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Responding to the Affordable Care Act: Health Insurance Exchange Policy Diffusion

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Responding to the Affordable Care Act:
Health Insurance Exchange Policy Diffusion

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Political Science Honors Thesis

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Abstract

Following the passage of the Affordable Care Act, the government of each U.S. state either adopted a state run health insurance exchange or defaulted to a federally run exchange. This study uses event history analysis to examine this decision making process and the broader diffusion of health insurance exchange policy among the states. The results of this analysis indicate that states with a government controlled by the Democratic Party, a moralistic political culture, and a large uninsured population were more likely to adopt a state run exchange at an earlier date.
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Table of Contents

Chapter 1: Introduction ......................................................... Page 1

Chapter 2: Historical Background Information ................................. Page 9

Chapter 3: Literature Review ................................................... Page 19

Chapter 4: Methodology ......................................................... Page 45

Chapter 5: Analysis .............................................................. Page 62

Chapter 6: Conclusion ............................................................ Page 85

Appendix A: Measurement Techniques and Data Sources for Variables ............... Page 90

Appendix B: Descriptive Statistics ............................................. Page 92

Reference ................................................................. Page 96
Chapter 1: Introduction

The United States is currently in the throes of a health care crisis. 48 million Americans lack health insurance (U.S. Census Bureau 2012a), the United States spends more money on health care than any other nation in the world (Kaiser Family Foundation 2012c), and despite this additional spending, the U.S. health care system ranks 37th in the world, behind middle income countries like Cuba and Saudi Arabia (World Health Organization 2000). In March 2010, the US government began to address this crisis by passing the Patient Protection and Affordable Care Act (ACA). The ACA aims to increase insurance coverage and lower healthcare costs through an expansion of eligibility for public insurance programs, reforms of the private health insurance market, and a requirement that individuals purchase insurance coverage or pay a tax penalty (Kaiser Family Foundation 2012d, 9). The creation of health insurance exchanges is a fundamental element of this legislation. A health insurance exchange is a competitive, yet regulated, marketplace where individuals and small businesses can purchase affordable health insurance coverage (United States Department of Health and Human Services 2012; hereafter USDHHS). By simplifying and clarifying the health insurance purchasing process for consumers and by grouping small businesses and individuals into larger risk pools, health insurance exchanges are expected to both increase insurance coverage and lower insurance premiums. Under the ACA, a health insurance exchange must be operating in every state by 2014 (Kaiser Family Foundation 2012a, 1).

In responding to this requirement of the ACA, states were faced with an important policy decision. States were given the option of either creating a fully state-based exchange, partnering with the federal government to develop and operate an exchange, or
allowing the federal government to completely design and operate an exchange on the state’s behalf. States were required to inform the U.S. Department of Health and Human Services of their decision on this issue by December 14, 2012 (Kaiser Family Foundation 2012a, 1). During the two and a half years between the initial passage of the ACA and the federal decision deadline, state health insurance exchange policy spread among the states as twenty four states and the District of Columbia either established or declared their intent to establish a state-based or federal-state partnership exchange (Kaiser Family Foundation 2013b).

Examining all of the states’ decisions on this issue and the larger spread of health insurance exchange policy raises a number of questions: Why did certain states establish a health insurance exchange while other states did not? What diverse array of factors played a role in each state’s unique decision to either establish or not establish an exchange? Why did certain states establish an exchange earlier than other states? Given the sharply partisan discourse surrounding the passage of the ACA, it may be tempting to assume that Democratic state governments uniformly adopted health insurance exchange policy, while Republican state governments did not. However, the decision of a few traditionally Republican states such as Idaho, Utah, and Iowa to establish state run or federal state partnership exchanges (Kaiser Family Foundation 2013b) indicates that factors beyond the party control of the state government play a role in the spread of this policy. By examining the spread of health insurance exchange policy among the states, this study provides some answers to the above questions and some key insights into the process of health insurance exchange policy adoption.
The recent spread of health insurance exchange policy is an example of the process of policy diffusion in action. Policy diffusion is defined as the spread of policy innovations among governments over time (Rogers 1983, 5; Shipan and Volden 2012, 788). A significant literature examines the process of policy diffusion among national, municipal, and state governments globally. The main theory underlying the policy diffusion literature is Lawrence Mohr’s theory of the determinants of innovations (1969). Mohr theorizes that innovation among organizations is “directly related to the motivation to innovate, inversely related to the strength of obstacles to innovation, and directly related to the availability of resources for overcoming such obstacles” (1969, 114). Using the existing policy diffusion literature and Mohr’s theory as a guide, I statistically examine the impact of a variety of independent variables on health insurance exchange policy adoption. All of the selected factors either directly measure or directly impact the motivation to innovate, the obstacles to innovation, or the resources available for overcoming these obstacles.

Using Mohr’s theory as a framework, I argue that the motivation to innovate is the key factor in the diffusion of health insurance exchange policy. While the obstacles to innovation and the resources available for overcoming those obstacles may also have an impact, the variables which measured the motivation to innovate consistently had a statistically significant impact on health insurance exchange policy diffusion. Of the variables measuring the motivation to innovate, the party control of the state’s government, the state’s political culture, and the size of the state’s uninsured population are particularly important determinants of health insurance exchange policy adoption. On the whole, states with governments controlled by the Democratic Party, states with a
moralistic political culture, and states with a higher uninsured population have a greater motivation to adopt health insurance exchange policy than states without these characteristics. Statistical analyses confirm that states with these characteristics are indeed more likely to adopt health insurance exchange policy.

The findings of this thesis are useful to both health policy leaders and policy diffusion scholars. Admittedly, the broader implications of this study are somewhat limited, since the diffusion of each policy is a unique process. However, similar public policies tend to diffuse in similar ways. Accordingly, this study provides significant insights into the diffusion of health reform policy generally. Healthcare reform is a complicated public policy issue and despite the passage of the ACA, state and national governments will continue to adopt health reform policies, including further reforms of the states’ health insurance exchanges. Indeed, states are currently in the process of deciding whether to expand the eligibility of their Medicaid program under the ACA (Somashekhar 2013). Although the specifics of the diffusion of each health policy will be different, similar factors are likely to play a role in health insurance exchange policy diffusion and the diffusion of other health reforms. Since the motivation to innovate is the primary determinant of health insurance exchange policy adoption, it is likely to also be the primary factor in determining the adoption of other health reform policies. Armed with this information, policy leaders can successfully advocate for health reform policies in the future. More specifically, policy leaders can directly use the findings of this study to efficiently focus their advocacy on increasing the state government’s motivation to innovate. For example, since states with a higher uninsured population were more likely to adopt health insurance exchange policy, policy advocates can subsequently emphasize
their state’s uninsured population, the challenges this population faces, and the ways in which the given policy addresses these challenges in order to effectively increase the government’s motivation to adopt the policy innovation. Overall, the findings of this research can be used by policy leaders to increase their capacity to create change through public policy adoption.

In addition to providing public policy leaders with knowledge applicable to their work, this thesis also contributes to the corresponding academic literature. Although the policy diffusion literature is currently a prolific area of academic study, the field developed fairly recently. Due to the recent development of this literature, only a few studies examine each public policy area. Accordingly, a limited literature examines the diffusion of health reform policies (Balla 2001; Karch 2006; Karch 2007a; Stream 1999; Volden 2006). Additionally, since the health insurance exchange diffusion process ended less than six months ago, this study is a foray into an unexamined topic in the broader literature. Since similar policies often diffuse in similar ways, the findings of this study can assist scholars in the development of future health policy diffusion studies. Indeed, much of the methodological design of this research and in particular, the selection of variables to include in the statistical analyses, was informed by the findings of the existing health policy diffusion literature. By alerting scholars to the relative importance of the motivation to innovate in health policy diffusion processes, this study encourages scholars to focus their future research on the motivation of state governments to adopt the health policy being studied.

I begin this thesis with a brief background on health insurance exchanges and their history in the United States. In this section, I outline the specific features and
functions of a health insurance exchange with the specific aim of explaining how health insurance exchanges are expected to increase health insurance coverage and lower the cost of health insurance premiums. For the most part, these objectives are achieved by addressing some of the inherent challenges of the health insurance market. Accordingly, this discussion is framed as an explanation of a few health insurance market challenges and how health insurance exchanges address these challenges. I then chart the historical emergence of health insurance exchanges as an element of comprehensive health reform in the United States. Although they were referred to as health insurance alliances at the time, health insurance exchanges first appeared in a national comprehensive health reform plan in President Clinton’s 1994 health reform proposal (Starr 1994, 85). Although Clinton’s reform effort failed, a health insurance exchange was successfully implemented at the state wide level in Massachusetts in 2006 (Kaiser Family Foundation 2012d). Using Massachusetts’ reform efforts as an example, the federal government passed the ACA, which, among other reforms, requires each state to have an operational health insurance exchange (Kaiser Family Foundation 2012d, 7). After outlining this history, I explain the requirements the ACA places on states in regards to health insurance exchange establishment. Altogether, Chapter 2 explains the historical context underlying health insurance exchange policy diffusion.

After explaining the practical context of this study, I discuss the academic and theoretical context of the study. More specifically, Chapter 3 reviews the policy diffusion literature. The chapter begins with a discussion of the theory underlying the policy diffusion literature and the subsequent development of the literature. As discussed earlier in the introduction, Lawrence Mohr’s theory of the diffusion of innovations underlies the
policy diffusion literature. To review, Mohr theorizes that innovation is negatively associated with the obstacles to innovation and is positively associated with the motivation to innovate and the resources available for overcoming the obstacles to innovation (1969, 114). Mohr’s theoretical concepts were applied to the ideas of the policy determinants literature, which examines the relationship between policy outcomes, state characteristics, and the political process, to form the contemporary policy diffusion literature. By explaining how internal state characteristics, aspects of the political process, and the actions of actors external to a state government can impact policy diffusion using Mohr’s theory, Berry and Berry developed the policy diffusion literature. They were also the first scholars to apply the statistical methods of event history analysis to the study of policy diffusion (Berry and Berry 1990). Since the contemporary policy diffusion literature is relatively complex and lacks organization\(^1\), I present this literature by listing several independent factors that are expected to have an impact on policy diffusion and that are usually included in policy diffusion studies. Mohr’s theory explains each variable’s expected impact on policy diffusion. The factors outlined in this section are also included as variables in this study’s statistical analyses. Due to the strong involvement of the federal government in the process of health insurance exchange policy diffusion, I also outline some of the ways in which the federal government can impact policy diffusion. Since similar policies’ diffusion processes are often impacted by similar factors, Chapter 3 concludes with a discussion of some of the factors that specifically play a role in the diffusion of health policies.

\(^1\) Shipan and Volden describe the complexity of the literature, “Indeed, it is hard to see the forest through all the trees” (2012).
In Chapter 4, I explain the statistical methods I use to determine the impact of the variables discussed in Chapter 3 on health insurance exchange policy diffusion. More specifically, I use the standard statistical method for policy diffusion studies, event history analysis. Event history analysis is a branch of statistics that examines and explains patterns of events (Yamaguchi 1991, 1). In this case, this technique is used to explain state health insurance exchange policy adoptions. After describing how I specifically use event history analysis in this research, I outline the dependent variable and many independent variables used in this study. I also explain how each variable was measured and cite the sources from which I gathered data.

Chapter 5 outlines the findings of the analyses described in Chapter 4. The findings of these analyses indicate that the partisan makeup of the state’s government, the state’s political culture, and the size of the state’s uninsured population have a statistically significant impact on the likelihood that a state will establish a state run or partnership exchange. Since all of these variables measure a state’s motivation to adopt the policy, these results also demonstrate that the motivation to innovate is the most explanatory element of Mohr’s theory in the case of health insurance exchange policy diffusion. I conclude the chapter with a discussion of the broader policy implications of these findings.

Finally, I conclude the thesis with a summary of the study and its findings and a discussion of avenues for further health policy diffusion research. Altogether, this research provides notable insights into the recent process of health insurance exchange policy diffusion and into the diffusion and adoption of healthcare policies generally.
Chapter 2: Historical Background Information

Introduction

Over the past two years, each state has decided whether or not to adopt health insurance exchange legislation. While the impetus for this decision making process was the passage of the Affordable Care Act, health insurance exchanges emerged as an element of health reform proposals before 2010. A general understanding of health insurance exchanges and their history is fundamental to understanding their vital role in the national model for reform and subsequent spread throughout the United States. I begin this chapter by explaining how a health insurance exchange addresses some of the unique challenges of the health insurance market. For example, health insurance exchanges are expected to help lower the extremely high premium costs paid by small businesses and individuals. I then briefly chart the emergence of the health insurance exchange as a reform proposal on the national stage and its adoption at the state level in Massachusetts in order to provide some historical context to its inclusion in the ACA. Finally, I discuss the ACA and the requirements it places on states in regards to health insurance exchanges. Overall, this chapter provides an understanding of the historical and policy context of state governments’ health insurance exchange policy adoptions. The background information presented in this chapter is essential to understanding why state governments are seriously considering health insurance exchange policy adoption and to understand why and how the federal government has promoted state health insurance exchange policy adoption.
Health Insurance Exchanges: Addressing the Unique Challenges of the Private Health Insurance Market

The private health insurance market is rife with challenges that reformers must overcome in order to achieve comprehensive health reform. In this section, I outline a few of these challenges and discuss how a health insurance exchange addresses these issues. I also describe the typical features and functions of a health insurance exchange.

The unique dynamics between consumers and providers of health insurance have created several challenging features and practices within the private health insurance market. The main root of most of these challenges is a lack of information, whether on the part of the consumer or the provider. First of all, the consumer usually does not have enough information about insurers and the plans they offer to make an appropriate, cost effective purchasing decision. Although a lack of appropriate consumer knowledge is often an issue in the purchase of products, in the context of health care decisions, the gap in information between providers and consumers is particularly large. Health care decisions are often complex and technical and consumers tend to trust the advice of experts such as insurance providers (Henderson 2005, 163). Additionally, for the many Americans who receive health insurance through their employer, there is often no choice in selecting an insurance plan as the employer only offers one option. About 47 percent of individuals who receive health benefits through their employer do not have a choice of insurance plans (Villegas 2009). The result is a system in which consumers rarely have the information or ability to make an educated health insurance purchasing decision.

Within the health insurance market, insurance companies also lack a significant amount of important information, namely the future medical needs of an individual.
Understandably, some uncertainty will always exist regarding this issue, as the need for medical care is unpredictable. However, insurance companies also need to predict future medical needs as much as possible in order to ensure they collect enough money from the insurance pool to pay for the health care needed by the pool and the administrative costs of the company (Henderson 2005, 160). Achieving the appropriate financial balance between insurance premiums and health care payments is easier with a larger rather than a smaller insurance pool. The larger the number of individuals in the pool, the larger the number of healthy individuals who can offset the increased medical care costs of a sick or injured individual (Henderson 2005, 160). The realities of risk pooling make it challenging for small businesses and individuals to purchase health insurance. While a large business with many employees will have a large enough pool to appropriately spread the risk, a small business with only a few employees will not. If a few employees are older than average, have significant preexisting medical conditions, or become very sick, the premium costs for the pool will increase dramatically to offset this risk. As a result, many small businesses do not offer medical benefits (The Washington Post 2009). This problem is exacerbated for individuals entering the market on their own. Since these individuals are not pooled at all, their premiums, deductibles, and copays are very high (Pickert 2009). According to a Commonwealth Fund report, 57% of individuals seeking private insurance found it difficult or impossible to find affordable coverage and 36% of individuals seeking coverage were either denied coverage or charged more due to a preexisting medical condition (Doty et al. 2009, 2-3).

Health insurance exchanges effectively address both the lack of consumer information and the increased premium costs paid by small businesses and individuals.
According to the White House, a health insurance exchange is a state-based competitive marketplace where individuals and small businesses can purchase affordable private health insurance (USDHHS 2012). The exchange serves three major functions. Firstly, the exchange groups individuals and small business employees into larger insurance pools. Since the larger pools formed through the exchange spread the risk of insuring small business employees and individuals over a larger group, exchanges are expected to lower premiums for small businesses and individuals (Pickert 2009). Secondly, the exchange can serve a regulatory function by determining which insurance companies are allowed to sell which insurance plans on the exchange (USDHHS 2012). At the very least, all plans being sold on the exchange must offer a minimum package of essential health benefits (Pickert 2009).

Finally, most of the specific functions and features of the exchange are aimed at addressing the lack of consumer information in the purchasing process by improving the ability of consumers to make educated purchasing decisions. To fulfill this objective, exchanges rate insurance plans based on quality and price, provide information about insurance plans in a standard format, provide consumers with a calculator that determines the cost of insurance after accounting for federal benefits, determine eligibility for federal tax benefits or other public coverage programs such as Medicaid, operate both a website and telephone hotline where consumers can receive information and purchase coverage.

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2 States may choose to run their exchange under a clearinghouse model, in which the exchange must contract with all insurance companies meeting the minimum requirements. However, the state may also adopt an active purchaser model in which the exchange selectively contracts with insurers. This model allows the exchange to further improve quality and cost by refusing to contract with companies who do not meet additional standards. States are actively pursuing both models, although active purchasing is more common overall (Kaiser Family Foundation 2012a).

3 The ACA defines essential health benefits as coverage in the following areas: ambulatory patient services, emergency services, hospitalization, maternity and newborn care, mental health and substance abuse services, prescription drugs, rehabilitation services and devices, laboratory services, preventative care, chronic disease management, and pediatric care, including dental and vision (USDHHS 2013).
and hire navigators, who will help consumers make purchasing decisions and access their insurance coverage in person (USDHHS 2012). These functions of the exchange and in particular the website have been likened to version of Travelocity or Expedia for health insurance. Although not an exact analogy, the exchange websites will allow consumers to directly compare the costs and benefits of different health plans from different companies (The District of Colombia). Altogether, health insurance exchange should make purchasing health insurance a transparent and easy process for consumers (Pickert 2009).

**Adopting Health Insurance Exchanges: From Massachusetts to Washington to the States**

Although health insurance exchanges were only recently adopted nationwide as an element of comprehensive health reform legislation, Massachusetts implemented an exchange at the statewide level prior to the adoption of the ACA. The health care reforms instituted in Massachusetts, including the exchange, were a policy example emulated by the federal government. Many of the basic elements of Massachusetts’ reform legislation diffused from the state to the national level and were ultimately included in the ACA, including state run health insurance exchanges. The ACA requires states to decide whether they will establish a health insurance exchange themselves or default to a federally run exchange.

Although first implemented in Massachusetts, health insurance exchanges emerged on the national level as an element of President Clinton’s failed 1993 healthcare reform plan. One provision of his plan was the creation of health insurance “alliances”. Health insurance alliances would have covered employees of businesses with fewer than 5,000 employees and individuals not receiving insurance through their employer.
Alternatively, businesses with more than 5,000 employees would have chosen to either establish their own corporate alliance or participate in the existing alliance (Starr 1994, 85). Although Clinton’s efforts were unsuccessful, the extensive discussion of his plan increased the profile of health insurance alliances, later referred to as health insurance exchanges, in the national health policy conversation.

After Clinton’s efforts failed, major attempts to achieve universal health coverage occurred primarily at the state level with Massachusetts being the first state to actually enact comprehensive health reform legislation. Massachusetts has a long history as a leader in health reform (Gray 1994, 217) and this history continued on April 12, 2006 when Governor Mitt Romney signed Massachusetts’ bipartisan health reform bill into law (McDonough 2011, 37). This legislation reformed the existing insurance system, expanded eligibility for state coverage programs, required everyone to purchase health insurance, and created a health insurance exchange (Kaiser Family Foundation 2012d; Raymond 2011; Massachusetts Health Connector 2012).

Through Massachusetts’ exchange, called the Health Connector, individuals receive either subsidized insurance, which allows low income individuals to pay an income adjusted sliding scale premium, (Raymond 2011, 6) or non-subsidized insurance (Kaiser Family Foundation 2012d, 2). The exchange selects participating insurers based on the quality and cost of their coverage and the size of their provider network, and presents insurance plan options to consumers in a clear manner (Raymond 2011, 17-8). Small businesses can provide their employees with insurance coverage through the exchange’s Business Express program (Raymond 2011, 18). In the five years since Massachusetts implemented health reform legislation (McDonough 2011, 42), insurance
coverage and access to care have improved, while costs have been unaffected. In terms of expanding insurance coverage, the Massachusetts reform plan has been successful. Since the passage of reform, an estimated 411,000 Massachusetts residents have gained insurance coverage (Raymond 2011, 26) and the number of uninsured residents has dropped to 1.9% of the population, the lowest in the nation (Raymond 2011, 26; Massachusetts Health Connector 2012). Additionally, access to medical care has improved throughout the entire population. The number of unnecessary emergency care visits and hospital stays has decreased, as has the number of adults struggling to pay for care (Kaiser Family Foundation 2012d, 5). The number of people using primary care doctors and engaging in preventative care has increased. Racial and ethnic disparities in access to care have also decreased (Raymond 2011, 26). However, despite these improvements in coverage and access, the cost of care continues to be a problem in Massachusetts. Although state legislators made a conscious effort to focus first and foremost on addressing coverage issues with their reform effort (Raymond 2011, 28), the state has the highest individual market premiums in the nation and spends significantly more than the national average on health care (Kaiser Family Foundation 2012d, 7). In response, the state has continued to further reform the system in an effort to contain costs (Raymond 2011, 28).

Using the Massachusetts reform effort as a model, the federal government enacted comprehensive health reform legislation in March 2010 with the passage of the ACA. There are a few differences between the two pieces of legislation. However, most of these differences are due to the larger scope of the federal legislation. For example, the ACA also reforms existing federal health programs such as Medicare. Despite these
differences, the mechanisms for expanding insurance coverage included in the ACA are very similar to the reforms enacted in Massachusetts (Kaiser Family Foundation 2012d, 7). In addition to a number of reforms aimed at cost containment and quality improvement⁴, the ACA expands insurance coverage by increasing Medicaid eligibility, instituting private health insurance market reforms, enacting an individual mandate, which requires individuals to purchase insurance or pay a tax penalty, providing tax credits to help eligible individuals afford insurance premiums, and creating health insurance exchanges in each state where individuals and small businesses can purchase health insurance (Kaiser Family Foundation 2012d, 9).

The portion of the ACA which establishes health insurance exchanges in each of the US states and the District of Columbia requires states to make a crucial policy decision. By January 1, 2014, a health insurance exchange must be operating in every state. While the intent of the law is for states to establish these exchanges themselves, the Federal Department of Health and Human Services will establish and run an exchange for the state if the state is unable or is unwilling to do so (McDonough 2011, 114). In responding to this requirement of the ACA, states have three policy options. States may establish their own state-based exchange, enter into a partnership exchange between the state and the federal government, or default through a lack of action to a federally run exchange (Kaiser Family Foundation 2012a, 1). In an entirely state-based exchange, each state’s government is responsible for operating all of the features and functions of the exchange. A state-based exchange has the advantage of offering the state a degree of autonomy from the federal government in developing and operating their exchange.

⁴ Some of these additional reforms include reforms to Medicare, creating preventative care programs, increasing the healthcare workforce, providing financial support to disabled individuals to allow them to live at home, and encouraging pharmaceutical innovation (McDonough 2011, 104).
When state governments develop an exchange themselves, they are able to craft an exchange that suits their state’s private insurance market and effectively serves their state’s population. Beginning in 2017, states may even receive a waiver from certain exchange requirements of the ACA if the state’s proposed insurance coverage plan is at least as comprehensive as the ACA’s exchange system (Kaiser Family Foundation 2011, 7). In a partnership exchange the state operates some of the exchange functions, while the federal government runs the rest of the exchange. The specifics of this division of labor are determined individually for each state establishing a partnership exchange. When a state adopts a partnership exchange, the state is able to both develop an exchange uniquely suited to its needs and receive additional support and resources from the federal government. The partnership exchanges are a particularly viable option for states with small populations as these states could benefit from the additional resources of the federal government. However, this is not always the case, since Illinois is establishing a partnership exchange (Kaiser Family Foundation 2012a, 2). States that default to a federal exchange have little to no control over the design and functionality of their exchange. However, state governments in states with federal exchanges do not need to expend personnel or financial resources on the development and operation of the exchange. States were required to submit an application to the Department of Health and Human Services outlining their plan to establish an exchange by December 14, 2012 in order to pursue a state-run exchange (Kaiser Family Foundation 2012a, 1).

5 At this point, Vermont plans on taking advantage of this opportunity. The state’s exchange legislation established a plan for Vermont to transition from a typical exchange system to a single payer system that will provide coverage to all of the state’s residents in 2017 with an expected federal waiver (Kaiser Family Foundation 2013a).
Conclusion

Building off of Massachusetts’ example, the US government recently passed comprehensive health reform legislation. One of the major components of this legislation is the creation of a health insurance exchange in each state. These exchanges are expected to expand insurance coverage and control costs by addressing the knowledge disparities that exist between consumers and insurance companies. The exchanges work to lower insurance premiums and address insurance companies’ lack of knowledge concerning their consumers’ future healthcare needs by providing a marketplace where small businesses and individuals can pool their risk. Exchanges also disseminate information about insurance plan options transparently, providing consumers with the knowledge they need to make educated health insurance purchasing decisions. In order to fulfill the requirements of the ACA, states must determine whether they will establish a health insurance exchange themselves, partner with the federal government, or allow the federal government to establish an exchange on their behalf. This chapter presents the background information on health insurance exchanges and their history needed to understand this state decision making process and its important role in the broader national plan for health reform.
Chapter 3: The Policy Diffusion Literature

Introduction

This study aims to explain the recent and rapid spread of health insurance exchange creation legislation among the states. In particular, this research examines the decision of states to adopt or not adopt the legislation, the timing of the states’ decisions, and the broader temporal and geographic spread of health insurance exchange policy. The decision to adopt such a policy is “determined by the interplay of an infinitely large number of elements” (Gray 1973, 1175). Even though the process of policy adoption is complex, the policy diffusion literature provides some key insights into the factors that are most likely to have a significant impact on the spread of health insurance exchange policy. Policy diffusion is defined as the spread of policy innovations among governments over time (Rogers 1983, 5; Shipan and Volden 2012, 788). The recent spread of health insurance exchange policy among the states is an example of policy diffusion in action. The policy diffusion literature provides the underlying theoretical framework for this study, informs the methodological design of this study, and informs my hypotheses.

The theoretical basis of the policy diffusion literature and of this study is Lawrence Mohr’s diffusion of innovations theory. Mohr theorizes that the key determinants of organizational innovation are the motivation to innovate, the obstacles to innovation, and the resources available for overcoming these obstacles. While obstacles to innovation are negatively associated with organization innovation, the resources for overcoming these obstacles and the motivation to innovation are positively associated with innovation (1969, 114). Mohr’s theory is a useful framework for understanding and
explaining the adoption and diffusion of health insurance exchange policy by state governments and the impact of wide array of factors on exchange policy adoption and diffusion. The decision of each state’s government to either adopt or not adopt health insurance exchange policy can be understood in relation to their motivation to innovate, the obstacles to their innovation, and their available resources for overcoming the obstacles to innovation. Furthermore, the impact of specific factors on the exchange policy diffusion process can be understood and explained in terms of how the factors either measure or directly impact states’ motivation to adopt a health insurance exchange, the obstacles to adoption, or the resources available for overcoming these obstacles.

I begin Chapter 3 with a more thorough discussion of Mohr’s theory and its applicability to policy diffusion studies. I then provide an overview of the historical development of the policy diffusion literature with a particular emphasis on the groundbreaking work of Berry and Berry (1990). The policy diffusion literature emerges from two disparate literatures, the diffusion of innovations literature and the policy determinants literature. Berry and Berry bring these two fields together by framing their respective ideas using a single theoretical framework, namely Mohr’s theory. Berry and Berry were also the first scholars to develop a statistical methodology for testing the applicability of Mohr’s theory to policy diffusion. Next, I broadly summarize the contemporary policy diffusion literature by outlining the factors that usually appear in policy diffusion analyses. Commonly studied factors include the state’s socioeconomic and political characteristics, its degree of geographic proximity to earlier adopters, and the policy’s specific context. The potential impact of each of these factors is explained using Mohr’s theory. Since the Federal Government actively promoted state health
insurance exchange policy adoption, I also discuss the segment of the policy diffusion literature which examines the impact of national government action on state policy diffusion. Although most policy diffusion studies consider the impact of fairly similar variables, the diffusion process varies greatly depending on the specific policy being considered. Thus, studies which examine the diffusion of similar health reform policies particularly inform my research. Accordingly, I conclude this chapter with a discussion of other health policy diffusion studies.

Theoretical Basis for Literature

The policy diffusion literature is theoretically rooted in the diffusion of innovations literature. The diffusion of innovations literature broadly examines the processes by which innovations, defined as an idea, practice, or object that is perceived as new by the unit of adoption, are communicated through certain channels over time among the members of a social system (Rogers 1983). While research examining the diffusion of innovations initially emerged in the areas of sociology and anthropology (Rogers 1983, 42), diffusion studies have since expanded to a wide variety of academic fields, including political science. Studies examining the diffusion of innovations focus on determining which innovations are most likely to be diffused, which units of adoption are most likely to effectively communicate and share innovations with one another, which units of adoption are likely to adopt innovations earlier, and the role of other actors in the diffusion process (Rogers 1983).

Building upon the diffusion of innovations literature, Lawrence Mohr develops a specific theory of the determinants of innovation in organizations. Mohr’s work focuses
on explaining why certain organizations innovate, meaning they adopt and emphasize policies or programs that depart from tradition, while others do not (1969, 111). As I explained in the introduction to this chapter, he theorizes that innovation “is directly related to the motivation to innovate, inversely related to the strength of obstacles to innovation, and directly related to the availability of resources for overcoming such obstacles” (Mohr 1969, 114). Since the motivation to innovate, the obstacles to innovation, and the resources available for overcoming obstacles to innovation are the key determinants of innovation, the relative innovativeness of organizations, including state governments, is a function of their relative motivation levels, obstacles, and resources. Mohr’s theory in turn explains why certain independent variables, such as community norms, environmental demands, organizational goals, and wealth may have an impact on innovation. If these variables measure in some capacity the motivation to innovate, obstacles to innovation, or resources to overcome those obstacles, they are likely to have a discernible impact on innovation in the direction indicated by the theory (Mohr 1969, 114). For example, the financial wealth of an organization is a measure of its resources, and thus, wealthier organizations ought to be more innovative than poorer organizations (Mohr 1969, 119). Although Mohr tests his theory by examining the innovativeness of public health departments, I extend his analysis by applying his theory to health insurance exchange policy adoption on the part of state governments.

Mohr’s understanding of the determinants of innovation has informed many studies of state policy diffusion and in particular, the selection of factors to be included in statistical analyses of diffusion. Mohr’s diffusion of innovations theory also informs this study and its research design. Since each state’s decision to either adopt or not adopt a
health insurance exchange is determined by its motivation to adopt the policy, the obstacles to adoption, and the resources for overcoming the obstacles to adoption, I include factors that either impact or directly measure a state’s motivation, obstacles or resources in my analysis of health insurance exchange policy diffusion. Mohr’s work also provides a theoretical basis for forming hypotheses about how these chosen factors will impact the diffusion process. Specifically, factors that measure motivation or resources should have a positive impact on health insurance exchange adoption, while factors measuring the obstacles to innovation should have a negative impact (Mohr 1969, 114).

_Historical Development of the Literature_

The contemporary policy diffusion literature emerges from two disparate literatures, the diffusion of innovations literature, discussed above, and the policy determinants literature. The policy determinants literature aims to explain policy outcomes in the states by examining the relationship between these outcomes, the political process, and socioeconomic variables (Dye 1966, 1; Fenton and Chamberlayne 1969, 388). Some major distinctions between these two literatures are the time period and number of decision-makers considered. While the diffusion of innovations literature examines the spread of innovations among several decision-makers over time, the policy determinants literature examines the adoption of a single policy at a single point by a single state.

The policy determinants literature is based on a fairly simple model of public policy decision-making. In this model, policy outcomes are seen as the result of outside forces, namely the socioeconomic conditions external to the political system, brought to
bear upon a political system. The outside forces then cause the system to make particular responses in the form of policy adoptions (Dye 1966, 3). The policy determinants literature’s model of policy decision-making conceives of policy adoption as a process of external variables both directly and indirectly, by means of mediation through the political system and the political process, impacting public policy (Dye 1966, 3; Dawson and Robinson 1963, 266).

To test the applicability of this model, scholars analyze the correlations between specific state policy outcomes, state socioeconomic characteristics, and characteristics of the state’s political system. Scholars usually include urbanization, industrialization, wealth, and level of education in their analyses as socioeconomic characteristics (Dawson and Robinson 1963, 280; Dye 1966, 7). These four characteristics are viewed as good measures of the economic development of a state, which in turn shapes the state’s political system and policy decisions (Dye 1966, 7). Scholars typically include the degree of interparty competition, the partisan makeup of the legislature, voter turnout, and the degree of malapportionment in legislative districts as political system characteristics in their analyses (Dye 1966, 13). The policy determinants literature indicates that socioeconomic characteristics have a larger impact on policy adoption than political system characteristics (Dawson and Robinson 1963; Dye 1966; Fenton and Chamberlayne 1969). This finding both confirms the policy determinants literature’s model of public policy decision-making and demonstrates the importance of state socioeconomic characteristics as determinants of policy adoption.

Jack Walker makes a significant contribution to the development of the policy diffusion literature by utilizing both the ideas of the policy determinants literature and the
diffusion of innovations literature in a single study. By examining how internal state characteristics impact a state’s general level of innovativeness and how innovations spread among the states, Walker begins to bring together these two disparate fields of study.

Walker sets out to determine the relative innovativeness of each state. He creates innovation scores for each of the states based on their adoption, or lack thereof, of eighty-eight different policies across a broad range of policy areas (1969, 882). To determine why certain states have higher innovation scores, he examines the correlations between a high innovation score and various state socioeconomic and political system characteristics, as in the policy determinants literature (Walker 1969).

However, Walker also examines the geographic and temporal spread of these policies among the states and theorizes that policies diffuse in regional clusters. Throughout history, states have adopted very similar public policies, indicating that a significant degree of policy communication is occurring between states. A particularly illustrative example of this phenomenon is the spread of California’s fair trade law, in which ten states directly copied major typographical errors found in the original legislation’s language (Walker 1969, 881). Walker theorizes that states choose to adopt another state’s policies in order to emulate successful policies or bolster their economic competitiveness with the earlier adopter (1969, 890). For this competition or emulation to occur, there must be strong communication channels between the states’ governments. Indeed, the process of diffusion is defined as the communication of innovations among decision makers (Rogers 1983, 5). Given the tendency for organizations to most effectively communicate with and learn from similar organizations (Rogers 1983, 274),
Walker theorizes that policies diffuse in regional clusters. He expects the process of policy diffusion to begin with the adoption of a policy by a particularly innovative policy leader in a region, with the policy being subsequently communicated to and adopted by similar, neighboring states (1969, 893). Even though statistical analysis only moderately supported Walker’s model (1969, 893) and even though his study was criticized by scholars (Gray 1973),⁶ his work was an important starting point for the further development of the policy diffusion literature.

Although Walker examines the impact of both internal determinants and external determinants on policy diffusion in the same article, his analyses of the internal determinants and the external determinants of diffusion are independent of one another in both theory and practice (Berry and Berry 1990, 396). Berry and Berry address this issue by merging the study of internal and external factors theoretically and methodologically. By explaining the impact of internal and external state characteristics on policy diffusion using the same theory, namely Mohr’s theory of the determinants of innovation, Berry and Berry firmly bring together the policy determinants and diffusion of innovations literatures. Berry and Berry also apply a statistical technique, event history analysis, to the study of policy diffusion. Using this technique, scholars can examine the role of internal and external factors in policy outcomes in a single analysis.

Before Berry and Berry’s study many scholars viewed the internal determinants of policy adoption and regional policy diffusion as independent areas of study. In contrast

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⁶ Gray’s criticisms were mainly focused on Walker’s treatment of innovation as a single composite variable. Gray pointed out the significant degree of diversity in the diffusion of policies and even demonstrated that different types of policies diffused in different ways in Walker’s own data set. Since different policies diffuse in different ways and since states are not uniformly innovative across all policy areas, she argued that Walker’s composite innovation score and his subsequent analyses using this measure oversimplified the process of policy diffusion. In accordance with these concerns, most contemporary policy diffusion scholars study the diffusion of specific policies.
to this view, Berry and Berry think of regional diffusion as a potential determinant, just as internal state characteristics are determinants, of policy innovation (1990, 396). As evidence for their perspective, Berry and Berry cite the practical process of state policy adoption. As they point out, “It is unrealistic to assume that a state blindly emulates its neighbors’ policies without its public officials being influenced by the political and economic environment of their own state. It is also implausible to presume that states are totally insulated from influence by neighboring states” (1990, 396). Thus, the impact of internal factors and the impact of a policy’s previous diffusion ought to be analyzed together, as they operate in conjunction with each other in practice.

Berry and Berry also demonstrate that the impact of both diffusion and state characteristics can be understood and explained using the same theoretical foundation, Mohr’s theory of the determinants of innovation. As a review, Mohr argues “that the probability of innovation is inversely related to the strength of obstacles to innovation and directly related to the motivation to innovate and the availability of resources for overcoming obstacles” (Berry and Berry 1990, 399). It is clear that a variety of internal determinants of innovation, such as the political and economic conditions of a state, impact either the motivation to innovate on the part of politicians, the strength of obstacles to innovation, or the resources available for overcoming those obstacles (Berry and Berry 1990, 400). However, Berry and Berry argue that previous policy adoptions by nearby states also fit into Mohr’s theory. Specifically, previous adoption by other states provides a state with more information on the effects of the policy under consideration, which is difficult to determine in advance. The information gleaned from other states’ actions is a resource for overcoming the obstacle of uncertainty (1990, 400). Since both
internal state characteristics and regional diffusion can be thought of as determinants of innovation using Mohr’s theory, Berry and Berry argue a unified theory of state policy innovation, which relies on both internal and external factors, should be developed.

Another weakness of early policy diffusion studies is their inability to examine the internal determinants of policy adoption and the regional diffusion of policies using a single statistical methodology. For example, Walker uses different statistical methods for his analyses of policy innovation and policy diffusion in his research. Berry and Berry address the policy diffusion literature’s statistical weakness by developing a statistical method for concurrently examining the impact of internal and external factors on policy diffusion. This statistical methodology is event history analysis. Originally developed in the field of biostatistics as a means of analyzing mortality and health outcomes, event history analysis aims to explain changes, referred to as events, in the behavior or being of an individual, organization, or some other collective, such as a state’s government. By examining which independent variables are associated with the given change over time, scholars gain an understanding of why and how the event is occurring. Berry and Berry apply event history analysis to policy diffusion by defining the event under consideration as the adoption of a particular policy, in their case state lotteries, and the entity undertaking the change as a state government. Although much of the literature focuses on the diffusion of public policies among states, event history analysis is also used to study the diffusion of policies between city and municipal governments (Rogers 7).

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7 Walker used correlations to examine the relationship between state characteristics and policy innovation. He used a matrix of pairwise comparisons and a factor analysis to examine the spread of policies among regional groups.
and Peterson 2008; Shipan and Volden 2008) and the governments of different countries (Dolowitz and Marsh 1996).

The introduction of event history analysis to the field of policy diffusion greatly improved the accuracy and scope of policy diffusion studies. The main advantage of using event history analysis is the ability to study the impact of variables that change over time. When using event history analysis, scholars are able to change the value of the variables being examined with each unit of time, usually a year (Berry and Berry 1990, 399). Given that the value of many variables included in policy diffusion studies change drastically over time, especially if the time period under consideration spans decades, event history analysis allows for more accurate studies of policy diffusion. As Berry and Berry explain, with event history analysis, “It is not necessary to assume that a state adopting a program recently is affected by what its characteristics were when the first state adopted the program perhaps decades ago” (1990, 399). The ability to change variables’ values over time when using event history analysis plays a particularly important role in successfully bringing together the analyses of external and internal factors. While the actions of previous adopters cannot be easily accounted for in correlations, primarily due to the fact that this variable changes over time, event history analysis allows for statistical analysis of the impact of prior adoptions of other states on policy adoption. Being able to study the influence of both internal and external factors using a single statistical methodology insures more accurate results that are less prone to mistaken spurious relationships (Berry and Berry 1990, 399). Thus, event history analysis, and in particular the opportunities it provides to study the impact of a wider diversity of factors, greatly improves the ability of scholars to study policy diffusion.
The Contemporary Policy Diffusion Literature

Since Berry and Berry introduced event history analysis as an effective method for studying policy diffusion, it has been used almost universally in the field. Most policy diffusion studies use this statistical methodology to either study the diffusion of a specific policy (Daley and Garand 2005; Stream 1999) as is the case with this particular study, or to demonstrate and emphasize the importance of a specific factor in the diffusion process (Balla 2001; Karch 2006; Mintrom 1997). When considering the policy diffusion literature, a number of trends emerge, particularly in the variables that are usually included in the studies’ statistical analyses. Variables almost universally included in policy diffusion studies include socioeconomic characteristics, political system characteristics, variables which account for the context of the specific policy being studied, and variables which measure previous adoptions by other states. Throughout the rest of this section, I discuss these variables further, with a particular emphasis on why they are expected to have an impact on policy diffusion. The expected direction of the impact of these factors can be determined using Mohr’s theory. Generally speaking, if the factor measures an obstacle to policy adoption, it will be negatively associated with policy diffusion. Conversely, if a factor positively impacts the motivation to innovate or measures a resource for overcoming an obstacle to policy adoption, it will be positively associated with policy diffusion. Since these factors impact policy diffusion generally, they are likely to also impact the diffusion of health insurance exchange policy.
The Impact of Internal Factors

State socioeconomic characteristics and more specifically, a measure of state wealth, are almost universally included in policy diffusion analyses. State wealth is important as it represents a state’s slack resources, namely the resources that are freely available to the state to expend on new policies. If slack resources are available, a state is better equipped to undertake policy experimentation and the risks of policy failure (Karch 2007a, 42; Walker 1969, 883). While slack resources have been measured in a number of different ways by different authors, the most commonly used measure today is state wealth. As a slack resource, financial wealth provides a state government with greater possibilities and opportunities in its policy decision-making (Allen et al. 2004, 324). Additionally, the cost of new policies can be a significant barrier to adoption, and state wealth is a key resource for overcoming this obstacle (Karch 2006, 405). Accordingly, state wealth is associated with state policy innovation (Allen, Pettus, and Haider-Markel 2004, 324; Daley and Garand 2005, 618; Stream 1999, 515; Walker 1969, 883).

Just as wealth is strongly associated with policy diffusion, certain characteristics of a state’s political system are associated with policy adoption. These characteristics include the professionalism of the legislature, the degree of unified party control across the government, the prevailing ideology of the government’s leaders, the prevailing ideology of the government’s constituents, and the proximity of the next election. While the first two characteristics are resources for overcoming significant obstacles to policy adoption, the latter three impact the motivation of governmental officials to adopt policies.
As was mentioned previously in the history section, a significant obstacle to policy adoption is a lack of information about the future effects of the policy. A key resource for overcoming this obstacle is information. Although information may be theoretically accessible to all of the states’ governments, states with more professional legislatures are better able to readily access and utilize this information (Karch 2007a, 43; McLendon, Heller, and Young 2005, 371). In the context of legislatures, professionalism refers to the extent to which the legislature holds the attributes of the U.S. Congress, namely extended sessions, high salaries, and large staffs (Karch 2006, 410; McLendon, Heller, and Young 2005, 371). The larger staff and time resources of a professional legislature allows the legislature to accumulate more information and knowledge about policies (Karch 2007a, 43). These features of a professional legislature also improve the overall legislative capacity of the government. In addition to informational constraints, legislatures face major time constraints. Legislators perform a wide variety of tasks and legislatures must formulate public policy in a number of different public policy areas. Accordingly, legislatures are pressed for time (Karch 2007a, 7-9). With more extensive staff resources and a longer period of time to consider public policies, professional legislatures are able to adopt a larger number of innovative policies (Karch 2007a, 43; McLendon, Heller, and Young 2005, 871; Walker 1969, 885).

An additional resource for overcoming the obstacle of legislative time constraints is unified party control of the state’s government. Divided control of a state’s government, specifically of the legislative chambers and the governor, slows down the legislative process, as the two parties will inevitably disagree over policy decisions. By removing
roadblocks to legislative action, unified party control leads to the adoption of more public policies (Berry and Berry 1990; 403; McLendon, Heller, and Young 2005; 373).

While the above factors have measured resources for overcoming obstacles to policy innovation, characteristics of a state’s political system can also impact the motivation of legislators to innovate. A particularly important motivator for legislators is reelection (Mayhew 1974). To be reelected, legislators ought to adopt policies that correspond with the viewpoints and opinions of their constituents (Berry and Berry 1990, 402). However, legislators are also motivated to improve public policy by their own conceptions of the public interest (Rosenthal 2009, 41). Altogether, a strong correspondence exists between popular opinion, the ideological orientation of legislators, and the passage of public policies (Berry et al. 1998, 327). Since adopting policies which align with both their personal and their constituents’ ideological beliefs is an important consideration for legislators, both public and governmental ideology impact a legislature’s motivation to adopt particular public policies (Allen, Pettus, and Haider-Markel 2004, 325). Additionally, the ideological fit of a policy can be an important resource for overcoming the obstacle of uncertainty (Karch 2006, 410). Different policies are often associated with different ideologies and thus the direction of the impact of ideology on policy diffusion varies depending on the specific policy being considered (Karch 2006, 410). However, regardless of whether the policy is generally supported by liberals or conservatives, it is more likely to be adopted by governments controlled by leaders with or representing constituents with the ideology usually associated with the policy.
While public opinion can be measured and studied as an independent factor in policy
diffusion studies, the viewpoints of the public are often not expressed directly to
legislators. Interest groups are an important mechanism through which constituents voice
their opinions to the legislature (Rosenthal 2009, 140). As representatives of important
interests, including the interests of constituents, interest groups have a notable impact on
state policy making, particularly in the area of health care (Stream 1999, 508). Interest
groups with large membership bases, strong opinions, and an important economic
standing in the state are particularly effective (Rosenthal 2009, 147-9). Support for a
policy from effective interest groups increases the likelihood that the policy will be
adopted (Stream 1999, 508).

In addition to underpinning the impact of constituent ideology and interest group
activity on policy diffusion, legislators’ electoral concerns cause the proximity of
elections to be an important factor in policy diffusion. In order to increase their chances
of reelection, legislators tend to adopt policies at advantageous times within the election
cycle (Berry and Berry 1990, 401). More specifically, politicians are more likely to adopt
popular policies in an election year, while controversial policies tend to be adopted in
non-election years (McLendon, Heller, and Young 2005, 373). Similarly to the last case,
whether a policy is more likely to be adopted in an election or non-election year depends
on its unique popularity. However, regardless of the popularity of the policy, proximity to
an election year is likely to have an impact on policy diffusion.

Another major determinant of the motivation to innovate is the perceived severity of
the problem the policy is designed to address. One of the primary reasons for adopting a
public policy is to address dissatisfaction or a problem with the current state of affairs
(Dolowitz and Marsh 1996, 346; Karch 2006, 409). Generally speaking, of these problems, those which are severe, are perceived as particularly problematic, receive media attention, are salient, and are precipitated by large and significant events that bring attention to the problem are more likely to be addressed by the government (Allen, Pettus and Haider-Markel 2004, 325; Chamberlain and Haider-Markel 2005, 450; Karch 2006, 409). Simply put, legislators are more likely to adopt a policy in states where the problem underlying the policy is more severe.

By impacting a state government’s motivation to innovate or by helping a state overcome the major obstacles to innovation of cost, time, and uncertainty, internal state socioeconomic and political system characteristics shape the diffusion of a variety of public policies. Since health insurance exchange policy is costly, complex, and controversial, these internal state characteristics are likely to have a significant impact on the diffusion of this particular policy.

The Impact of External Characteristics

External factors also play an important role in the process of policy diffusion. In particular, the adoption of a policy by one state can impact its diffusion among the other states. As was previously discussed, states tend to learn from the previous policy actions of other states in order to gain information about a policy’s potential effects. The information gleaned from other states helps the state overcome the uncertainty associated with adopting a new policy (Berry and Berry 1990, 400). Although policy diffusion is usually perceived as a process of learning from other states, states may also compete economically with one another through the adoption of economically friendly policies.
(Bergin 2011, 405) or feel pressured by one another to adopt policies. Regardless of the specific mechanism, previous adoption by other states is usually seen as a positive pressure encouraging further adoption (Daley and Garand 2005, 620). Previous adoption by another state can also be a resource for overcoming the obstacle of negative public opinion by providing concrete evidence of the positive effects of a policy (Berry and Berry 1990, 400; Karch 2006, 408).

When the policy diffusion literature was initially developed, it was assumed that policies diffused among states in a regional manner. Indeed, “the significance of geographic proximity is a powerful theme in policy diffusion research, dating back to some of the earliest studies on the topic” (Karch 2007a, 41). This focus on geographic proximity is based on the assumption that lawmakers pay particular attention to the actions of neighboring states (Karch 2007a, 41). Several concrete mechanisms could explain this tendency on the part of states. These include stronger communication networks among policymakers in neighboring states, media markets which overlap several states, and the inclination of policymakers to learn from culturally, ideologically, and demographically similar states, which are likely to also be neighboring states (Karch 2007b, 57). Although geographic proximity has been emphasized as an important factor in policy diffusion studies for decades, the empirical record provides a limited degree of support for its impact (Karch 2007b, 58). Additionally, given the realities of the modern world, the traditional view of diffusion as a process occurring in geographic clusters is limiting and outdated. In particular, as communication and travel have become easier, states are able to easily look at the policy decisions of any state in the country, regardless
of its geographic proximity (Shipan and Volden 2012, 789). A more nuanced view of policy diffusion needs to be adopted in response to these technological changes.

Due to these concerns, contemporary policy diffusion studies often emphasize measures and mechanisms of policy diffusion besides geographic proximity (Karch 2006, 405; Karch 2007b, 59). Some major alternative policy diffusion mechanisms include interstate professional organizations (Balla 2001), national organizations (Karch 2007b, 65), policy networks (Mintrom and Vergari 1998), and policy entrepreneurs (Mintrom 1997). Several policy diffusion scholars suggest that the impact of previous state policy adoption ought to be measured in an alternative way in order to account for the changing nature of communication in the modern world. Just as the traditional view of policy diffusion was founded upon the idea of closeness between states, in this case a geographic closeness, newer conceptions of policy diffusion also emphasize the closeness of states. However, instead of defining closeness as geographic proximity, scholars define closeness as ideological, political, demographic, economic, or budgetary similarity or as substantial economic and culture exchange (Karch 2007b, 59; Volden 2006, 299). By expanding the scope of interstate learning from neighboring states to the entire nation, these authors provide a more nuanced, contemporarily accurate measurement of policy diffusion.

The Role of the Federal Government in Policy Diffusion

Although each state makes its own policy decisions, state decision-making doesn’t occur in a vacuum. As discussed in the previous section, states often learn from the experiences of other states as they consider public policies. However, in the United
States’ system of federalism, states are not only impacted by the actions of other states, but also by the actions of the national government. Accordingly, policy diffusion scholars have examined the important ways in which national government action impacts state policy diffusion for decades. For example, although their studies did not statistically examine the impact of national government action on policy diffusion, early scholars such as Walker and Virginia Gray hypothesized that the federal government impacts the state level diffusion of policies tied to federal grant money (Gray 1973, 1180; Walker 1969, 895). Since these initial studies, scholars have further elucidated the relationship between national government action and state policy diffusion. Given the prominent role of the Affordable Care Act, a piece of federal legislation, in facilitating the adoption of health insurance exchanges by the states, understanding the relationship between national government action and state policy diffusion is key to understanding the diffusion of health insurance exchange policy.

The ability of the national government to impact the diffusion of state level policy can be explained, just as the impact of the variables discussed in the previous section were explained, using Mohr’s diffusion of innovations theory. As explained previously, factors which increase a state’s motivation to innovate, decrease the obstacles to innovation within a state, or increase the resources for overcoming these obstacles should have a positive impact on policy diffusion, while factors with the opposite effect should have a negative impact on policy diffusion. Through a number of different actions, the federal government can either encourage or discourage the diffusion of a public policy among the states by impacting either the obstacles to innovation, the resources for overcoming said obstacles, or the motivation to innovate.
Of the various ways in which the federal government can influence state government action, a policy mandate yields the strongest impact. Although federal policy mandates can take many forms, they all require states to enact or implement an innovative policy idea or incur a penalty (Allen, Pettus, and Haider-Markel 2004, 320; Karch 2006, 406). By creating a penalty for inaction, policy mandates increase a state’s motivation to innovate, as states will generally want to avoid incurring the penalty. Studies of previous federal government mandates, including a mandate to expand Medicaid coverage, demonstrate that government mandates have a positive impact on state policy diffusion (Allen, Pettus, and Haider-Markel 2004, 320).

An action often, but not always, taken by the federal government in conjunction with policy mandates is the provision of financial incentives to states. As a means of encouraging state adoption of a given policy, the federal government often provides funding to help cover the costs of the policy. If the state chooses not to enact the policy, it foregoes receiving these federal funds (Karch 2006, 406). As discussed earlier, a major obstacle to the adoption of new policies is their cost. By providing states with funds for a given policy, the federal government gives states the resources needed to overcome one of the largest obstacles to policy adoption. The results of a few studies confirm this relationship. These studies show that a link between federal financial incentives and a faster rate of policy diffusion exists (Allen, Pettus, and Haider-Markel 2004, 326; Karch 2006, 206; McGaughey and Mank 2001, 204).

Although policy mandates and financial incentives have the strongest impact on state policy diffusion, more subtle forms of national government action, such as policy signals, can also impact state policymaking. Policy signals are indications that the federal
government gives states concerning its policy preferences. These signals may come from Congress, the executive branch, or the judiciary and can take many different forms, including statutes, executive orders, court decisions, simple public statements by government leaders, and even a lack of national government action (Allen, Pettus, and Haider-Markel 2004, 321; Karch 2006, 406-7). Since policy signals don’t directly penalize states for not adopting a policy or reward states for policy adoption, policy signals have a less direct impact on state action than federal mandates and financial incentives. Studies have shown that policy signals and in particular strong and clear policy signals have an impact on state policy diffusion (Allen, Pettus, and Haider-Markel 2004, 336; Karch 2006, 418). Federal policy signals have an impact on state government action in much the same way that the actions of other states impact a state government’s action. Just as prior adoption of a given policy by another state provides states with vital information about the policy, federal government support for a policy provides information to states. Given that uncertainty about a policy’s impact is a major obstacle to policy innovation, the information about a policy gleaned from the federal government by the states is a resource for overcoming this obstacle to innovation (Grossback, Nicholson-Crotty, and Peterson 2004, 356). Accordingly, when the federal government endorses a specific policy, state governments tend to adopt the policy (Allen, Pettus, and Haider-Markel 2004, 321). Furthermore, federal support of a policy can be used by either state government leaders or interest groups to help garner public support for the policy (Allen, Pettus, and Haider-Markel 2004, 321). Given the importance of reelection to legislators, increased public support for a policy will increase the motivation of
legislators to adopt said policy. In these two ways, federal policy signals impact on the diffusion of policies among the states.

The federal government significantly impacts state government action through the use of policy mandates, grants, and policy signals. By penalizing the state for inaction or by providing the state with financial and informational resources, the federal government can encourage state policy adoption. In the case of health insurance exchange policy, the federal government took a number of these steps to strongly encourage state action on this issue.

*The Health Policy Diffusion Literature*

Although similar variables play a role in the diffusion of a broad range of policies, the diffusion of each policy is a unique process. Public policies are widely varied in their goals and the strategies they use to accomplish these goals and accordingly, the process of policy diffusion varies depending on the type of policy. Policy diffusion research indicates that the factors which affect the diffusion of certain types of policy do not impact other policy areas. For example, studies demonstrate that the factors which impact the diffusion of morality policies, like abortion policies, are different than the factors which impact the spread of economic policies (Karch 2006, 408). Furthermore, the policy diffusion literature suggests that the relative innovativeness of states varies depending on the type of policy, with certain states being early adopters in some policy areas and late adopters in other areas (Karch 2006, 408). Due to this variation in the policy diffusion process, the results of my study are likely to be most similar to other studies examining the diffusion of health policies. Therefore, the health care policy diffusion literature
provides a further indication of which factors are most likely to play a role in the diffusion of health insurance exchange policy. Within the health care policy diffusion literature, Christopher Stream’s study of the diffusion of small group health insurance market reforms among the states (1999) is the closest approximation to this study. Accordingly, his findings are particularly significant for this study.

The existing literature on the diffusion of health care and social welfare policy indicates that a number of factors specifically play a role in the diffusion of these types of policy. One of the factors impacting the diffusion of social welfare policy generally is the political culture of a state. Daniel Elazar develops a system of three different political cultures based upon a state’s values and beliefs concerning the purpose of government. Although a state may be influenced by more than one political culture, the three major political cultures are moralistic, individualistic, and traditionalistic. States with moralistic political cultures generally view intervention in income redistribution and economic affairs as the necessary and proper role of government. Conversely, in states with traditionalistic political cultures, governmental involvement in social welfare policy is limited as private charities and churches are considered the primary providers of social welfare services. Finally, the individualistic political culture focuses on personal responsibility and individual freedom. As a result, states with this political culture tend to help disadvantaged groups by decreasing barriers to personal opportunity as opposed to redistributing resources (McGaughey and Mank 2001, 205). Since states with these three political cultures hold vastly different beliefs about the proper role of the government in social welfare policy, the legislators in states with certain political cultures are more motivated to adopt social welfare policies, such as health reform policies, than legislators
in other states (McGaughey and Mank 2001, 205). Although the direction of the impact of political culture on policy diffusion depends on the specific policy being consideration, generally states with a moralistic political culture are most likely to adopt social welfare policies, especially redistributive policies, while states with a traditionalistic political culture are least likely to adopt these policies.

While political culture plays a role in the diffusion of social welfare policies generally, other factors only play a role in the diffusion of health care policies and even more specifically, health insurance reform policies. One of these variables is the strength of the existing health insurance regulatory structure. Regulating the health insurance industry, especially in the context of implementing a complex, comprehensive reform policy, requires considerable resources. Thus, states with a history of strong regulation of the health insurance industry and large, established health insurance regulatory agencies in the bureaucracy are more likely to be able to effectively and successfully implement further insurance market reforms (Stream 1999, 210). More specifically, the expertise and large number of regulatory staff in these states are slack resources that can be used to overcome the cost of adopting further reform legislation. Accordingly, large state insurance regulatory bureaucracies are associated with the adoption of further health insurance market reform policies (Stream 1999, 210).

These variables, namely political culture and the strength of existing regulatory frameworks, interact with the variables discussed in earlier sections of this chapter to shape the process of health policy diffusion. The existing health policy diffusion research and in particular Stream’s study of the diffusion of small group health insurance market reforms indicates which of these factors are likely to impact the diffusion of health
insurance exchange policy. Based on the findings of Stream’s study, the health insurance regulatory environment, state wealth, the degree of problem severity, and previous adoption by other states significantly impact health policy diffusion, while interest group activity has a negligible impact (Stream 1999, 512-4).

Conclusion

Over the past few years, an increasing number of state across the country adopted health insurance exchange legislation. The spread of this policy among the states is an example of policy diffusion at work (Shipan and Volden 2012, 793). The diffusion of any policy, including health insurance exchange policy, is a complex process with a diverse array of factors playing a role in each state’s decision to adopt or not adopt the policy. Despite this complexity, the policy diffusion literature provides a clear theoretical structure for understanding how and why various factors have an impact on policy diffusion. Mohr theorizes that an organization’s tendency to innovate is negatively associated with obstacles to innovation and is positively associated with the organization’s motivation to innovate and their resources for overcoming the obstacles to innovation. Mohr’s understanding of innovative decision-making was applied to state policy decision making by Berry and Berry, creating the contemporary policy diffusion literature. Contemporary policy diffusion scholars explain the impact of a wide variety of factors on policy diffusion using Mohr’s theory. By either impacting a state’s motivation to innovate, its obstacles to innovation, or by providing resources for overcoming these obstacles, state wealth, legislative professionalism, the degree of unified party control in the state’s government, the ideological views of both government leaders and citizens, the
proximity of the next election, the severity of the problem the policy is designed to address, the actions of both other states and the national government, interest group action, political culture, and the strength of existing regulatory structures impact the process of state policy diffusion.
Chapter 4: Methodology

Introduction

Over the past two years, as part of implementing the Affordable Care Act, each state created their own health insurance exchange, partnered with the federal government to create a health insurance exchange, or allowed the federal government to create an exchange on their behalf. My study examines the states’ health insurance exchange implementation decisions with the aim of providing some insights into why certain states created their own exchanges while others did not and how health insurance exchange policy spread among the states. These insights are gained by examining the rate of policy diffusion and the impact of several independent variables on this diffusion. My selection of independent variables is strongly informed by the policy diffusion literature and Mohr’s theory of the determinants of innovation. More specifically, variables which measure or impact the state government’s motivation to adopt health insurance exchange policy, obstacles to adoption, or the resources available to overcome these obstacles are included in the analysis. Although the results of my study will not provide a causative explanation for health insurance exchange policy diffusion, they will provide a better understanding of the exchange policy diffusion process.

While event history analysis is the branch of statistics used for this study, I specifically use the Kaplan-Meier estimator and the Cox proportional hazards regression model. In the first section of this chapter, I explain how and why I am using the Kaplan-Meier estimator and Cox models in my research. Next, I outline the dependent variable and independent variables used in the analysis. For each variable, I explain why it is
being included in the analysis, how it is measured, and the impact I expect it to have on policy diffusion.

Statistical Methods

To examine states’ health insurance exchange policy decisions and the potential determinants of these decisions, I use event history analysis, the standard statistical method for policy diffusion studies. As was discussed earlier in chapter 3, Berry and Berry first applied event history analysis to the study of state policy diffusion. Since then, almost all policy diffusion studies have used this technique. Originally developed within the field of biology, event history analysis examines “the patterns and correlates of the occurrences of events” (Yamaguchi 1991, 1). In the context of my study, the examined events are adoptons of a state run or partnership health insurance exchange by states.

Event history analysis models function by examining the hazard rate, or the probability that an event being studied will occur at a particular time interval (Mills 2011, 1). In this particular study, the hazard rate is the probability that a state will adopt a state run or partnership health insurance exchange in a particular month. Stated differently, event history analysis examines the length of time before a particular event occurs (Cleves, Gould, and Gutierrez 2004, 1). In this study, event history analyses examine the length of time between the beginning of the observation period and policy adoption. The hazard rate and the time period between the beginning of the study and policy adoption can be examined using nonparametric, semiparametric, or parametric analysis. The three types of analysis differ in how much they assume about the data prior to analysis. In a nonparametric analysis, the data is allowed to speak for itself as no assumptions are made
about how the hazard rate changes over time or about how independent variables impact the hazard rate (Cleves, Gould, and Gutierrez 2004, 5; Mills 2011, 11). In contrast, in parametric analyses, the researcher makes assumptions about the hazard rate and the impact of independent variables in advance (Mills 2011, 14). Finally, in semiparametric analyses, the impact of independent variables is assumed to take a particular form, while no assumptions are made about the hazard rate (Cleves, Gould, and Gutierrez 2004, 5).

Due to the difficulty of making assumptions about the hazard rate, I complete nonparametric and semiparametric analyses in this study.

Many event history analyses begin with nonparametric analysis, since nonparametric analyses are simpler and more straightforward. I follow suit and complete a nonparametric analysis using the Kaplan-Meier estimator. The Kaplan-Meier estimator estimates the values of the survivor function over time. The survivor function is the probability that the event being studied will not occur in a given time period (Cleves, Gould and Gutierrez 2004, 93). In the context of this study, the survivor function is the probability that a state will not adopt a health insurance exchange in a given month.

While the hazard rate and the survivor rate both measure the phenomenon of state exchange policy adoptions, the hazard rate specifically measures the likelihood of adoption and the survivor function specifically measures the likelihood of inaction.

Unfortunately, in my study, the terms survivor function and hazard rate are ill-fitting. Describing state policy adoption as a hazard and a lack of state action as survival is confusing and counterintuitive. However, the terms hazard rate and survivor rate were originally developed in the field of biostatistics. In biological settings, event history analysis is usually used to examine mortality and health outcomes (Box-Steffensmeier
and Jones 2004, 7). When the event under consideration is death, the terms hazard rate and survival function are quite appropriate. Unfortunately, as event history analysis has been applied to the social sciences, this terminology has become confusing. As a reminder, in the context of this study, “survival” refers to a lack of state action, while the hazard rate refers to the “hazard” of state policy adoption.

The estimated survivor function provided by the Kaplan-Meier estimator shows how quickly the policy is spreading among the states. A drop in the value of the survivor function over time indicates that a state or several states have adopted the policy. Thus, a large drop in the value of the survivor function indicates that the policy is diffusing at a fast rate. Conversely, if there is a small drop in the value of the survivor function, the policy is diffusing at a slower rate. Similar findings can be gleaned from an examination of the value of the hazard rate over time. When examining the hazard rate, the relationship between the change in the hazard rate and the speed of diffusion is simply reversed. An examination of either the survivor function or hazard rate over time indicates how rapidly the given policy is diffusing. The Kaplan-Meier estimator can also be used to compare the diffusion of a policy among different groups of states. After grouping states using a categorical variable, the survivor functions of each of these groups can be estimated and compared (Cleves, Gould, and Gutierrez 2004, 101). I use this methodology to examine the relationship between particular categorical variables and the speed of health care exchange policy diffusion.

While the Kaplan-Meier estimator provides a sense of the temporal spread of health insurance exchange policy adoption, it is not possible to examine the impact of independent variables on policy diffusion using this type of analysis. To analyze the
impact of a variety of independent variables on the adoption of health insurance exchange policy, I utilize the Cox proportional hazards regression model, the most commonly used semiparametric model. As a semiparametric model, the Cox model has the advantage that it allows the impact of independent variables to be considered without requiring changes in the hazard rate to be determined in advance (Mills 2011, 14; Cleves, Gould, and Gutierrez 2004, 121). The Cox model elucidates the relationship between independent variables and policy diffusion by determining the impact of each variable on the hazard rate over time. This impact is measured using the hazard ratio, which is the ratio of the hazard rate when the variable is at a higher level to the baseline hazard rate (Cleves, Gould, and Gutierrez 2004, 123-4). For example, if the hazard ratio of a given variable is 1.25, then the hazard rate will be 125% of its base value when the value of said variable is higher (Cleves, Gould, and Gutierrez 2004, 169).

I also use the Cox model to determine the independent impact of each variable on health insurance exchange policy diffusion. The direction and statistical significance of each variable’s impact is determined by running a Cox model including only one variable at a time. Although not entirely analogous, these single variable Cox models function similarly to bivariate correlational analyses. Finally, I develop and analyze comprehensive Cox models which include a number of independent variables. These larger, comprehensive models describe the diffusion process more accurately, as they examine the impact of many variables concurrently. Through these models, the direction and statistical significance of each variable’s impact can be determined. Another important aspect of these models is their chi-square values. In this context, chi-square measures the predictive ability of the model. Thus, models with high chi-square values
better explain the phenomenon of health insurance exchange diffusion than those with lower chi-square values. The chi-square values of both the single variable and multivariable Cox models further indicate which variables have a particularly significant impact on the diffusion process.

Variables and Hypotheses

Dependent Variable

The dependent variable in this study is the hazard rate or in this context, the probability that a state will decide to create either a state-based health insurance exchange or a federal partnership exchange in a given time period. However, since probabilities cannot be observed and measured, a dummy variable is used to indicate whether a state has or has not decided to create a health insurance exchange during a given period. This dummy variable is coded as a 0 or a 1, with a 1 indicating that the state decided to create either a state run or partnership health insurance exchange and a 0 indicating that the state has not yet made this decision. Given the short time frame of this study, I measure time in months. Beginning with the passage of the ACA in March 2010 and ending with the Department of Health and Human Services’ decision deadline in December 2012, the study includes 34 months in total. The time at which a state decided to create a health insurance exchange was obtained from the Kaiser Family Foundation’s State Exchange Profiles (2013b). For states that either passed legislation or issued an executive order creating a health insurance exchange before December 2012, the date on which the legislation or executive order was signed was used. For states that did not pass legislation or issue an executive order before December 2012, the date on which the governor
declared the state’s intent to create an exchange to the Federal Department of Health and Human Services was used.

Independent Variables

I draw on Mohr’s theory of the diffusion of innovations to select appropriate independent variables for inclusion. The policy diffusion literature indicates that internal socioeconomic characteristics, internal political system characteristics, the external actions of other states and the Federal government and the context of the policy significantly impact the process of policy diffusion. Accordingly, I include these types of variables in my analysis.

I. State Wealth: Although the federal government is helping to alleviate the cost of creating a health insurance exchange for states through grant money (Kaiser Family Foundation 2012a, 4), there are still significant initial and ongoing costs associated with setting up and running a health insurance exchange. Thus, I hypothesize that wealthier states are more likely to create their own health insurance exchanges. For this study, I developed three different measures of state wealth. Each of these measures defines state wealth in a slightly different way. My first measure of state wealth is the per capita personal income of residents of the state. Personal income is the income received by an individual from all income sources (U.S. Department of Commerce Bureau of Economic Analysis 2012a). Since much of a state’s revenue is collected through taxes paid by citizens of the state and since many state taxes are income based, per capita personal income can be used to measure the wealth available to a state’s government. I gathered
personal per capita income data from the Council of State Governments’ Book of the States (Wall 2012a). However, per capita income is not direct measure of a state’s monetary resources. Given the variation in tax rates and structures among the states, a more direct measure of a state’s budget situation may be a better measure of state wealth. To measure a state government’s overall fiscal health, I used state revenue and expenditure data to calculate the percentage of a state’s expenditures that are directly paid for by revenue. If this percentage is high and particularly if it is higher than one hundred percent, the state is in a better financial position and is more likely to be able to afford a state run health insurance exchange. I also gathered state revenue and expenditure data from the Book of the States (Wall 2012d; Wall 2012e). Although a state may experience a positive relationship between revenue and expenditure in a given year, the positive relationship may not match historical trends in the finances of the state. Even if a state has additional revenue above the level of expenditures, additional revenues may be needed to pay off outstanding state debt. In order to account for the long term fiscal status of a state, I developed a measure of state debt. Using outstanding state debt data and population data, I calculated the share of a state’s debt in USD held by each resident of the state. The method of calculation controlled for the impact of population on outstanding state debt. I acquired state debt data from the Book of the States (Wall 2012b) and population data from the U.S. Census Bureau (2012b). By measuring a state’s overall debt, this measure of state wealth accounts for the long term fiscal health of a state.

II. Legislative Professionalism: Professional legislatures have greater resources and the capacity to consider more public policies in a particularly thorough manner. Because of
these characteristics, I expect these legislatures to be more likely to adopt health insurance exchange policy than less professional legislatures. To measure legislative professionalism, I use a measure originally developed by Peverill Squire (1992). His measure of legislative professionalism approximates how similar a given state legislature is to Congress in regards to member pay, staff members per legislator, and the total number of days in session (Squire 1992, 71). The level of this measure for each state is included in a table in Squire’s article (1992, 72).

III. Unified Party Control: Given the extent to which divided control can slow down the workings of a government, I hypothesize that unified party control is correlated with health insurance exchange policy adoption. I measure unified party control using a dummy variable. This variable takes a value of 1 if the Senate, House, and Governor of a state are all controlled by the same political party and a value of 0 if this is not the case. Since the time period covered by this study, namely March 2010 to December 2012, includes several election cycles, the value of this variable changes over the course of the study to account for election results. Data on the party control of state legislatures is available from the National Conference of State Legislatures (NCSL 2010; NCSL 2011) while data on the party control of governors is available from the National Governors Association (NGA 2010; NGA 2011; NGA 2012).

IV. Ideology: Since the ACA was passed by a Congress controlled by and was signed by a President from the Democratic Party, an institution associated with liberal political ideologies, I expect states led by ideologically liberal governments to be more likely to
create a health insurance exchange than states led by conservative governments. I developed two different measures for the ideology of a state’s government. My first measure is based on the partisan control of the branches of a state’s government. The party control measure is a categorical variable which takes a value between 0 and 3 depending on how many branches of the state’s government are controlled by the Democratic Party. However, the party control variable does not account for the relative size of the ruling majority in state legislatures. For example, state legislatures controlled by a majority holding 75% of the total seats are likely to behave in different ways than legislatures controlled by a majority holding only 55% of the seats. Thus, my second measure of ideology is based on the percentage of legislative seats held by each party. More specifically, the legislature ideology measure is the percentage of the total available legislative seats at the federal and state levels held by the Democratic Party. I acquired information on the partisan makeup of state governments from the NCSL (NCSL 2010; NCSL 2011) and information on the partisan makeup of Congress from the U.S. Government Printing Office’s Congressional Directory (U.S. Government Printing Office 2009; GPO 2011). As with the unified party control variable, the values of both ideology variables change over time to account for elections.

V. Interest Group Influence: A wide variety of health policy interest groups, including doctor specialist associations, nurses associations, and large corporations, such as hospital organizations and health insurance companies, represent and lobby on behalf of the economic interests of specific subsets of the health industry. Since most health policy interest groups represent major economic interests who contribute significantly to state
economies, a health care interest group’s economic concentration in a state can be a major source of influence in the policy process (Stream 1999, 508). Accordingly, in his study of the diffusion of small group health insurance market reforms, Stream measures the influence of health industry and insurance industry interest groups on state policy decision making by measuring each industry’s share of the state’s total employment (1999, 508). In his study, Stream measures the influence of the health and insurance industries separately, as these industries have opposing views on the policies he examined. However, although health and insurance industry interest groups disagree on the specific features of the exchanges, a consensus in favor of state run, as opposed to federally run, health insurance exchanges has emerged. As a result, my study will measure the influence of health policy interest groups as a whole. Overall, I expect states in which the health and insurance industries make up a large percentage of total state employment to be more likely to create a state-run health insurance exchange. I calculate the percentage of a state’s total employment which is taken up by either the health industry or the insurance industry using data from the U.S. Department of Commerce’s Bureau of Economic Analysis (2012b).

VI. Proximity to Next Election: Since its passage, the ACA has been a controversial policy with a limited amount of public support. For example, a June 2012 poll found that only 34 percent of Americans approve of the law, while 48 percent disapprove of the law (De Pinto 2012). Given how controversial the ACA and its various reforms are among Americans, I expect state governments to avoid making a decision on health insurance exchanges immediately before an election. I measure proximity to the next election by
using a dummy variable. This variable takes a value of 1 if either the governor or legislature is up for reelection in the same calendar year of the given month. If no election is occurring that calendar year, the variable is coded as 0. The variable is also coded as 0 in November and December of the year of the elections since US elections occur the first week of November. Data on the timing of state legislative and gubernatorial elections is available through the Book of the States (Wall 2012c; Wall 2012f).

VII. Political Culture: As was discussed in the previous chapter, social welfare policies, such as health reform policies, are more likely to be adopted in states with a moralistic political culture and are less likely to be adopted in states with a traditionalistic political culture, while states with an individualistic political culture fall somewhere in the middle (McGaughey and Mank 2001, 205). Since health insurance exchange policy is a type of social welfare policy, I expect states with a moralistic political culture to be the most likely to create a health insurance exchange. I also expect states with a traditionalistic political culture to be the least likely to create a health insurance exchange. To measure political culture, I use Daniel Elazar’s classification of the states into one of these three political cultures or a hybridization of two of these political cultures (1972). Throughout my study, I group states into the three major political cultures discussed above while ignoring hybrid political cultures in order to simplify the analysis.

VIII. Severity of Problem: One of the major goals of the ACA and by extension one of the major goals of state health insurance exchanges is to reduce the number of uninsured
Americans. While the growing number of uninsured Americans is a nationwide problem, the distribution of the uninsured population across the nation is not even. Since legislators are particularly motivated to address severe problems, I hypothesize that a large uninsured population is correlated with health insurance exchange policy adoption. Using data acquired from the U.S. Census Bureau, I use the percentage of a state’s population without health insurance as a measure of the severity of the problem being addressed by this policy (2012a).

IX. Strength of Existing Regulatory Structures: In addition to needing financial resources to effectively implement a health insurance exchange, a state also needs human resources. Regulating an industry as complex as the health insurance industry requires a strong bureaucratic agency with a significant number of staff members with expertise in this area. Thus, I expect state governments with a large preexisting insurance regulatory agency to be more likely to adopt health insurance exchange policy. I measure the size of a state’s insurance regulatory bureaucracy using the same measure as Stream (1999, 510). Using data from the National Association of Insurance Commissioners on the staff size of different states’ departments of insurance and population data from the U.S. Census Bureau, I calculated the total number of full time staff at a state’s department of insurance per 100,000 people living in the state (Ananthapura 1995, 56; U.S. Census Bureau 2012b).

X. Regional Diffusion: Although the idea of regional policy diffusion has been sharply criticized in recent years, the factor’s long history within the literature necessitates
continued inclusion in policy diffusion analyses. Since states tend to learn from and emulate the policy decisions of other states, I hypothesize that prior adoption of health insurance exchange policies by nearby states will be correlated with adoption of the same policy in a given state. I will measure prior adoption by nearby states as the percentage of states in a given state’s U.S. Census region that have already created a health insurance exchange. There are currently four U.S. Census regions. Region 1 is the Northeast, region 2 is the Midwest, region 3 is the South, and region 4 is the West. Using information on state health insurance exchange policy adoption from the Kaiser Family Foundation’s State Exchange Profiles (2013b) and a map of the U.S. Census regions (U.S. Census Bureau), I calculated this variable myself.

As I discussed in the previous chapter, the traditional conception of diffusion as a process that occurs in regional clusters has been sharply criticized. Contemporary policy diffusion scholars provide alternatives to regional diffusion by emphasizing alternative diffusion mechanisms such as interstate professional organizations and policy entrepreneurs and alternative measures of diffusion which group states based on cultural, ideological, or economic closeness (Balla 2001; Grossback, Nicholson-Crotty, and Peterson 2004, 299; Karch 2007b, 59; Mintrom 1997; Volden 2006, 299). Unfortunately, many diffusion mechanisms are difficult to measure and effectively include within statistical analyses. For example, Mintrom sent a mail survey to hundreds of policy entrepreneurs to gather the information needed to effectively examine their impact on policy diffusion (1997). It can also be challenging to include alternative measures of diffusion in analyses. For example, although Grossback, Nicholson-Crotty, and Peterson’s measure of the ideological closeness between states is theoretically sound, it is
also fairly complex (2004). Due to time limitations, I was unfortunately unable to include any of these alternative mechanisms and measurements of diffusion in my analysis.

XI. National Government Grant Money: As was mentioned in the section on state wealth, the federal government has provided states with grant money to help alleviate the cost of creating a health insurance exchange. I expect that states that received larger grants will be more likely to create a health insurance exchange than states who receive smaller grants. I measure federal grant money as a single totaled number of all the grants a state has received up to that point for implementing a health insurance exchange, regardless of when the grants were received. I accessed data on the number and size of grants received by each state from the Centers for Medicare and Medicaid Services’ website (USDHHS; USDHHS 2011b).

XII. Market Competitiveness: Although private health insurance markets in different states operate in similar ways, there is wide variation in the competitiveness of the private small group and individual health insurance markets across the states. For example, in the state of Alabama, a single insurer controls 96% of the small group health insurance market while Oregon’s small group insurance market is controlled by seven major insurers, none of which control more than 24% of the market (KFF 2010b). Although the existing literature does not provide a clear indication of the effect insurance market competitiveness may have on public diffusion, I expect states with less competitive insurance markets to adopt state-based health insurance exchanges. In states with less competitive insurance markets, only a few insurers control large shares of the market.
Due to these large market shares, these insurance companies have a larger economic role in the state than their counterparts in states with more competitive insurance marketplaces. Since an interest group’s economic standing can impact its lobbying power, insurance companies with a larger economic share of the market are more likely to achieve their lobbying goals (Rosenthal 59 2009, 148). Insurance companies have generally favored state run insurance exchanges. Thus I expect states with less competitive insurance markets and accordingly stronger health insurance companies to be more likely to adopt a state run insurance exchange. To measure insurance market competitiveness, I use the Kaiser Family Foundation’s Herfindahl-Hirschman Index (HHI). The HHI measures how evenly market share is spread across a large number of health insurers by taking the sum of squares of market share by state. The index is measured on a scale of 0 to 10,000. Higher HHI values indicate less competition while lower values indicate more competition (KFF 2010b). While the Kaiser Family Foundation calculated the HHI for the individual and small group markets separately, I have taken the mean of these two values to form a single measure of overall insurance market competitiveness (KFF 2010a; KFF 2010b). Overall, I expect states with higher HHI values to be more likely to adopt a state run health insurance exchange.

XIV. Supreme Court Decision: Following the passage of the ACA, 26 states joined a lawsuit challenging the law’s constitutionality (KFF 2012b, 1). The lawsuit called into question the long term existence of the ACA by creating an opportunity for the legislation to be ruled unconstitutional. However, in June 2012 in the case National Federation of Independent Business v. Sebelius the Supreme Court ruled that the ACA, with the
exception of an element of its Medicaid expansion, is constitutional (KFF 2012b, 4). A
number of states made the decision during the period between the ACA’s passage and the
Supreme Court’s ruling to not move forward with implementation of the ACA, including
the creation of health insurance exchanges, since there was a possibility the law could be
overturned. Since the Supreme Court case was the final legal decision on this issue, I
would expect the rate of health insurance exchange policy diffusion to increase
immediately following the Supreme Court’s decision. In order to isolate the impact of
this event from other independent variables, I did not include it in the Cox proportional
hazards models. Instead, I analyzed the impact of this variable using nonparametric
analyses. I began this process by splitting the entire data set into two groups. One group
included data for the months prior to the Supreme Court decision while the other included
data for the months after the Supreme Court decision. I then analyzed these two data sets
independently using the Kaplan-Meier estimator and compared the results to ascertain the
role of the Supreme Court’s decision in the policy diffusion process.

Conclusion

Following the standard for policy diffusion studies, I use event history analysis to
examine the diffusion of health insurance exchange policy. This branch of statistics
allows scholars to study the patterns and correlates of events, such as policy adoptions.
More specifically, I use the Kaplan-Meier estimator to examine the timing of health
insurance exchange policy diffusion and both single variable and multivariable Cox
proportional hazards regression models to examine the impact of independent variables
on the diffusion process. In the analyses, the hazard rate, defined as the probability that a
state will adopt a health insurance exchange in a particular month, is the dependent
variable. My selection of independent variables for this study was strongly informed by the policy diffusion literature. The independent variables included in my analysis either directly measure or significantly impact state governments’ motivation to innovate, obstacles to state government innovation, or the resources available for overcoming these obstacles. Independent variables include internal state socioeconomic and political system characteristics, such as state wealth, legislative professionalism and political culture, and external factors, such as regional policy diffusion and federal grant money. Analysis using the methodology outlined in this chapter will provide valuable insights into the process of health insurance exchange policy diffusion and the impact of a variety of independent variables on this process.
Chapter 5: Data Analysis

The Diffusion of Health Insurance Exchange Policy

In the period between the passage of the Affordable Care Act in March 2010 and the U.S. Department of Health and Human Services’ state run exchange application deadline in December 2012, twenty four states and the District of Columbia decided to either run their own health insurance exchange or participate in a federal partnership exchange. The other twenty six states decided to allow the federal government to operate a health insurance exchange on their behalf. Each state’s decision in regards to this issue can be seen in Figure 1.8

Despite the relative simplicity of the map, the routes states have taken to making this important public policy decision vary widely. Significant differences in both the timing of the decision and the governmental process through which the decision was made exist across the states. For example, California passed legislation creating a state run exchange a mere six months after the passage of the ACA in September 2010. Idaho’s governor announced the state would pursue a state run exchange only a few days before the final federal deadline in December 2012 (KFF 2013b). Particularly unique examples of this decision making process include Mississippi and Missouri. In Mississippi, the independently elected insurance commissioner decided to adopt a state run health insurance exchange without the support of the governor or the legislature.9 Although Missouri’s governor had intended to create a state run exchange via executive

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8 This figure reflects the diffusion of this policy as of December 2012. Since then, Mississippi has defaulted to a federal exchange and New Hampshire has adopted a partnership exchange.
9 The insurance commissioner’s application to the federal government to create a state exchange was subsequently denied due to this lack of support from the state government. After the denial of this application, Mississippi defaulted to a federal exchange.
order, he was forced by the referendum to forego this possibility. These examples demonstrate the diverse ways in which states’ decisions on health insurance exchange policy were made. A diverse array of factors underlies the unique decision each state made in response to the exchange requirements of the ACA. The findings outlined in this chapter help tease out the details of this complicated diffusion process.

**Nonparametric Analysis: Kaplan-Meier Estimator**

As I explained in the previous chapter, I begin my analysis with a nonparametric analysis using the Kaplan-Meier estimator. By estimating the survivor function\(^{10}\), the Kaplan-Meier estimator provides a sense of the policy’s relative speed of diffusion. Large decreases in the survivor rate signify that the policy is diffusing at a faster rate at that particular time period than at other points of time in the study. Similarly, small decreases in the survivor rate signify that the policy is diffusing at a slower rate at that time period. The results of this analysis can be seen in table 1. In addition to presenting the survivor rate over time, this table shows the specific months when states made a decision concerning health insurance exchanges and how many states made this decision during that month. The relative speed of the diffusion process is also shown in figure 2, a graph of the hazard rate. Although large increases in the hazard rate indicate the policy is diffusing at a faster rate and small increases indicate the policy is diffusing at a slower rate, the hazard rate measures the same phenomenon as the survivor rate.

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\(^{10}\) As a reminder, in the context of this study, the survivor rate is the probability of state inaction, while the hazard rate is the probability of state policy adoption.
Table 1: Kaplan-Meier Survivor Function Estimate

<table>
<thead>
<tr>
<th>Month</th>
<th>Number of Adoptions</th>
<th>Survivor Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>March 2010</td>
<td>2</td>
<td>.9608</td>
</tr>
<tr>
<td>September 2010</td>
<td>1</td>
<td>.9412</td>
</tr>
<tr>
<td>April 2011</td>
<td>1</td>
<td>.9216</td>
</tr>
<tr>
<td>May 2011</td>
<td>2</td>
<td>.8824</td>
</tr>
<tr>
<td>June 2011</td>
<td>3</td>
<td>.8235</td>
</tr>
<tr>
<td>July 2011</td>
<td>2</td>
<td>.7843</td>
</tr>
<tr>
<td>September 2011</td>
<td>1</td>
<td>.7647</td>
</tr>
<tr>
<td>December 2011</td>
<td>2</td>
<td>.7255</td>
</tr>
<tr>
<td>April 2012</td>
<td>1</td>
<td>.7059</td>
</tr>
<tr>
<td>July 2012</td>
<td>4</td>
<td>.6275</td>
</tr>
<tr>
<td>November 2012</td>
<td>3</td>
<td>.5686</td>
</tr>
<tr>
<td>December 2012</td>
<td>3</td>
<td>.5098</td>
</tr>
</tbody>
</table>

Number of adoptions refers to the number of states which adopted a state run or federal state partnership exchange during the given month. The survivor function is the probability that a state will not adopt a health insurance exchange during the given month.

**Figure 2: Hazard Function**

The hazard function is the probability that a state will adopt a state run or federal state partnership health insurance exchange during a given month. The analysis time refers to the month of the study, with 1 referring to March 2010 and 34 referring to December 2012. In this figure, the estimated hazard rates for each month have been smoothed to create a continuous hazard rate function.
The Kaplan-Meier estimates demonstrate that the adoption of health insurance exchange policy has occurred at an uneven rate over time, with faster rates of adoption during the late spring and summer months of 2011 and 2012 and during the two months immediately preceding the federal government’s deadline. This uneven rate of adoption is unsurprising considering the nature of legislative work. While there is certainly variation among the states in terms of the length and timing of legislative sessions, many states end their legislative sessions in late spring or early summer (NCSL 2013). Since complicated legislation, such as health insurance exchange legislation is often adopted at the end of a legislative session, legislative session scheduling is a likely cause for the summer spikes in adoption rates. Similarly, the likely cause for the higher adoption rates in the final few months of the study is the federal timeline for action placed upon states. In order to meet the requirements of the ACA, states needed to make a decision regarding health insurance exchanges before December 2012. Many states waited to make this decision as they weighed their options and in some cases, hoped a presidential victory for Mitt Romney would lead to complete repeal of the ACA (Goodnough 2012). Given these factors, it is unsurprising that many states decided to create health insurance exchanges in November and December of 2012. Overall, the Kaplan-Meier estimator provides a sense of the temporal diffusion of health insurance exchange policy.

Single Variable Cox Proportional Hazards Regression Models

As was discussed in the previous chapter, I use both single variable and multivariable Cox proportional hazards regression models to examine the impact of independent variables on the adoption of health insurance exchange policy. I begin my
discussion of these models with the simpler single variable Cox models. To determine the independent impact of variables on health insurance exchange policy diffusion, I ran a separate single variable Cox model for each independent variable discussed in the previous chapter, with the exception of the Supreme Court decision (see Table 3).

**Table 3: Single Variable Cox Proportional Hazards Models**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Hazard Ratio</th>
<th>Standard Error</th>
<th>Significance</th>
<th>Chi Square</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personal Income</td>
<td>1.004355</td>
<td>.001626</td>
<td>.007**</td>
<td>7.21</td>
</tr>
<tr>
<td>Fiscal Health</td>
<td>.9678664</td>
<td>.0331439</td>
<td>.34</td>
<td>.91</td>
</tr>
<tr>
<td>Outstanding State Debt</td>
<td>1.020284</td>
<td>.0100163</td>
<td>.041*</td>
<td>4.18</td>
</tr>
<tr>
<td>Legislative Professionalism</td>
<td>1.309303</td>
<td>.132992</td>
<td>.008**</td>
<td>7.04</td>
</tr>
<tr>
<td>Unified Control</td>
<td>.8618724</td>
<td>.3472322</td>
<td>.712</td>
<td>.14</td>
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<tr>
<td>Democratic Party Control</td>
<td>2.702152</td>
<td>.5003797</td>
<td>0.000***</td>
<td>28.82</td>
</tr>
<tr>
<td>Legislature Ideology</td>
<td>1.067587</td>
<td>.0125241</td>
<td>0.000***</td>
<td>31.08</td>
</tr>
<tr>
<td>Interest Group Activity</td>
<td>1.085252</td>
<td>.0899926</td>
<td>.324</td>
<td>.97</td>
</tr>
<tr>
<td>Election Proximity</td>
<td>.9520201</td>
<td>.2616493</td>
<td>.858</td>
<td>.03</td>
</tr>
<tr>
<td>Political Culture</td>
<td>1.529015</td>
<td>.3468846</td>
<td>.061*</td>
<td>3.5</td>
</tr>
<tr>
<td>Uninsured Population</td>
<td>.8929808</td>
<td>.0570365</td>
<td>.076*</td>
<td>3.14</td>
</tr>
<tr>
<td>Regulatory Agency Size</td>
<td>.9065361</td>
<td>.1254388</td>
<td>.478</td>
<td>.5</td>
</tr>
<tr>
<td>Regional Diffusion</td>
<td>1.00417</td>
<td>.011626</td>
<td>.719</td>
<td>.13</td>
</tr>
<tr>
<td>Federal Grant Money</td>
<td>1.034632</td>
<td>.0120699</td>
<td>.004**</td>
<td>8.52</td>
</tr>
<tr>
<td>Market Competitiveness</td>
<td>.9943433</td>
<td>.0129109</td>
<td>.662</td>
<td>.19</td>
</tr>
</tbody>
</table>

The dependent variable in all of the models is the hazard rate. Each variable listed in the left hand column is the independent variable in each model. The hazard ratio is the ratio of the hazard rate when the variable is at a higher level to the baseline hazard rate. *significant at p<0.05; ** significant at p<0.005, *** significant at p<0.001. Chi square measures the predictive ability of the model. Models with higher chi square values are more predictive than models with lower chi square values.
Of the fifteen variables included in this study, eight of them had a statistically significant impact at the five percent level on health insurance exchange policy adoption. Most of these fifteen variables can be categorized as state socioeconomic characteristics, state political system characteristics, or external actions by other states or the federal government. While these variables are included in most policy diffusion studies (Allen, Pettus, and Haider Markel 2004; Karch 2006; McLendon, Heller, and Young 2005; Stream 1999), the remaining variables in this study are expected to only have an impact on the diffusion of health insurance exchange policy and other similar health policies (McGaughey and Mank 2001; Stream 1999). Of these categories of variables, most state socioeconomic characteristics, including state debt and personal income, some state political system characteristics, namely legislative professionalism, Democratic party control of the legislature and the ideology of the legislature, federal government action in the form of grants, and a few additional variables, such as the size of the uninsured population and political culture, had a significant impact on health insurance exchange policy diffusion.

Furthermore, all but two of the eight statistically significant variables impacted policy diffusion in the expected direction. The direction of a variable’s impact is reflected in the value of the hazard ratio. If a variable’s hazard ratio is greater than one, the variable has a positive impact on the probability of adoption. Similarly, if a variable’s hazard ratio is less than one, said variable has a negative impact on the probability of adoption. In this study, all of the variables with the exception of state debt are expected to have a positive impact on health insurance exchange policy diffusion. Of the eight statistically significant variables, state debt and the size of the uninsured population
impact the probability of policy adoption in an unexpected direction. Although these results were not expected, these models’ use of only one variable and their limited predictive ability temper these findings.

Overall, the results of the single variable Cox models indicate that the most important factors in determining whether a state creates a health insurance exchange are the resources available to a state, both financially in the form of tax revenues and federal grant money and in terms of personnel as measured by the legislative professionalism variable, and the motivation to innovate, as measured by the Democratic party control, legislature ideology, and political culture variables. However, when the chi-square values of these models are also taken into consideration, ideology and Democratic party control seem to be particularly important determinants of health insurance exchange policy adoption. As was discussed in the previous chapter, chi square measures the predictive ability of a model. Although the chi-square values for the models listed in Table 3 may seem low, the low chi-square values are expected. Given that each of the models only includes a single covariate, these models are unlikely to explain much of the phenomenon of policy diffusion. However, the chi square values of these models can be compared with one another to ascertain the most predictive determinant of policy diffusion. Given that most of the chi square values for these models are between zero and five, even among statistically significant variables, and given that the chi square values for the Democratic party control and ideology models are 28.82 and 31.08 respectively, ideology and Democratic party control seem to be especially strong determinants of health insurance exchange policy adoption.
**Multivariable Cox Proportional Hazards Regression Models**

Although the results of single variable Cox proportional hazards regression models can be informative, I develop a model which includes several different covariates to fully understand the phenomenon of health insurance exchange policy diffusion. Accordingly, I developed several different models that included a significant number of independent variables. For the most part, all of these models included all of the independent variables discussed in the methods section and produced similar results. Different models were used to determine the best measure for state wealth (fiscal health, outstanding state debt, or personal income) and the best measure of government ideology (legislature ideology or Democratic party control). The strongest model included personal income and legislature ideology as independent variables. The results of this model can be seen in Table 4.

**Table 4: Cox Hazard Model Results**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Hazard Ratio</th>
<th>Standard Error</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personal Income</td>
<td>1.003133</td>
<td>.0056279</td>
<td>.577</td>
</tr>
<tr>
<td>Legislative Professionalism</td>
<td>.9594518</td>
<td>.1293424</td>
<td>.759</td>
</tr>
<tr>
<td>Unified Control</td>
<td>3.489097</td>
<td>1.594715</td>
<td>.006**</td>
</tr>
<tr>
<td>Legislature Ideology</td>
<td>1.132185</td>
<td>.0216436</td>
<td>0***</td>
</tr>
<tr>
<td>Interest Group Action</td>
<td>1.034624</td>
<td>.0976059</td>
<td>.718</td>
</tr>
<tr>
<td>Election Proximity</td>
<td>1.10109</td>
<td>.3145843</td>
<td>.736</td>
</tr>
<tr>
<td>Political Culture</td>
<td>6.072616</td>
<td>2.213996</td>
<td>0***</td>
</tr>
<tr>
<td>Uninsured Population</td>
<td>1.339032</td>
<td>.1287884</td>
<td>.002***</td>
</tr>
<tr>
<td>Regulatory Agency Size</td>
<td>.6705346</td>
<td>.2190573</td>
<td>.221</td>
</tr>
<tr>
<td>Regional Diffusion</td>
<td>.995049</td>
<td>.0139395</td>
<td>.723</td>
</tr>
<tr>
<td>Federal Grant Money</td>
<td>1.057693</td>
<td>.0116675</td>
<td>0***</td>
</tr>
<tr>
<td>Insurance Market Competitiveness</td>
<td>1.024697</td>
<td>.0174572</td>
<td>.152</td>
</tr>
</tbody>
</table>

The dependent variable is the hazard rate. The variables listed in the left hand column are the independent variables in this model. The hazard ratio is the ratio of the hazard rate when the variable is at a higher level to the baseline hazard rate. *significant at p<0.05; ** significant at p<0.005, *** significant at p<0.001

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11See footnote 1.
To a large extent, the results of the larger Cox proportional hazards model are similar to the results of the single variable models. Ideology, federal grant money, the size of the uninsured population, and political culture continue to have a statistically significant impact on health insurance exchange policy diffusion. However, the size of the uninsured population has an impact in the expected direction in the multivariable Cox model. The change in direction could be attributed to the more comprehensive and predictive nature of the larger model or to interactions and correlations among the covariates themselves. In either case, the direction of the uninsured population’s impact in the multivariable model corresponds with expectations while the variable’s reaction in the single variable model does not. Unified party control is also statistically significant at the five percent level in the multivariable model. All other variables in the multivariable Cox model do not have a statistically significant impact.

Of particular note in the results of the larger model is the continued importance of ideology as a determinant of policy diffusion. Due to the partisan makeup of the national government when the ACA was passed, the legislation and its effects, including the establishment of health insurance exchanges, have been strongly associated with the Democratic Party. Thus, the finding that state governments controlled by the Democratic Party are more likely to create state run or federal partnership exchanges is entirely expected. I also suspect that the unified party control variable’s statistically significant impact in the larger model is in part a result of this variable’s interaction with the ideology variable. Given the large degree to which a state government’s partisan makeup predicts its health insurance exchange policy decision, the unified control variable ought to have a middling impact when it is studied independently of other variables, given that
it codes for state governments entirely controlled by either the Republican Party or the Democratic Party. However, in a larger model in which the impact of a state government’s ideology is accounted for, this variable is likely to have a statistically significant impact as governments with unified Democratic control should be more likely than divided governments to adopt health insurance exchange policy. Thus, I doubt that unified party control has much of an impact on health insurance exchange policy diffusion outside of its interaction with ideology and party control.

Although Democratic Party control of the state government appears to be a particularly strong predictor of a state’s decision to adopt a state run or partnership health insurance exchange, this variable does not account for the decision of some traditionally Republican states, such as Utah and Idaho, to create state run health insurance exchanges. I suspect that political culture may explain the decision of these and similar states to enact health insurance exchange policy. Based on the characteristic viewpoints of the three political cultures, I expect states with moralistic political cultures to be more likely than states with traditionalistic or individualistic political cultures to adopt health insurance exchange policy. Given that political culture is a statistically significant variable in both the single variable and multivariable Cox models and given that Utah is an archetypal example of a state with a moralistic political culture (Elazar 1972), I would argue that political culture accounts for the decision of many traditionally Republican states to adopt health insurance exchange policy. Analysis using the Kaplan-Meier estimator of the different survival rates of states with moralistic, individualistic and traditionalistic political cultures further supports this argument. The results of this analysis can be seen in Figure 3. As a reminder, in the context of this study, the survivor
The survivor rate is the probability that a state will not adopt a health insurance exchange during the given month. Political culture group 1 is formed of states with a moralistic political culture, political culture group 2 is formed of states with an individualistic political culture, and political culture group 3 is formed of states with a traditionalistic political culture.
Another variable that was statistically significant in both the individual variable and multivariable Cox models is federal grant money. Despite this variable’s statistically significant impact and despite the important role of grants in making state run insurance exchanges more affordable for states, I am skeptical of the causal impact of grant money on policy diffusion. Federal grant money for health insurance exchanges was given to states through an application process (USDHHS 2011a). States who applied for grants through the federal government were perhaps more inclined to adopt a state run or partnership health insurance exchange, as the grant application process is designed to provide money for this purpose. If states who applied for grant money were already more likely to adopt a health insurance exchange than states who did not apply for grant money, the link between health insurance exchange policy adoption and federal grant money may be correlation, as opposed to causational.

The final variable with a statistically significant impact in both the single and multivariable models is the size of the uninsured population. Although the change in the direction of the variable’s impact between the two models is somewhat disconcerting, the statistical significance of the size of the uninsured population in both models indicates that this variable plays a role in the diffusion process. Fundamentally, health insurance exchanges and the other reforms of the ACA are aimed at reducing the number of uninsured Americans. Given that the number of uninsured Americans has steadily increased for decades, reaching 48 million in 2011 (U.S. Census Bureau 2012a), and given that these individuals and families face the enormous burden of paying for their medical care out of pocket, a burden which often leads to foregoing medical care (Kaiser Family Foundation Commission on Medicaid and the Uninsured 2012), it is not
surprising that legislators will adopt policies to address this issue, particularly if the size of the uninsured population in their state is large. Although the impact of the size of the uninsured population on health insurance exchange policy adoption is less supported than the impact of either legislature ideology or political culture, the multivariable Cox model still indicates that the size of the uninsured population plays a role in the diffusion process.

Clearly, a large number of independent variables included in this analysis did not have a statistically significant impact in either the multivariable Cox model or in the single variable Cox model. Some of these variables may truly not play a role in the diffusion of health insurance exchange policy. However, many of the variables with a statistically insignificant impact were weakened by measurement limitations. In particular, I found interest group activity and the size of the existing regulatory agency difficult to accurately measure. In many policy diffusion studies, the impact of interest groups is measured using the size of the membership in relevant citizen interest groups. For example, studies examining the diffusion of environmental policy often use membership in the Sierra Club as the basis for their measure of interest group activity (Daley and Garand 2005, 626). However, since interest group activity in the area of health policy is dominated by professional associations and corporations, an equivalent measure based on citizen group membership does not exist. While my chosen measure does provide a sense of the relative economic importance of the health care and insurance sectors, I find it to be a rather crude measure of interest group activity. Additionally, I found it challenging to accurately measure the size of the existing regulatory agency. Although data on the size of these agencies exists, it dates from 1995. The size of state
bureaucracies may very well have changed over this time period. Given this possibility, I am somewhat skeptical of the contemporary accuracy of this variable. Both interest group activity and the size of the existing insurance regulatory bureaucracy were statistically significant factors in Stream’s similar study of health insurance market reform policy diffusion (1999). Based on Stream’s results, I am hesitant to dismiss the potential impact of these factors on health insurance exchange policy diffusion. Further health insurance exchange policy diffusion studies ought to reexamine the impact of these variables using more accurate measurement techniques.

Of the independent variables without a statistically significant impact on health insurance exchange policy diffusion, the case of the regional diffusion variable is of particular note. There are a significant number of scholars who are understandably critical of the idea of regional policy diffusion. They argue that technological advancements have allowed states to learn from the policy decisions of other states independently of the states’ geographic proximity. However, in the case of health insurance exchange policy diffusion, the geographic distribution of the states with state run or partnership health insurance exchanges appears to be quite regional. While many states in the West and the Northeast have adopted state run health insurance exchanges, few states in the South and Midwest have adopted exchange policy. A comparison of the survival rates of the states in each Census region (West, Midwest, Northeast, and South) using the Kaplan-Meier estimator supports this perception. As can be seen in figure 4, states in Census region 1 (Northeast) and Census region 4 (West) are much more likely to create a state run or partnership health insurance exchange than states in Census region 2 (Midwest) or Census region 3 (South). These results would seem to indicate that regional
diffusion ought to have a role in health insurance exchange policy diffusion. However, the regional geographic distribution of the states that have adopted health insurance exchange policies may be due to other underlying common characteristics, such as ideology and political culture.

Figure 4: Kaplan-Meier Survival Rate Estimates by Census Region

The survivor rate is the probability that a state will not adopt a health insurance exchange during the given month. Census region 1 is formed of states in the Northeast Census region, Census region 2 is formed of states in the Midwest Census region, Census region 3 is formed of states in the South Census region, and Census region 4 is formed of states in the West Census region.

The Impact of the Supreme Court Decision

As was discussed in the methodology chapter, I expect states to be more likely to adopt health insurance exchange policy after the Supreme Court decision in *NFIB v. Sebelius* than before this decision. I analyzed the impact of this decision independently from the Cox models in order to isolate its effects. As I explained in the previous chapter, I split my data set into a period before and a period after the Supreme Court decision and then compared the survivor rates of these two data sets. Tables 5 and 6 and figures 5 and 6 show the results of this analysis.
Table 5: Kaplan-Meier Survivor Function Estimate before Supreme Court Decision

<table>
<thead>
<tr>
<th>Month</th>
<th>Number of States Remaining</th>
<th>Number of Adoptions</th>
<th>Survivor Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>March 2010</td>
<td>51</td>
<td>2</td>
<td>.9608</td>
</tr>
<tr>
<td>September 2010</td>
<td>49</td>
<td>1</td>
<td>.9412</td>
</tr>
<tr>
<td>April 2011</td>
<td>48</td>
<td>1</td>
<td>.9216</td>
</tr>
<tr>
<td>May 2011</td>
<td>47</td>
<td>2</td>
<td>.8824</td>
</tr>
<tr>
<td>June 2011</td>
<td>45</td>
<td>3</td>
<td>.8235</td>
</tr>
<tr>
<td>July 2011</td>
<td>42</td>
<td>2</td>
<td>.7843</td>
</tr>
<tr>
<td>September 2011</td>
<td>40</td>
<td>1</td>
<td>.7647</td>
</tr>
<tr>
<td>December 2011</td>
<td>39</td>
<td>2</td>
<td>.7255</td>
</tr>
<tr>
<td>April 2012</td>
<td>37</td>
<td>1</td>
<td>.7059</td>
</tr>
<tr>
<td>May 2012</td>
<td>36</td>
<td>0</td>
<td>.7059</td>
</tr>
</tbody>
</table>

Number of adoptions refers to the number of states which adopted a state run or federal state partnership exchange during the given month. The survivor function is the probability that a state will not adopt a health insurance exchange during the given month.

Figure 5: Kaplan-Meier Survivor Estimate before Supreme Court Decision

The survivor function is the probability that a state will not adopt a health insurance exchange during the given month. The analysis time refers to the month of the study, with 1 referring to March 2010 and 34 referring to December 2012.
Table 6: Survivor Function after Supreme Court Decision

<table>
<thead>
<tr>
<th>Month</th>
<th>Number of States Remaining</th>
<th>Number of Adoptions</th>
<th>Survivor Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>July 2012</td>
<td>36</td>
<td>4</td>
<td>.8889</td>
</tr>
<tr>
<td>November 2012</td>
<td>32</td>
<td>3</td>
<td>.8056</td>
</tr>
<tr>
<td>December 2012</td>
<td>29</td>
<td>3</td>
<td>.7222</td>
</tr>
</tbody>
</table>

Number of adoptions refers to the number of states which adopted a state run or federal state partnership exchange during the given month. The survivor function is the probability that a state will not adopt a health insurance exchange during the given month.

Figure 6: Kaplan-Meier Survivor Estimate after Supreme Court Decision

The survivor function is the probability that a state will not adopt a health insurance exchange during the given month. The analysis time refers to the month of the study, with 1 referring to March 2010 and 34 referring to December 2012.

In comparing the process of health insurance exchange policy diffusion before and after the Supreme Court’s decision on the constitutionality of the ACA, diffusion after the Supreme Court decision tended to progress at a faster rate than before the decision. While the survivor function, defined as the probability of not adopting the policy, dropped from .9608 to .7059 over the course of 27 months before the Supreme Court decision, in the period after the Supreme Court decision, the survivor function dropped from .8889 to .7222 in only six months. Additionally, while 15 states created a
state run or partnership health insurance exchange in the 27 months before the Supreme Court decision, an additional 11 states created a state run or partnership exchange in the 6 months following the Supreme Court’s decision. Altogether, these findings indicate that the diffusion of health insurance exchange policy occurred at a faster rate after the Supreme Court decision than it did before the decision. However, this may be a correlational relationship as opposed to a causational relationship. The rate of policy diffusion was also probably higher after the Supreme Court’s decision due to the national government’s ensuing December 2012 deadline. More investigation is needed to determine the cause of this trend in the rate of health insurance exchange policy diffusion.

Conclusion and Policy Implications

This study’s statistical analysis of the diffusion of health insurance exchange policy began with a nonparametric analysis using the Kaplan-Meier estimator. By estimating the survivor rate, the Kaplan-Meier estimator provides a sense of the relative speed of diffusion over the time period being studied. The results of this analysis show that health insurance exchange policy did not diffuse at a uniform rate over the time period of study. More specifically, the diffusion rate was at its highest during the late spring and summer months and the last few months of the study. This analysis both confirms the tendency of state legislatures to adopt legislation near the end of the legislative session, which occurs in late spring or early summer in most states (NCSL 2013). Meanwhile, the spike in adoptions at the end of the time period indicates that
many states waited until the last minute to decide whether or not to establish a health insurance exchange.

Further analysis using semiparametric Cox proportional hazards regression models provides a sense of which factors play a role in the diffusion of health insurance exchange policy and additionally, which factors may play a role in each state’s individual decision to either establish or not establish a health insurance exchange. The Cox models indicate that the ideology or partisan makeup of the state’s government, the political culture of a state, and to a lesser extent, the size of the state’s uninsured population have a statistically significant positive impact on health insurance exchange policy diffusion. To a significant extent, these three factors together do the most to explain the decisions of states to either adopt or not adopt health insurance exchange policy and the larger spread of the policy across the nation. A comparison of the survival rates of states with each political culture using the Kaplan-Meier estimator confirmed the important role of political culture in exchange policy diffusion. Although other variables, such as unified party control and federal grant money, had a statistically significant impact on health insurance exchange policy diffusion in the Cox models, issues of covariance minimize the explanatory power of these variables.

When the results of the Cox models are further examined through the lens of Mohr’s theory of the determinants of innovations, a stark pattern emerges. The three strongest determinants of health insurance exchange policy diffusion, namely legislature ideology, political culture, and the size of the uninsured population, all measure, either directly or indirectly, a state’s motivation to adopt the policy. Since politicians are motivated to adopt policies that coincide with both their constituents’ and their personal
ideology in order to gain reelection and improve the public interest (Berry and Berry 1990, 402; Berry et al. 1998, 327), the ideology of the legislature impacts the state government’s motivation to innovate (Allen, Pettus, and Haider-Markel 2004, 325). Political culture also impacts a state government’s motivation to innovate, because certain political cultures, namely moralistic and to a lesser extent, individualistic political cultures, are associated with views on the role of the government in welfare policy which encourage health insurance reform policy adoption (McGaughey and Mank 2001, 205). Finally, since state governments are more motivated to adopt public policies that address severe and salient problems (Karch 2006, 209) and since health insurance exchanges aim to decrease the uninsured population, the size of the uninsured population indirectly measures a state’s motivation to increase health insurance coverage through a health insurance exchange. Given that all three of the statistically significant variables in my study measure the motivation to innovate, I conclude that the state governments’ motivation to innovate is the key determinant of health insurance exchange policy diffusion.

The findings of this study have broader policy implications for legislators and health policy leaders as they continue to consider, adopt, and advocate for further health reform policies. While each state government has made a preliminary decision concerning the development and operation of their state’s health insurance exchange, the adoption of health insurance exchange policy at the state level will continue. Even though each state’s initial decision to adopt a state run, partnership, or federally run exchange will remain in place for several years, states will have the option of moving from a federally run to either a partnership exchange or state run exchange. States may also
move from a partnership exchange to a state run exchange in the future (Kaiser Family Foundation 2012a, 2). Additionally, states who established state run or partnership exchanges have a significant degree of leeway in determining the specific details of their exchange. Although each exchange will be operational by January 2014, states with state run or partnership exchanges will inevitably continue to reform their exchanges over the years (Kaiser Family Foundation 2012a). States will also continue to adopt other health reform policies. For example, state governments are currently determining whether they will expand their Medicaid program as part of implementing the ACA (Somashekhar 2013).

As states continue to reform their health care systems and develop their health insurance exchanges, an understanding of the determinants of the initial adoption and diffusion of health insurance exchange policy will help legislators and policy leaders more effectively advocate for their preferred policies. Based on the findings of this study, the most important determinant of health insurance exchange policy adoption is the state government’s motivation to adopt the policy. Armed with this information, policy leaders can effectively focus their resources on influencing the legislature’s motivation to innovate. For example, since a state’s political culture influences the state’s government’s motivation to adopt policy innovations, policy leaders can highlight the ways in which their preferred policy coincides with the state’s political culture and fulfills the political culture’s views on the purpose of government in conversations with legislators. By efficiently focusing their efforts on altering the government’s motivation to adopt policy innovations, policy leaders should be more effective in achieving their legislative goals.
The final analysis I conducted is an examination of the impact of the Supreme Court case *NFIB v. Sebelius*, which upheld the constitutionality of the ACA, on health insurance exchange policy diffusion. The analysis revealed that policy diffusion occurred at a higher rate in the six months following the Supreme Court decision than in the 27 months preceding the decision. However, due to the limited time frame of the study and the short time span between the court’s decision and the federal deadline, I am hesitant to conclude that the Supreme Court decision was the cause of the increase in the diffusion rate. On the whole, the analysis of the impact of the Supreme Court decision on exchange policy diffusion is inconclusive.
Chapter 6: Conclusion

Summary of Thesis

At its most basic, this thesis examines the recent diffusion of health insurance exchange policy among the US states. As a response to the Affordable Care Act’s requirement that every state have an operational health insurance exchange, each state decided to either establish a state run exchange, establish a partnership exchange in conjunction with the federal government, or take no action and default to a federally run exchange. Health insurance exchange policy quickly spread among the states as twenty four states and the District of Columbia established a state run or a partnership exchange. This study used event history analysis to determine which factors played a role in the states’ decision making processes and in the broader diffusion of the policy across the nation.

Health insurance exchanges are a vital component of the Affordable Care Act, as they are expected to both increase health insurance coverage and lower health insurance premiums by addressing the knowledge disparities that exist between health insurance providers and consumers. By providing consumers with clear and accessible information about available insurance plans, health insurance exchanges arm consumers with the knowledge needed to make an intelligent health insurance purchasing decision. The exchanges also lower insurance premiums and address insurance companies’ lack of knowledge concerning consumers’ future healthcare needs by pooling individuals and small businesses into larger risk pools. After appearing as an element of President Clinton’s failed 1993 health reform plan, the first health insurance exchange was enacted in Massachusetts in 2006. Using Massachusetts’ reform plan as an example, the ACA
mandated the creation of a health insurance exchange in every state. However, states
could decide to develop and operate their own exchange, partner with the federal
government in developing and operating the exchange, or default to a federally developed
and operated health insurance exchange. After the passage of the ACA, health insurance
exchange policy quickly spread among the states.

Since this thesis is an examination of the diffusion of a public policy, the policy
diffusion literature strongly informs the methodological design of this project. In
particular, Mohr’s (1969) theory of the determinants of innovation guides the study.
Mohr theorized that innovation is related to the motivation to innovate, the obstacles to
innovation, and the resources for overcoming these obstacles. Berry and Berry (1990)
subsequently used Mohr’s theory to explain how factors both internal and external to the
state impact state policy adoption and diffusion. Through the use of Mohr’s theory and
through the development of a statistical technique which allows scholars to
simultaneously examine the impact of internal and external factors on policy diffusion,
Berry and Berry founded the contemporary policy diffusion literature. Since Berry and
Berry’s seminal work, scholars have examined the diffusion of a wide variety of policies.
However, regardless of the specific policy being examined, most policy diffusion studies
include similar variables in their analyses. Mohr’s theory explains the expected impact of
the variables, which include state socioeconomic characteristics, state political system
characteristics, and the actions of actors outside the system, such as the other states’
governments. Using studies within the policy diffusion literature as examples, I include
similar variables in my study of health insurance exchange policy. However, in addition
to the commonly studied variables, I include variables which measure the impact of
federal government activity on exchange policy diffusion and variables which are expected to specifically impact the diffusion of social welfare and health reform policies in my analysis.

I determine the impact of these variables on health insurance exchange policy diffusion using event history analysis. More specifically, I use the Kaplan-Meier estimator to examine the relative speed of diffusion over the two and a half years between the passage of the ACA and the federal government’s deadline for health insurance exchange decisions. The estimator is also used to examine the relationship between a few categorical variables and the rate of diffusion and to examine the impact of the Supreme Court’s decision in *NFIB v. Sebelius* on exchange policy diffusion. I then used Cox proportional hazards regression models to determine the impact of the independent variables on health insurance exchange policy diffusion.

From my statistical analyses, I conclude that the motivation to innovate is the strongest determinant of health insurance exchange policy adoption and diffusion. More specifically, variables which measure a state government’s motivation to innovate, such as the partisan makeup of the state’s government, the political culture of the state, and the size of the state’s uninsured population, are all significant determinants of state health insurance exchange policy adoption and diffusion, while the other variables included in this analysis did not have a statistically significant impact.

*Future Research*

While this study is a good starting point for beginning to understand the process of health insurance exchange policy diffusion, both refining this study’s analysis and
researching additional aspects of the health insurance exchange policy diffusion process will strengthen and extend our understanding of this complex issue.

Given that my study has a few methodological limitations, further research could reexamine the issue of health insurance exchange policy diffusion in a more methodologically sound manner. Examining the impact of alternative policy diffusion mechanisms, improving the measurement techniques used to calculate variables, and using more contemporary data sources would improve the methodological soundness of future examinations of health insurance exchange policy diffusion. An analysis of health insurance exchange policy diffusion using stronger methodological techniques could result in different findings and would certainly explain the diffusion process more accurately.

Although the choice between a state run exchange, partnership exchange, and federally run exchange was the major decision states faced in responding to the ACA’s health insurance exchange requirements, the states who established state run or partnership exchanges faced a number of additional policy decisions in developing their exchanges. For example, states need to decide whether to operate their insurance exchange using a clearinghouse model or an active purchaser model. While under a clearinghouse model, the exchange would be required to contract with every insurance plan meeting the federal minimum requirements, an active purchaser exchange could selectively contract with insurers based on criteria beyond the federal minimums (Kaiser Family Foundation 2012a, 3). States also need to decide whether to run the exchange as a state agency, a quasi-governmental entity, or as a non-profit independent from the state government (Kaiser Family Foundation 2012a, 3). An even more complete picture of the
health insurance exchange policy diffusion process would be gained from further research investigating the diffusion of these specific elements of health insurance exchanges among the states establishing their own exchange.
### Appendix A: Measurement Techniques and Data Sources for Variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>Measurement</th>
<th>Data Source</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dependent Variable</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Health Insurance Exchange Policy Adoption</td>
<td>Coded 0 when the state has not yet adopted a state run or partnership exchange. Coded 1 when the state has adopted a state run or partnership exchange beginning with the month during which the exchange was adopted.</td>
<td>Kaiser Family Foundation’s State Exchange Profiles (2013b)</td>
</tr>
<tr>
<td><strong>Independent Variables</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Personal Income</td>
<td>Per capita personal income of the residents of a state. Ranges in value from $73,105 to $31,071.</td>
<td>Council of State Governments’ Book of the States (Wall 2012a)</td>
</tr>
<tr>
<td>State Fiscal Health</td>
<td>Percentage of a state’s expenditures that can be paid with the same fiscal year’s revenue. This variable ranges in value from 115.5% to 88.17%.</td>
<td>Book of the States (Wall 2012d; Wall 2012e)</td>
</tr>
<tr>
<td>State Debt</td>
<td>A state’s outstanding debt in USD divided by the population of the state. This variable ranges in value from $73,105 to $31,071.</td>
<td>Outstanding Debt Data: Book of the States (Wall 2012b); Population Data: U.S. Census Bureau (2012b)</td>
</tr>
<tr>
<td>Legislative Professionalism</td>
<td>A state legislature’s professionalism score, with higher values indicating more professional legislatures. This variable ranges from 0.659 to 0.042 in value.</td>
<td>Squire (1992)</td>
</tr>
<tr>
<td>Unified Party Control</td>
<td>Coded as 1 when all branches of the state’s government are controlled by the same political party. Coded as 0 in all other cases.</td>
<td>Party Control of State Legislatures: National Conference of State Legislatures (2010; 2011); Party of Governor (2010; 2011; 2012)</td>
</tr>
<tr>
<td>Party Control</td>
<td>Categorical variable which takes a value between 0 and 3 depending on how many branches of the state government are controlled by the Democratic Party.</td>
<td>National Conference of State Legislatures (2010; 2011)</td>
</tr>
<tr>
<td>Variable</td>
<td>Description</td>
<td>Source</td>
</tr>
<tr>
<td>-----------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>--------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Legislature Ideology</td>
<td>Percentage of the total legislative seats in the state’s legislature and in the state’s delegation to Congress held by members of the Democratic Party. This variable ranges from 89.83% to 14.89% in value.</td>
<td>State Legislature Data: National Conference of State Legislatures (2010; 2011); Congress Data: U.S. Government Printing Office (2009; 2011)</td>
</tr>
<tr>
<td>Interest Group Activity</td>
<td>Percentage of a state’s total employment taken up by either the health or insurance industries. This variable ranges in value from 22.09% to 10.62%.</td>
<td>U.S. Department of Commerce’s Bureau of Economic Analysis (2012b)</td>
</tr>
<tr>
<td>Election Proximity</td>
<td>Coded as 1 if the month falls in a state election year. Coded 0 in all other cases. November and December are always coded as 0 regardless of the year.</td>
<td>Council of State Governments’ Book of the States (Wall 2012c; 2012f)</td>
</tr>
<tr>
<td>Political Culture</td>
<td>Coded as 3 if the state has a moralistic political culture. Coded as 2 if the state has an individualistic political culture. Coded as 1 if the state has a traditionalistic political culture.</td>
<td>Elazar (1972)</td>
</tr>
<tr>
<td>Uninsured Population</td>
<td>Percentage of a state’s population without health insurance. Variable ranges from 24.6% to 3.4% in value.</td>
<td>U.S. Census Bureau (2012a)</td>
</tr>
<tr>
<td>Regulatory Agency Size</td>
<td>The number of full time staff at a state government’s department of insurance per 100,000 people living in the state. Variable ranges from 6.94 to 1.1 in value.</td>
<td>Size of Staff: Ananthapura (1995); Population Data: U.S. Census Bureau (2012b)</td>
</tr>
<tr>
<td>Regional Diffusion</td>
<td>The percentage of states in the state’s U.S. Census region that have already established a state run or partnership exchange. Ranges in value from 75% to 0%.</td>
<td>U.S. Census Region Information: U.S. Census Bureau; Policy Adoption Information: Kaiser Family Foundation’s State Exchange Profiles (2013b)</td>
</tr>
<tr>
<td>Federal Grant Money</td>
<td>The total value in USD of grants received by the state from the federal government for the purpose of establishing a health insurance exchange. Ranges in value from $236,901,012 to $0.</td>
<td>Centers for Medicare and Medicaid Services (2011b)</td>
</tr>
<tr>
<td>Market Competitiveness</td>
<td>The mean of each state’s Herfindahl-Hirschmann Index for the small group and individual insurance markets. Higher values are associated with increased competition in the insurance market. Ranges in value from 8300.5 to 1575.</td>
<td>Kaiser Family Foundation (2010a; 2012b)</td>
</tr>
</tbody>
</table>
### Appendix B: Descriptive Statistics of Variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dependent Variable</strong></td>
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<tr>
<td>Health Insurance Exchange Policy Adoption</td>
<td>.193</td>
<td>.394</td>
</tr>
<tr>
<td><strong>Independent Variables</strong></td>
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<td></td>
</tr>
<tr>
<td>Personal Income</td>
<td>40858</td>
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<tr>
<td>State Fiscal Health</td>
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<tr>
<td>State Debt</td>
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<tr>
<td>Legislative Professionalism</td>
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<td>.142</td>
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<tr>
<td>Unified Party Control</td>
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<tr>
<td>Party Control</td>
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<tr>
<td>Legislature Ideology</td>
<td>48.74</td>
<td>17.07</td>
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<td>Interest Group Activity</td>
<td>16.05</td>
<td>2.55</td>
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<tr>
<td>Election Proximity</td>
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<td>.5</td>
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<tr>
<td>Political Culture</td>
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<td>Uninsured Population</td>
<td>14.43</td>
<td>4.07</td>
</tr>
<tr>
<td>Regulatory Agency Size</td>
<td>3.34</td>
<td>1.55</td>
</tr>
<tr>
<td>Regional Diffusion</td>
<td>19.26</td>
<td>20.88</td>
</tr>
<tr>
<td>Federal Grant Money</td>
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<td>28000000</td>
</tr>
<tr>
<td>Insurance Market Competitiveness</td>
<td>3882.23</td>
<td>1397.52</td>
</tr>
</tbody>
</table>
Reference


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