.516	0.599
Sample Size	300	300	300	300	150

*Notes:* This table presents the estimated coefficients for each variable with standard errors in parentheses. \*\*\* Significant at the one percent level. \*\* Significant at the 5 percent level. \* Significant at the 10 percent level. Control variable results available upon request from the author.

of people who get their insurance through a direct purchase and a significant decrease in the proportion of people who get their insurance through their employer because exchanges make it easier for individuals to obtain their insurance

through a direct purchase. When demand for insurance through an exchange increases, demand for insurance through other sources, such as employers, decreases. No matter what is causing the pre to post-2014 changes in health insurance outcomes, however, I can certainly be sure that it is not directly partisanship.

**Table 18. Legislative Partisanship, Medicaid Expansion Implementation, and Health Insurance Outcomes**

INDEPENDENT VARIABLE	HEALTH INSURANCE OUTCOMES				
	Proportion Uninsured	Proportion Medicaid	Proportion Employer	Proportion Direct Purchase	Avg. Monthly Family Premium
MedicaidExpansionNew <sub>s</sub>	-0.021*** (0.0067)	0.010* (0.0104)	0.015 (0.0101)	0.005 (0.0072)	-62.24** (24.94)
DemocratLegislature <sub>st</sub>	-0.010* (0.0056)	0.023** (0.0103)	-0.006 (0.0078)	-0.005 (0.0063)	48.88 (33.51)
Post <sub>t</sub>	-0.012** (0.0067)	0.014* (0.0074)	-0.026*** (0.0056)	0.006* (0.0041)	78.30*** (14.30)
Post <sub>t</sub> *MedicaidExpansionNew <sub>s</sub>	-0.016*** (0.0051)	0.032*** (0.0067)	-0.007 (0.0051)	-0.006* (0.0035)	56.29 (26.32)
Post <sub>t</sub> *DemocratLegislature <sub>st</sub>	0.006 (0.0054)	-0.003 (0.0074)	0.001 (0.0072)	-0.003 (0.0063)	-47.66 (30.77)
R <sup>2</sup>	0.717	0.495	0.779	0.499	0.592
Sample Size	294	294	294	294	147

*Notes:* This table presents the estimated coefficients for each variable with standard errors in parentheses. \*\*\* Significant at the one percent level. \*\* Significant at the 5 percent level. \* Significant at the 10 percent level. Control variable results available upon request from the author.

One other important note about these results is that, similar to in past results sections, when my health insurance outcome is the average monthly family

premium, the standard errors of the estimated coefficients on both my  $\text{post}_t * \text{DemocratGovernor}_{st}$  variable and  $\text{post}_t * \text{DemocratLegislature}_{st}$  variable are quite high and economically significant at 18.94 and 30.77 dollars, respectively. Although I cannot determine the exact effect a Democrat governor or Democrat legislature because of limited data, I can be 95 percent confident it falls within - 46.40 and 29.36 dollars when the partisanship variable is  $\text{DemocratGovernor}_{st}$  and - 109.20 and 13.88 dollars when the partisanship variable is  $\text{DemocratLegislature}_{st}$ .

Moving onto my regressions where the implementation variables are  $\text{FederallyFacilitatedNew}_s$  and  $\text{StateBasedNew}_s$ , I again find that adding  $\text{FederallyFacilitatedNew}_s$  and  $\text{StateBasedNew}_s$  to my Partisanship  $\rightarrow$  Health Insurance Outcomes regressions does not radically change any of my previous results. I first see changes in the estimated coefficients on my  $\text{post}_t$  variables when the health insurance outcome is proportion covered through a direct purchase for both the regression where my partisanship variable is  $\text{DemocratGovernor}_{st}$  and the regression where my partisanship variable is  $\text{DemocratLegislature}_{st}$ . In my Partisanship  $\rightarrow$  Health Insurance Outcomes (Without Implementation) the coefficients on  $\text{post}_t$  for each of these regressions was positive, whereas it is now negative. I also find that there are some slight differences on some of the coefficients for the  $\text{post}_t * \text{FederallyFacilitatedNew}_s$  and  $\text{post}_t * \text{StateBasedNew}_s$  variables. In the regression where partisanship is  $\text{DemocratGovernor}_{st}$ , and the health insurance outcome is the average monthly family premium, the estimated coefficient on  $\text{post}_t * \text{FederallyFacilitatedNew}_s$  is significant, whereas it was not in my Implementation  $\rightarrow$  Health Insurance Outcomes regressions. Similarly, when the

**Table 19. Executive Partisanship, State Exchange Implementation, and Health Insurance Outcomes**

INDEPENDENT VARIABLE	HEALTH INSURANCE OUTCOMES				
	Proportion Uninsured	Proportion Medicaid	Proportion Employer	Proportion Direct Purchase	Avg. Monthly Family Premium
FederallyFacilitatedNew <sub>s</sub>	0.007 (0.0094)	-0.011 (0.0113)	-0.009 (0.0107)	0.003 (0.0065)	48.82* (27.23)
StateBasedNew <sub>s</sub>	-0.008 (0.0110)	-0.003 (0.0102)	-0.004 (0.0127)	0.016*** (0.0059)	-44.42 (33.60)
DemocratGovernor <sub>st</sub>	-0.012 (0.0082)	0.013 (0.0094)	-0.000 (0.0069)	0.000 (0.0045)	54.39* (25.70)
Post <sub>t</sub>	-0.024*** (0.0079)	0.041*** (0.0114)	-0.029*** (0.0077)	-0.005 (0.0053)	132.29*** (25.65)
Post <sub>t</sub> *FederallyFacilitatedNew <sub>s</sub>	0.011 (0.0072)	-0.022** (0.0094)	0.003 (0.0049)	0.008** (0.0039)	-49.38** (24.59)
Post <sub>t</sub> *StateBasedNew <sub>s</sub>	-0.004 (0.0080)	0.013 (0.0110)	-0.000 (0.0049)	-0.003 (0.0044)	6.97 (23.88)
Post <sub>t</sub> *DemocratGovernor <sub>st</sub>	0.002 (0.0075)	-0.006 (0.0090)	-0.002 (0.0059)	0.003 (0.0044)	-29.31 (20.58)
R <sup>2</sup>	0.682	0.434	0.775	0.543	0.620
Sample Size	300	300	300	300	150

*Notes:* This table presents the estimated coefficients for each variable with standard errors in parentheses. \*\*\* Significant at the one percent level. \*\* Significant at the 5 percent level. \* Significant at the 10 percent level. Control variable results available upon request from the author.

partisanship variable is DemocratLegislature<sub>st</sub>, and the health insurance outcomes are proportion uninsured and proportion of people who get their insurance through a direct purchase, the estimated coefficient on the post<sub>t</sub>\*FederallyFacilitatedNew<sub>s</sub> variables are significant and not significant, respectively. In my Implementation → Health Insurance Outcomes regressions, the estimated coefficients on these

variables were not significant and significant, respectively. The results for the regressions where the implementation variables are  $FederallyFacilitatedNew_s$  and  $StateBasedNew_s$  and the partisanship variable is  $DemocratGovernor_{st}$  are summarized in table 19 above and the results for the regressions where the implementation variables is  $FederallyFacilitatedNew_s$  and  $StateBasedNew_s$  and the partisanship variable is  $DemocratLegislature_{st}$  are summarized in table 20 below.

My results do not yield significant estimated coefficients on the  $post_t * DemocratGovernor_{st}$  or the  $post_t * DemocratLegislature_{st}$  variables for any of my health insurance outcomes. This allows me to conclude that once partisanship's indirect effect through federally-facilitated or state-exchange implementation is controlled for, partisanship does not additionally directly affect pre to post-2014 changes in any of my health insurance outcomes. Pre to post-2014 changes in health insurance outcomes are coming from other sources. One such source perhaps could be the through advertisement of the ACA. When the ACA was first implemented, it received a great deal of press and, especially in states that supported it, a lot of advertisement. Advertisement and press relating to the ACA could increase the public's general knowledge about some of the law's provisions, such as the individual mandate. If people realize that they need to be insured in order to prevent receiving a tax penalty, they will seek out ways to obtain insurance either through Medicaid, a direct purchase on the exchange, or through an employer, which could change pre to post-2014 health insurance outcomes, for example, in this case decrease the overall uninsured rate.

**Table 20. Legislative Partisanship, State Exchange Implementation, and Health Insurance Outcomes**

INDEPENDENT VARIABLE	HEALTH INSURANCE OUTCOMES				
	Proportion Uninsured	Proportion Medicaid	Proportion Employer	Proportion Direct Purchase	Avg. Monthly Family Premium
FederallyFacilitatedNew <sub>s</sub>	0.005 (0.0090)	-0.005 (0.0128)	-0.009 (0.0116)	0.000 (0.0066)	33.57 (27.51)
StateBasedNew <sub>s</sub>	-0.008 (0.0115)	-0.001 (0.0105)	-0.004 (0.0127)	0.015** (0.0148)	-66.33* (66.33)
DemocratLegislature <sub>st</sub>	-0.017** (0.0078)	0.027** (0.0128)	-0.001 (0.0074)	-0.005 (0.0056)	53.60* (30.46)
Post <sub>t</sub>	-0.026*** (0.0091)	0.039*** (0.0130)	-0.030*** (0.0073)	-0.002 (0.0058)	125.35*** (25.69)
Post <sub>t</sub> *FederallyFacilitatedNew <sub>s</sub>	0.013* (0.0072)	-0.023** (0.0110)	0.004 (0.0043)	0.007 (0.0044)	-42.81 (25.76)
Post <sub>t</sub> *StateBasedNew <sub>s</sub>	-0.004 (0.0089)	0.008 (0.0123)	-0.000 (0.0049)	-0.000 (0.0045)	30.23 (31.48)
Post <sub>t</sub> *DemocratLegislature <sub>st</sub>	0.006 (0.0045)	0.001 (0.0077)	-0.001 (0.0056)	-0.003 (0.0039)	-53.94 (30.10)
R <sup>2</sup>	0.687	0.474	0.774	0.529	0.610
Sample Size	294	294	294	294	147

*Notes:* This table presents the estimated coefficients for each variable with standard errors in parentheses. \*\*\* Significant at the one percent level. \*\* Significant at the 5 percent level. \* Significant at the 10 percent level. Control variable results available upon request from the author.

## VI. Conclusion

The motivating question I ask at the beginning of this study is how much does economic policy differ when Republicans are in power versus when Democrats are? Furthermore, how do these possible differing policies affect economic outcomes? Using the ACA as my economic policy, I narrow this motivating question

even further and ask, how does the executive and legislative partisanship of a state affect how the state implements the Medicaid expansion and state exchange components of the law and, as a result, constituents' access to health insurance? To answer my question, I complete a mediation analysis using state-level annual data from 2010 to 2015. The central question I ask in my mediation analysis is does state partisanship affect health insurance outcomes?

On one hand, I find that pre to post-2014 changes in the following health insurance outcomes are not significantly different in states that have Democrat governors compared to ones that have Republican or Independent governors: proportion uninsured, proportion of people covered through an employer, proportion of people covered through a direct purchase, average monthly family premium for employee for employer-based health insurance, and the monthly silver and bronze premiums for a 40 year-old non-smoker making \$30,000 per year before tax credits. The same result is true for states that have Democrat legislatures compared to states that have Republican or split ones. On the other hand, pre to post-2014 changes in the proportion of people covered through Medicaid do significantly differ in states that have Democrat legislatures compared to in states that have Republican or split ones. I find that having a Democrat legislature increases the proportion of people covered through Medicaid by 1.7 percentage points from pre to post-2014.

Even though I only find that partisanship has an effect on the pre to post-2014 change in one health insurance outcome, I cannot prematurely conclude that partisanship does not affect health insurance outcomes at all. I hypothesize that

partisanship affects ACA implementation, and that ACA implementation has an effect on health insurance outcomes, which means that partisanship could indirectly be affecting health insurance outcomes through implementation. To examine this possible indirect effect more in depth, the next part of my mediation analysis involves examining how partisanship affects ACA implementation. In this part of my mediation analysis, I find that having a Democrat governor increases the probability of a Medicaid expansion by 19.9 percentage points, the probability of a state-based exchange by 11.9 percentage points, and the probability of a partnership exchange by 14.0 percentage points. Having a Democrat governor decreases the probability of a federally-facilitated exchange by 25.9 percentage points. Moreover, having a Democrat legislature increases the probability of a Medicaid expansion by 51.6 percentage points, the probability of a state-based exchange by 18.7 percentage points, and the probability of a partnership exchange by 15.6 percentage points. Having a Democrat legislature decreases the probability of a federally-facilitated exchange by 34.4 percentage points.

I then move on to examine how implementation of the two components of the ACA affects health insurance outcomes. The pre to post-2014 change in the uninsured rate was 1.2 percentage points higher in states that implemented the Medicaid expansion compared to those that did not. I also find that the proportion of people covered through Medicaid and the average monthly family premium per employee for employer-based health insurance increased by 1.5 percentage points and 1008.12 dollars, respectively, from pre to post-2014 in non-expansion states. Implementing a Medicaid expansion additionally increased the proportion of people



covered through Medicaid by 2.9 percentage points. The pre to post-2014 changes in each of my health insurance outcomes were not significantly different when a federally-facilitated or state-based exchange was implemented instead of a partnership one.

To complete my mediation analysis, I re-run the exact same regressions I ran when examining how partisanship affects health insurance outcomes, but this time use implementation of the two components of the ACA as a mediator variables. Doing this allows me to look at how implementation choices mediate the relationship between partisanship and health insurance outcomes. When the mediator variable is Medicaid expansion implementation, I find that pre to post-2014 changes in each of my health insurance outcomes are not significantly different in states that had a Democrat governor compared to states that had Republican or Independent ones. I find the same results to be true when examining legislative partisanship. I also find the same results when the mediator variables are a federally-facilitated and state-based exchange. In other words, controlling for implementation, pre to post-2014 changes in health insurance outcomes are not significantly different in states that have a Democrat governor or legislature compared to states that do not. From these results, I can conclude that partisanship only has an indirect effect through implementation on health insurance outcomes. This indirect effect can be separated into two parts. First, partisanship affects whether or not the state expands Medicaid and which type of exchange the state implements. Second, implementation then affects some health insurance outcomes,

as described above, which means that partisanship is essentially affecting health insurance outcomes through implementation decisions.

In conclusion, economic policy does differ when Republicans are in power versus when Democrats are; however such differing policies do not always lead to different economic outcomes under each party. During the time in which this research was in progress, the partisanship of the president changed, leaving the ACA's future status uncertain. Because of this, it is hard to attribute my findings to any future ACA policies; however, my findings do have policy implications beyond the ACA. First, when the federal government enacts a law that is a federal law, but allows states to have some control over how they choose to implement it, the federal government must be aware that Republican and Democrat states will implement it differently, just as they implemented the ACA differently. The federal government cannot assume that states will enact the law exactly how it prefers, especially when the state is controlled by a different partisanship than the presidency. Applying this theory to other policies, in education policy, the federal government sets national educational guidelines and provides federal funding to school districts that follow such guidelines. Each state, however, is largely given control over whether or not it wants to follow these guidelines, how it wants to operate public schools, what its curriculum will be, and graduation requirements (Thomson Reuters 2017). Although federal agencies, such as the Department of Education, can recommend graduation thresholds and curriculum, there is no way for the federal government to enforce that states will follow them. In other words, similar to the ACA, the federal government must be aware that Republican and Democrat states will implement

education policy differently, with states that are controlled by the same partisanship as the presidency likely choosing to implement the federal guidelines. Moreover, states that do and do not implement the federal guidelines might experience differences in education levels, just as states that did and did not implement the Medicaid expansion experienced differences in health insurance outcomes.

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