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May, 2018

THE TIES THAT DO NOT BIND: SOCIAL CAPITAL, MINORITY FEMALE
REPRESENTATION, AND SOCIAL INEQUALITY IN THE UNITED STATES

A Dissertation
Presented to
The Faculty of the Department
of Political Science
University of Houston

In Partial Fulfillment
Of the Requirements for the Degree of
Doctor of Philosophy

By
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ABSTRACT

This dissertation is comprised of three studies on how social capital and the representation of members of traditionally under-represented groups affect health inequality in the US. A consequence of racial and ethnic diversity in America has been increased social inequality. Social inequality in health exists along gender, race/ethnicity, and the intersection of the two. The goal of this dissertation is to offer insight on the factors that improve health outcomes and reduce health inequality. Motivated by the theory of representative bureaucracy, theories on legislative behavior, and public health research, I argue that (minority) female representation is critical to reducing health disparity.

In the first essay, “All Women *Not* Affected Equally: Social Capital and Minority Female Representation in American States”, I study how various measures of social capital effect the emergence and political representation of women who belong to different racial/ethnic groups in 2012. The findings suggest that social capital is a form of “political” capital for women with differential effects on white women, black women, and Latinas. Sub-group social capital indexes reveal that social capital is a private good that unique effects in-group members. Aware of research that highlights additional “limits” to expected benefits of social capital and the importance of other representatives that can affect health, I examine how social capital shapes female representation more broadly. In the second chapter, “Occupational Hierarchy vs. Employment Sector: A Comparison of Social Capital Effects on Female Employment”. By focusing on female employment in government and in health, my findings suggest social capital affects the sector women pursue careers in and promotes the representation of women in health. The third chapter, “What about *Substantive* Representation? The Effects of Female Bureaucratic Representation and Social Capital on US Inequality”, ties the studies together. While all women benefit from high stocks of female social capital, only white women accrue the

benefits associated with increased female bureaucratic representation. High stocks of social capital *and* female bureaucratic representation reduce disparity in infant mortality rates.

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DEDICATION

To other first-generation college students with ambitious goals.

EPIGRAPH

“It always seems impossible until it’s done.” - Nelson Mandela

1 INTRODUCTION

America is one of the most racially diverse nations in the world. Unfortunately, America's growing diversity has come with prejudice and racism which results in "unfair gains and unearned rewards for whites" (Lipsitz, 2006), increased social inequality along racial/ethnic and gender lines (Shapiro, 2004), as well as interlocking systems of oppression at the intersection of the two (Collins, 2000; Penner and Saperstein, 2013). Social inequality exists across public policy outcomes. For example, there is income inequality as the richest 20% of the population enjoy half of the income in America (Jacobs and Skocpol, 2007). There is inequality in the responsiveness of politicians, because although America is built on democratic values such as "one person, one vote", the political voice of each American does not carry the same weight as politicians are disproportionately responsive to whites and wealthier members of society (Bartels, 2008; Dahl, 2006; Hero, 1998; Schlozman and Brady, 2012). There is inequality in the poverty rates (Handler and Hasenfeld, 2007), wealth accumulation (Shapiro, 2004), and mass incarceration rates of members of different sub-groups in society (Alexander, 2012).

This project focuses on health inequality, which is a persistent and problematic forms of social inequality in the US. Sadly, a social gradient in health is common across most industrialized democracies in the world (Marmot, 2005). There is an interesting paradigm that surrounds health in America. America spends more money on health and health care services than all other comparable industrialized nations (Starr, 2011). Despite this, Americans have poorer health outcomes than individuals in countries who spend far less on health, particularly for older Americans (Osborn et al., 2014). This paradigm - high levels of spending, yet poor health outcomes - becomes more problematic due to the fact that there is significant variation in the health status of Americans across social identities, such as gender and race/ethnicity. Racial and ethnic disparity in health, or a

difference in health conditions that result in one group having a disproportionate burden of disease, disability, or premature death (Smedley, Stith and Nelson, 2009), has been prevalent in the US for decades.

There are several examples of racial and ethnic disparity in health. For example, from 2010 to 2012 - nearly 8% of Non-Hispanic Whites were diagnosed with diabetes, however, these rates are much higher for people of color as 9% of Asian Americans, 12.8% of Hispanics, 13.2% of blacks, and 15.9% of American Indians were diagnosed (see the 2012 National Health Interview Survey and the 2012 Indian Health Service's National Patient Information Reporting System). Although there have been increases in the average life expectancy of blacks, disparity remains as the life expectancy of these minorities is four years less than that of whites (CDC, 2017). Racial and ethnic disparity in health is also reflected in the causes of death as there is variation in the factors that lead to death from members of different racial/ethnic sub-groups. Minorities are more likely to die from cancer or stroke than whites (Johnson-Askew and Sockalingam, 2011). Blacks have a higher risk of dying from infectious disease than whites; this disparity exists after accounting for income and education (Richardus and Kunst, 2001). Considering the intersection of gender *and* race reveals even more troubling aspects of health. According to the Centers for Disease Control and Prevention, from 2011 to 2013, maternal deaths per 100,000 live births was 13 for white women and 44 for black women. A study on five conditions that result in pregnancy-related mortality had findings that suggest black women with the conditions were two to three times as likely to die than white women, despite no difference in the prevalence rates for the two groups of women (Tucker et al., 2007). Women of color consistently have higher infant mortality rates than white women. The infant mortality rates of black women are twice the rate of white women (Johnson-Askew and Sockalingam, 2011). A 2013 report by the March of Dimes finds black women have the higher premature births (17%) when compared to Latinas (11.7%)

and white women (10.5%). According to the World Health Organization, the death rates of expectant and new black mothers in the US are comparable to countries such as Uzbekistan.

It is important to identify factors that improve the health outcomes. The variation of health outcomes in the US along gender and race/ethnicity make it important to examine how the intersection of these social identities effects health outcomes. This is important because of the direct effect health has on the quality of life a person is able to live. Understanding the factors that contribute to health is also important because racial and ethnic disparities result in unnecessary economic costs. Estimates suggest 30% of direct medical costs for blacks, Hispanics, and Asian Americans are excess costs due to health disparities and that the US economic loses an estimated \$309 billion per year as a result of the direct and indirect costs associated with health disparities (Kaiser Family Foundation, 2012). The negative consequences and financial costs associated with racial and ethnic disparities in health are compounded by population estimates that suggest by 2050, the individuals who belong to current racial and ethnic minorities will comprise a much larger portion of the population (Mead, 2010).

Given the severity of social inequality in health, it is not surprising that different factors have been put forth as avenues for improving health outcomes of the public. Scholars and health professionals offer many suggestions for reducing racial and ethnic disparities in health. One of the most common explanations for racial and ethnic disparities in health is that these disparities are the result of disparities in health care access (Lado, 2001) as access to health care services is important to one's health. Scholars also highlight the importance of socioeconomic factors such as income, education, and employment and occupation as having important effects on health disparity (Adler and Newman, 2002; Williams and Collins, 2001). Thus racial and ethnic disparity in income

is thought to contribute to racial and ethnic disparity in health (Jacobs and Skocpol, 2012). However, findings suggest that health disparity remains even *with* adjustments for socioeconomic differences and health access-related factors (Smedley, Stith and Nelson, 2009).

A second common explanation centers on public policies. The type of policies that are enacted at the local, state, and federal levels of government have important effects on health. For example, the Patient Protection and Affordable Care Act (henceforth, ACA), which in 2010 was projected to expand health care insurance coverage to 94% of the population in America (CBO, 2010) and focuses on community-based initiatives (Islam et al., 2015), is associated with improved health insurance coverage (Sommers et al., 2013), as well as increased doctor visits and overnight hospital stays and diagnosis rates for diabetes and high levels of cholesterol, for individuals in states that accepted the Medicaid coverage expansion afforded via the ACA (Wherry and Miller, 2016). Tax policies also have important effects on health-related behavior. State cigarette taxes are associated with a decline in cigarette consumption; the greater the increase in the cigarette tax, the larger the decline in cigarette consumption (Flewelling et al., 1992; Peterson et al., 1992). Similarly, taxes on alcoholic beverages or increases in the price of alcohol reduce alcohol consumption (Elder et al., 2010) and reduce alcohol related disease, suicide, and other health outcomes (Wagenaar, Tobler and Komro, 2010). Scholars expect a similar improvement in health if taxes were added to sugar-sweetened beverages - a penny-per-ounce excise tax on sugary beverages would reduce consumption of these drinks and could prevent diabetes in more than 2 million people, approximately 8,000 strokes, and nearly 30,000 premature deaths (Wang et al., 2012). Each of these are examples of how policy can act as a public health intervention. The importance of policy, illuminates the important potential role of political representation in shaping health outcomes. There are also explanations for health that center on social determinants of health. “Social

determinants of health” refer to the social factors and an individual’s environment that contribute to one’s health (Marmot, 2005). This line of reasoning suggests that poor health outcomes can be made worse (or improved) by the physical environment one lives in and are impacted by one’s gender and race/ethnicity.

I focus on the relationship between social capital, a measure that captures factors relating to social determinants of health, female representation, and health inequality in the US. The purpose of this project is to examine factors that improve health of the public. Given the nature of the health outcomes and health disparity in the US, I focus on the outcomes of women. Although attention has been given to the factors that improve various health indicators, it is important to give attention to how different social identities interactively shape this form of social inequality. The research question that motivates this dissertation is twofold. The increased representation of traditionally under-represented groups is often viewed as an important avenue to improving the outcomes of minority groups in society, so the first half of this dissertation examines:

- 1) What are the determinants of female representation? In the first chapter I examine how social capital affects the political representation of minority women and in the second chapter I explore whether social capital improves the representation of women in government and in health - two employment sectors that may directly affect health outcomes of the public. There is an extensive line of research that argues social capital and female representation are key to improving health outcomes; the final chapter of this dissertation explores:
- 2) How do social capital and female representation affect health outcomes and racial and ethnic disparities in health? The insights of the three studies in this project reveal the importance of exploring the intersectional effects of salient social identities, such as gender and race, on equity in social policy outcomes and can inform our understanding of factors that can reduce social inequality more broadly.

1.1 Explanations of Health and Health Inequality

1.1.1 Social Capital

Social capital has been extensively studied across scholarly disciplines. As a result, there are many definitions, measurements, and findings concerning the effects of social capital. Social capital refers to different phenomena at relating to social relations in a given society. The underlying premise of the concept is that social connections or networks have value. Classic social capital research dates back to Karl Marx's work on capital, Durkheim's work on group life, and work from Bourdieu. "Capital" refers to resources used to produce goods, or even more broadly, all of the resources that bring in income. Many social capital studies are based on Marx's definition of capital (Lin, 2000)(785). For Marx, capital is exploitative class relations between capitalists/bourgeoisie and the proletariat, which introduces the idea of social capital as having targeted benefits for select members of society. Durkheim argues workers were left confused after institutional movements away from modernization and Feudalism to industrialization and Capitalism, respectively. A result of this confusion was workers turning to religion, which gave rise to the shared norms and values between the rich and the poor. In his view, these shared values lead to group solidarity, or "social capital", which highlights social capital as a resource that can connect different subgroups in society. There were benefits associated with high stocks of social capital and dangerous consequences, such as more behavioral disorders and greater suicide rates, as the ties connecting individuals in a given society. Bourdieu describes cultural capital as an investment made by the dominant class in order to produce symbols, norms, and values (Bourdieu, 1990).

More recent research offers a largely positive view of social capital as having a wide range of benefits. Coleman (1988) describes social capital as the connective tissue

of society that makes it possible to achieve certain ends that would not be possible without the connections existing. According to this interpretation, there are benefits that result from connections that exist between family, friends, neighbors, and communities (Kunitz, 2004). Robert Putnam puts forth a similar theory concerning important benefits that result from highly connected, highly trusting, and civically and organizationally involved individuals in a community. Some of the benefits include high levels of education attainment, political participation, and improvements in various policy indicators (Putnam, 2000, 2007). Putnam's conceptualization of the concept has been widely embraced and applied by scholars across disciplines, including political science, public administration, sociology, and public health. In this extended line of research, findings suggest that there are wide-ranging benefits to high stocks of social capital such as reducing juvenile delinquency (Hoffmann and Dufur, 2008), reducing economic inequality (Kawachi, 2000), increasing economic payoffs in homogeneous countries (Knack and Keefer, 1997), improving general population health (Portes and Vickstrom, 2011), and student academic performance (Coleman and Kilgore, 1982; Coleman and Hoffer, 1987).

Although social capital is heralded as wholly beneficial by many scholars, greater attention is being given to factors that limit the benefits that are associated with the concept. Scholars have studied how factors may limit the potentially beneficial effects of high levels of social capital (Matsubayashi and Rocha, 2012; Portes and Vickstrom, 2011). There has also been a significant amount of attention on the contrasting effects of racial diversity and social capital. Scholars have noted that stocks of social capital are higher in populations with less diversity (Hero, 1998), that social capital and racial and ethnic diversity have opposing effects on equity in policy outcomes (Hawes and Rocha, 2010), and that any benefits that result from high stocks of social capital do not affect all sub-groups in society the same. There are also concerns about the effects of social capital. Another common critique is that social capital studies have too simplistic and optimistic

expectations about the effects of social capital. Taken together, the dynamics surrounding social capital and the relationship between social capital and racial and ethnic diversity highlight the importance of exploring how social capital affects equity in policy outcomes.

1.1.2 Descriptive Representation

Political Representation

Many scholars argue that increased descriptive representation is key to improving the policy outcomes of members of the public who share their descriptive features. Gender and race are two salient social identities and there are important differences in the health status of individuals along these social identities. For this reason, female - and sometimes minority female - representation may be key to promoting equity in policy outcomes.

There are two types of political representation: descriptive and substantive. Descriptive representation is the degree of similarity in the appearance of representatives in political positions and the population being represented; this type of representation is about the physical similarity between representatives and the represented (Pitkin, 1967). On the other hand, substantive representation occurs when a representative acts in a manner responsive to the people they represent; this type of representation centers around how representatives behave. Generally, gender is a salient social identity that has a significant influence on the life experiences, attitudes, and behavior of individuals. This motivates me to expect increases in female representation will lead to improvements in the health outcomes of women in the public.

Gaining electoral office has been a slower process for women than for men. Although women comprise approximately half of the US population, women have yet to attain parity in American politics; in many cases, the percent of women in political office is far less than the size of the female population in a given area (Paxton and Hughes,

2007). In 2014, there were 1,787 women (or approximately 24.2%) serving in US state legislatures (Center for American Women and Politics, 2017). There is variation in the level of female representation in state legislatures as some states have a high percent of female legislators (Colorado, Vermont, and Arizona), while other states had very low percentages female legislators (Louisiana, South Carolina).

The level of minority female representation is somewhat comparable. 21% of the 1,787 women serving in state legislatures were minorities. There is variation in the race / ethnicity of the minority serving in these positions as well. Most of the minority female state legislators are black and Latinas are the second largest group of minority legislators (Center for American Women and Politics, 2017). Similar to female representation, there is significant variation in minority female legislators across states and there are some state legislatures, such as those in Arkansas, Kentucky, North Dakota, and South Dakota, that do not have any legislators who are women of color. Since health policy is understood as a “women’s issue,” I expect female representation to be key in improving the health of women in the public. The possibility of beneficial effects to health make it important to understand the factors that promote female representation. Aware of differences in the representation of minority women and white women, makes it important to consider how factors affect women who belong to different racial/ethnic groups differently.

Bureaucratic Representation

The theory of representative bureaucracy highlights the importance of bureaucrats on policy outcomes. The foundation of this theory is that “if the attitudes of administrators are similar to the attitudes held by the general public, the decisions administrators make will in general be responsive to the desires of the public” Meier and Nigro (1976). Teachers, police officers, social workers, and health workers are examples of street-level bureaucrats, and through their interactions with citizens and with a sufficient level

of discretion, bureaucrats are thought to shape outcomes. In the health care context, street-level bureaucrats are the front-line workers responsible for implementing health policy and who have direct interaction with members of the public (Lipsky, 1980). For Lipsky, the street-level bureaucrat is a policymaker. In his seminal piece, *Street-Level Bureaucracy*, Lipsky (1980) describes street-level bureaucrats as the front-line workers who have direct interaction with citizens and discretion in the execution of their work. These street-level bureaucrats act as a liaison between policy makers and citizens and are thought to influence policy outcomes because as Lipsky (1980) puts it, “policy implementation in the end comes down to the people who actually implement it” (1).

Street-level bureaucrats generally have direct contact with the public, little supervision, and potentially great impacts on their clients. According to the theory of representative bureaucracy, as the workforce becomes more diverse, the outcomes of members of traditionally under-represented groups will improve. There is support for the expectations derived from the theory of representative bureaucracy as black school administrators are associated with improved educational outcomes (standardized test scores, attendance, graduation rates) of black students (Meier and England, 1989), shared race between teachers and students has important effects on the academic performance of students (Dee, 2005), and the outcomes of Latino students improve with increases in Latino school administrators (Meier and Stewart, 1994).

1.2 Dissertation Outline

In this dissertation, I examine the determinants of (minority) female political representation and female bureaucratic representation and how female representation affects health outcomes and health disparity. As reviewed above, there are currently two disjointed theories concerning determinants of health - one line of research that hails high levels

of social capital as the avenue for improving health and a separate line of research that posits increased minority representation as being key in reducing these inequalities. This dissertation seeks to bridge these two lines of research by arguing that the effects of social capital on racial and ethnic disparities is not fully understood without accounting for levels of minority representation. The question driving this project concerns the relationship between social capital, representation, and racial and ethnic disparity in health and aims at offering a more comprehensive understanding of the factors affecting social inequality in the US.

There are several promising aspects of this dissertation. First, I account for the potential benefits of high levels of social capital *and* the complication posed by considerations of race. Most social capital research examines the effects of individual-level social capital with limited consideration for the effects of gender or race on social connectedness, networks, and civic and organizational involvement. Scholars make many important distinctions in social capital, such as the difference between bridging and bonding social capital Putnam (2000), but only a few have been able to explore the *distribution* of social capital for different sub-groups. My dissertation contributes to scholarly understanding of social capital by using newly developed social capital indexes. These indexes allow me to study the effects of overall social capital, female social capital, white social capital, black social capital, and Latino social capital across states. The extant literature views social capital and representation as two *separate* avenues for improving health outcomes. Recognizing the role of female representation as an important yet understudied consideration in the relationship between social capital and social equity, I bridge these lines of literature by examining the relationship between social capital, political and bureaucratic representation, *and* racial disparities in health outcomes. I account for the positive effects of social capital by exploring how social capital affects minority female representation and I study limits to the benefits of social capital

across occupations in different employment sectors and at various levels of occupational hierarchy. Classical social capital research highlights troubling dynamics between social capital and class. By using sub-group measures of social capital, I am able to explore the effects of the stock held by women and minorities, two salient social identities that are increasingly relevant to our understanding of policy outcomes.

In the first essay, “All Women *Not* Affected Equally: Social Capital and Minority Female Representation in American States”, I study how overall social capital, female social capital, as well as the stock of race-group social capital (white, black, and Latino) affects the emergence and electoral success of women along their race / ethnicity. I focus on all of the elections for state legislature in 2012. Using lagged values of the social capital indexes, I find that social capital is a form of “political capital” that increases the emergence and electoral success of female candidates, but the findings suggest that social capital is a private good with unique benefits for in-group members. The importance of the intersectional approach is revealed as social capital affects white women, black women, and Latinas differently. Most of the benefits from high stocks of social capital target white women - as white women benefit from high stocks of overall, female, and white social capital.

In the second chapter, “Occupational Hierarchy vs. Employment Sector: A Comparison of Social Capital Effects on Female Representation”, I examine how social capital shapes a broader notion of female representation. By focusing on how social capital affects the presence of women in government and in health, I am able to determine whether the benefits expected from high stocks of social capital exists across employment sectors. Using bi-annual data from 2001-2011, I compare the effects of social capital on positions that vary in hierarchy (i.e. executive-level and street-level occupations). The findings of this chapter suggest the effects of social capital have significant influence

over the sector women choose to pursue careers in as high stocks of female social capital promotes the representation of women in health.

The third chapter, “What about *Substantive* Representation? The Effects of Female Bureaucratic Representation and Social Capital on US Inequality”, connects all of the studies together to determine how social capital and female bureaucratic representation affect health. I focus on how those two factors affect health outcomes (preterm birth rates and infant mortality rates) and disparity in these outcomes for white women, black women, and Latinas. Focusing on these outcomes allows me to apply the intersectional approach and compare the power of female bureaucratic representation and female social capital on women who belong to different racial / ethnic groups. There is some promise in these results. While the health outcomes of all of the women I study improve as the stock of female social capital increases, the benefits associated with increased female bureaucratic representation are relegated to improving the health outcomes of white women. The interactive effect of high stocks of female social capital *and* female bureaucratic representation is the key to reducing disparity in infant mortality rates, but does not affect disparity in preterm birth rates.

2 ALL WOMEN *NOT* AFFECTED EQUALLY: SOCIAL CAPITAL AND MINORITY FEMALE REPRESENTATION IN AMERICAN STATES

Abstract: In this paper, I posit social capital as a source of “political capital” for women, particularly minority women seeking electoral office. I argue that social capital, or the connectedness and engagement of members of society, acts as a resource that motivates women to run for office and contributes to their electoral success. I rely on newly developed sub-group measures of social capital in 2011 and originally collected data with the race/ethnicity and gender of every candidate who ran for state legislative office in 2012 to test my expectations. This study deviates from most of the existing literature by shifting attention from the representation of women of color in Congress to examining the factors that drive minority female representation in state legislatures.

I apply the intersectional approach by studying the effects of different social capital measures on White women and minority women - with separate consideration for black women and Latinas. The findings shed light on the complexity of increasing minority female representation. While high stocks of each social capital measure benefit white women, only high stocks of black social capital benefit black women, and no measure of social capital improves the emergence and electoral success of Latinas. This highlights the importance of intersectional research and reveals the need for greater attention to factors that contribute to the electoral success of Latinas.

2.1 Introduction

Women and minorities are traditionally under-represented in representative bodies in the US. Although the number of women serving in state legislatures has increased over time, women remain an under-represented group in American politics. Women comprise approximately 50% of America's population, but in 2018 women held 19.8% of all US Congress seats, 23.7% of statewide elective executive offices, and 25.3% of the 7,383 state legislative seats (Center for American Women and Politics, 2018). Women have yet to attain parity. Racial and ethnic minorities are also a traditionally under-represented group. Over time, there have been increases in minority representation across different levels of American government, but these increases have been very small. In 2015, non-whites (blacks, Latinos, Asian/Pacific Islanders, and Native Americans) were approximately 38% of the American population, but only comprise a small percentage of members of Congress, state executives, and state legislatures. The percentage of female and non-white representatives does not accurately reflect US demographics.

The under-representation of women and minorities is problematic because of the important benefits derived from the presence of these groups in American politics. There are major differences in the behavior of male and female representation. For example, generally, women are more effective legislators (Anzia and Berry, 2011), are more likely to raise important "women's issues" than men over time (Volden, Wiseman and Wittmer, 2016), are more "collaborative" while men are more "competitive" (Volden and Wittmer, 2013), are more likely to cooperate and work with members of a different political party (Paxton and Hughes, 2007), and the presence of female representation encourages other women to run for office. Similarly, there are important effects from minority representation. Black and Latino representatives are more likely than white representatives to support bills on issues that voters who share their race/ethnicity find important and

minority representation leads to higher assessments and trust of government by minority voters, improves minority voter turnout, and increases efficacy of minority voters. These important effects make the under-representation of women and minorities particularly problematic.

For more than 30 years political science research has explored questions relating to low levels of female representation *or* minority representation, but limited attention has focused on minority female representation. Of the limited research that exists, most focuses on the *effects* of minority female representation. Comparatively less attention has been given to the factors that increase the probability that minority women get into office in the first place. There is an implicit assumption that explanations for minority female representation are subsumed in theories for either female representation *or* minority representation.

There are several reasons that the limited consideration for minority female representation as well as the assumption that the descriptive representation of minority women can be explained by theories concerning women (without regard to their race) or minorities (without consideration for their gender) are problematic. First, the intersectionality theory (also referred to as intersectionality or the intersectional approach) argues that there are important effects at the intersection of an individuals' social identities. That is, scholars must consider how different social identities interact to shape the experiences of an individual. This suggests that a theory of descriptive representation should account for the effects of multiple social identities. Second, over time, there has been a unique trend in minority female representation. Over time, female representation has remained relatively constant since the mid-1990s (Sanbonmatsu, 2005) and there have been small increases to minority representation. On the other hand, there have been years that minority women have been *over*-represented, particularly in state legislatures.

Minority women held 19% of legislative seats in 2012 and the percent of elected women of color has been increasing since (21% in 2014, 22% in 2015, 20% in 2016, and 23.69% in 2017) (Center for American Women and Politics, 2017). In fact, increases in female representation and minority representation have been largely driven by an increase in the percent of minority women elected to office since the dawn of the 21st century (Orey et al., 2006)(98-99). Taken together, the intersectionality theory and trends in minority female representation make the lack of attention to the determinants of minority female representation in scholarly research quite puzzling. Lastly, theories of minority female representation do not gel with reality. Arguments claim that minority women are doubly disadvantaged as a result of their race and gender (Darcy and Hadley, 1988) and thus face more difficulty attaining electoral success than their female or non-minority counterparts. However, the (slight) over-representation of minority women in state legislatures suggests this longstanding theory may need to be revisited.

This paper fills the gap on the descriptive representation of minority women by arguing that social capital acts as a political resource and exploring how social capital affects women who belong to different racial/ethnic groups. I examine two critical questions - what motivates individuals to run for office and what shapes their prospects for electoral success? I posit social capital, or the connectedness and engagement of individuals with others in their network, as a crucial yet overlooked source of political capital for female representation. Instead of assuming social capital will affect all women the same, I apply the intersectional approach. Following the example of (Juenke, 2014), I focus on how social capital shapes the emergence *and* electoral success of white women, black women, and Latinas. Using newly developed social capital measures and originally collected data on the race, gender, and other important individual-level factors of all candidates for state legislative office in 2012, my findings suggest that social capital has promising effects on the emergence and electoral success of white women and black

women, but does *not* effect women who belong to different racial/ethnic groups equally.

2.2 Theory and Hypotheses

Determinants of Descriptive Female Representation

Descriptive representation refers to the degree of correlation between the physical appearance of representatives (gender, race, ethnicity, etc.) and their constituents (Pitkin, 1967). There are benefits from female representation as women have different policy priorities than men (Dodson and Carroll, 1991), and women are more likely to than male state legislators to view themselves as uniquely qualified to represent the interests of women (Reingold, 1992), are associated with the blockage of pro-life legislation (Berkman and O'Connor, 1993), most likely to advocate for policies related to health, education, and women's health issues (Swers, 2016). This makes understanding the determinants of descriptive representation of women critical because women must be in office before the important effects of female representation can be realized.

The decision to run for office is a major contributing factor to the under-representation of women in the US. Women are just as likely as men to win an election when they run for office (Darcy, Welch and Clark, 1994). This suggests that the key to understanding the under-representation of women may be identifying the factors that motivate women to run for office in the first place. Some of the factors that the existing literature highlights as important for female representation include the make-up of the voting population, electoral rules and the role of political parties (Paxton and Hughes, 2007), citizen ideology of a state, as well as institutional factors such as electoral rules.

The existing literature also offers several theories on “supply side” factors that shape the representation of women. Things that increase the number of women with the will and experience necessary to run for office are supply-side factors. Some of the

common explanations in this line of research are that women feel unqualified to run for office, that women must be asked to run for office and often are not thus women are under-represented, and that women lack interest in political office or have limited political ambition. The importance of women being encouraged to run for office is quickly becoming one of the most common explanations for the under-representation of women in American politics. That is, the argument goes: women find it important to be encouraged to run for office, so one reason women are under-represented in US politics is because they do not receive the encouragement that is necessary to motivate them to run for office. There is strong support for this theory as compared to men, women are less likely to be recruited for political office, to consider themselves “qualified”, to express interest in running for election (Lawless and Fox, 2005). Women are more likely than men to doubt their skill and ability to handle the dynamics of politics (Fox and Lawless, 2011) and women are less likely to run for electoral office even when they are equally as qualified as men (Fox, 2011). This pattern contributes to the limited emergence of female candidates and has existed over time (Lawless and Fox, 2010). Recruitment of female candidates and women being *asked* to run for office are hailed as essential to improving female representation (Fox and Lawless, 2010), but there is limited theoretical insight on factors that result in women receiving this crucial encouragement.

Despite a growing understanding of the importance of encouragement for female candidate emergence, limited attention has been given to how this can be “addressed”. Social capital has been used across disciplines and has multiple definitions. One of the most common definitions is that social capital refers to the connections among individuals and the social networks and the norms of reciprocity that arise from them (Putnam, 1993, 2000). This collective approach of social capital highlights the importance of community-level characteristics such as civic engagement, network associability, and reciprocity among members of the same group or community (Putnam, 2000). High stocks

of social capital reflect communities with individuals who are connected with one another and engaged in voluntary activities; it also reflects a citizenry that is more engaged in the political process. Group membership creates resources - “capital” - for individuals similar to the resources produced by economic and human capital (Brehm and Rahn, 1997).

Though social capital has origins in the sociology literature (Coleman, 1990), recent research reveals that social capital has important politically related effects. Though the costs associated with information collection may make it irrational for individuals to participate at the individual level (Downs, 1957), high stocks of social capital actually improve the political engagement and participation of the public (Putnam, 2000). High stocks of social capital also improve educational attainment (Coleman, 1988), which is a key predictor of whether an individual participates in the political process (Rosenstone and Hansen, 1993), are associated with less corrupt government (Putnam, 1995), and facilitate certain types of action and cooperation (Coleman, 1987; Greeley, 1997). Personal networks derive a type of social capital that leads to political engagement and increases the likeliness that an individual participates in politics (La Due Lake and Huckfeldt, 1998)(569).

Because of these effects, I argue that social capital is an important resource that may help to address the under-representation of women. As noted in the paragraph above, there are important effects from high stocks of social capital. Highly engaged, informed, and connected citizens are possible contexts that exist in high-stock social capital states. I argue that these type of contexts make it more likely for women to receive the encouragement they need to run for office and the voter support necessary to be elected to office. As a result, I expect states with high stocks of overall social capital (that is, the level of social capital for all of the citizens in a state, without consideration for race/ethnicity or gender) to significantly influence female representation. I account for all

of the candidates who ran in a given election as well as the winning candidates (Juenke, 2014) and I expect overall social capital to increase the number of women who run for legislative office *and* the women who win. Stated as my first hypothesis:

Hypothesis 1a: The stock of overall social capital is positively associated with female candidate emergence and electoral success.

There are three reasons the implicit assumption that the factors that explain the emergence and electoral success of female candidates have the same explanatory power for white women and women of color is problematic. First, the intersectionality theory posits that a comprehensive understanding of the effects of social identities requires attention to multiple social identities, particularly since individuals are comprised of more than one social identity. Most of the existing literature offers explanations for increasing candidate emergence or representation by focusing on one salient social identity - either race *or* gender. Applying the intersectional approach allows me to account for the unique social space that minority women inhabit and to explore whether social capital effects these women the same as white women. A second reason I expect determinants of descriptive representation to affect women of different racial/ethnic groups differently is because the trend of minority female representation is different than the trend for white women / female representation. Although women as a collective (without distinction for race/ethnicity) have a history of being under-represented in the US, there have been instances where minority women have attained parity (when their percentage in the population equals their level of representation) and have even been *over*-represented. The over-representation of minority women in state legislatures is not a randomly occurring phenomenon as minority women have fared well in American politics for some time now. Increased minority female representation has been driving minority representation since the 1990s (Orey et al., 2006)(98-99). If minority female representation and white

female representation are actually driven by the same factors, then we should see the representation of these two sub-groups of women follow the same pattern, but that is *not* the case. The unique pattern of minority female representation suggests that factors that are important for female representation may not affect women who belong to different racial/ethnic groups equally. Lastly, recent research gives credence to my argument that it is problematic to assume the factors that are important to female representation affect minority women and white women the same. In the mid-1990s the conclusion was that female legislators - white and black - were elected in districts that were largely comparable (Rule, 1992), however recent research suggests there are major differences in the district-level determinants of minority female representation and white female representation (Philpot and Hanes Walton, 2007). Scola (2006) compares how common explanations of female representation affect women broadly, white women, and black women; the findings suggest that many factors- the percent of professional women, political culture, liberal ideology, minority population, and legislative professionalization - affect the sub-groups of women quite differently.

There are also reasons to expect race to complicate the expected benefits of high stocks of social capital. Modern research highlights the political-related benefits of high stocks of social capital. Early on, the conventional wisdom was that these benefits accrued to all members of the public equally, however, recently scholars have raised questions about whether or not that is actually the case. Other important caveats have been raised, including giving attention to the relationship between social capital and racial/ethnic diversity. Rodney Hero was one of the first scholars to argue that an accurate understanding of the effects of social capital must account for racial diversity (Hero, 2003). Hero's research revealed critical details about social capital - namely, that high stocks of overall social capital yields beneficial *aggregate* outcomes and can *negatively* affect racial minorities (Hero, 2007). Since then, many scholars have highlighted the complexities

between the relationship between social capital and racial diversity. Improved measures of social capital have been developed (Hawes, Rocha and Meier, 2012) and findings suggest that social capital and racial/ethnic diversity have completely *opposite* effects on policy equity in the US (Hawes and Rocha, 2010) and in the UK (Laurence, 2011).

Recent social capital research highlights two avenues for improving social capital research: 1) accounting for racial/ethnic diversity, and 2) examining the effects of social capital on whites and racial minorities separately. For this reason, I posit an additional hypothesis related to *H1a*. I expect:

Hypothesis 1b: The stock of overall social capital benefits white female candidates more than minority female candidates.

I also expect female social capital to have critical benefits for female representation (both white women and minority women). In the first set of hypotheses I argue that overall social capital (the level of social capital for the entire population, without consideration for race or gender) will benefit female representation (*H1a* and *H1b*). I also expect important benefits from high stocks of *female* social capital. Female voters are a key source of support for women who decide to run for office (Atkeson, 2003). Women are less likely to be encouraged to run for public office than equally qualified men (Fox and Lawless, 2010), are more likely to run for office when they are targeted by candidate recruitment and mobilization efforts (Broockman, 2014), value the opinions of others when deciding whether or not to run for office (Carroll and Sanbonmatsu, 2013), particularly for women seeking office for the first time (Preece, Stoddard and Fisher, 2016), and on average, are supported more by female voters than men (Sanbonmatsu, 2003). Because of these things, I expect that female candidates will be more likely to emerge and fare well in contexts where they receive “push” to run for office from other women. This shapes my

expectation that women who are civically engaged, highly networked, and participate in politics (i.e. women in states with high stocks of social capital) will encourage women to run for office *and* turnout as voters to ensure the electoral success of female candidates. Stated as my next hypothesis, I expect:

Hypothesis 2a: The stock of female social capital is positively associated with female candidate emergence and electoral success.

However, the negative stereotypes that plague women of color will cause the benefits of female social capital to disproportional benefit the emergence and electoral success of white female candidates. There is a history of negative stereotypes surrounding women of color, particularly concerning black women. Being comprised of two marginalized groups historically deemed “inferior”, black women hold a position in US society that makes them distinct from black men *and* white women. One of the oldest stereotypes around black women is the “Jezebel” image, which portrays black women as lascivious, seductive, overly sexualized, and lewd (Mgadmi, 2009). During slavery, the “Jezebel” stereotype was used to rationalize sexual relations between slave-owners and their slaves, but continues to shape attitudes toward black women. There is also the stereotype of the “welfare queen”, or a mother that prefers to raise her children in poverty than to lose her welfare benefits (Schram, 2005). These longstanding perceptions about black women were used as the foundation for politically motivated mis-representations around race, class, and gender to shape attitudes about the welfare reform debate in 1996 (Hancock, 2004) and this image gave rise to the social construction of welfare recipients as single, poor black mothers (Hancock, 2004)(86). The negative stereotypes of black women as “welfare queens”, Jezebel, angry, unintelligent, mammies (unskilled domestic servant), and other particularly derogatory images that are not conducive to developing support for the emergence or electoral success of black female candidates. On the other hand, white

women are generally “stereotyped” as self-respecting, modest, self-controlled. Negative constructions about a racial/ethnic groups can lower support for policies targeting that group (Link and Oldendick, 1996) and I expect these negative images to also impact the emergence and electoral success of black women.¹

In essence, I expect benefits to result from high stocks of social capital. However, I argue that the complicated history and negative stereotypes surrounding women of color, particularly black women, will result in an unequal “distribution” of these benefits. Specifically, I expect the benefits to disproportionately accrue to white women. In other words, communities may be highly connected, but the stereotypes associated with women of color will result in the benefits associated with high stocks of social capital to target white women. sThe unique position women of color hold in American society because of their race and gender, the prevalence of hurtful and negative stereotypes surrounding black women, and the “positive” images about white women, motivate my next hypothesis.

Hypothesis 2b: The stock of female social capital benefits white female candidates more than minority female candidates.

Social Capital as a Club Good?

I explore the possibility of social capital as a club good in the remaining hypotheses. Although classic economic theories focus on public and private property, club goods fall somewhere in between as they hold qualities like public property (shared by many people) and private property (has a transaction cost). I posit social capital as a club good and I expect it will only act as a resource for in-group members. Race-group social capital can be shared by many people but individuals must belong to a specific racial/ethnic group to gain access to the benefits that result from high stocks

¹It would be ideal to explore this possibility using measures of bridging and/or bonding social capital. Although, the effect of these types of social capital is not the focus of this paper, I highlight this as a promising direction for future research in the conclusion.

of social capital for that racial/ethnic group. I focus on social capital along racial/ethnic sub-groups because race is a salient social identity that influences the engagement, behavior, and life experiences of an individual. While it is important to study men separately from women and also important to study women of color separately from white women (Hancock, 2007; Hawkesworth, 2003; Mansbridge, 1999; Ortiz, 1994; Scola, 2006; Simien, 2013), I also give separate consideration for women who belong to different minority groups because social capital likely varies across different sub-groups (Farris and Holman, 2014)(335). This allows me to examine the effects of social capital on the two largest groups of minority women in America - black women and Latinas (Bejarano, 2013; Brown, 2014; Reingold, Haynie and Bratton, 2014) and may offer insight on the factors contributing to the unique trends in minority female representation.

A highly networked, civically and politically engaged, and interactive white population in a state will act as a resource that increases the emergence and electoral success of white female candidates. This expectation is motivated by several factors. First, white voters find the presence of a white candidate important when deciding who to vote for. White voters are less likely to vote for a black candidate, even when political party affiliation is accounted for (Washington, 2006). Actually, white voters “penalize” black candidates based on the race and skin color of these candidates, and the level of individual prejudice in the voters (Terkildsen, 1993). Generally, white voters hold more critical views of minority candidates (Williams, 1990). This drives my expectation that high stocks of white social capital to contribute to the emergence and electoral success of white female candidates because of the importance white voters place on having white candidates and the support white voters normally give to white candidates.

Second, I expect white social capital to benefit white women more than minority women because of group status threat. Social identity is derived from membership of

different social groups. Social identity theory argues that people differentiate the group they belong to from an out-group (Tajfel and Turner, 1986) and people are motivated to favor their in-group (i.e. the race-group they belong to) over an out-group (Spears, Doosje and Ellemers, 1997)(539). I argue that group status threat may be the driver for white voters' valuing the presence of white candidates and the high levels of support from white voters to white candidates. The increased diversity in the US has triggered increases in concerns over group status threat in whites. Actually, group status threat is a strong explanation for white support for President Donald Trump in the 2016 U.S. Presidential election (Major, Blodorn and Blascovich, 2016) and the importance of white candidates to white voters (Schildkraut, 2017). Changing dynamics in the American public, coupled with the election of America's first black president, may result in group status threat concerns in whites, and this threat may manifest as white voters encouraging other white individuals to run for office and/or whites being particularly supportive of white female candidates in a given state for a legislative seat. Stated as my third hypothesis:

Hypothesis 3a: White social capital is positively associated with white female candidate emergence and electoral success.

The history of *minority* female representation has followed a different trajectory than white female representation. While women and minorities are traditionally under-represented in American politics, the women at the intersection of these two identities - minority women - fare surprisingly well. A longstanding theory about minority women in the US is the "double disadvantage" hypothesis, which argues that since minority women are minorities *and* women they will be "doubly" disadvantaged - once along their race and second along their gender. According to this hypothesis, we should expect fewer black women to be elected to office than black men, white women, and white men (Moncrief, Thompson and Schuhmann, 1991). However, that is not the case as there

have been many times when the proportion of minority women elected to office is larger than the proportion of white women (Darcy and Hadley, 1988). Despite this interesting paradigm, there has been limited attention to the specific determinants of descriptive representation of minority women in political science research.

Clearly *something* driving minority female representation - I argue that it is social capital. In the remaining sections, I focus on black female representation and argue that highly connected, engaged, and civically and politically engaged blacks are a “resource”. I expect high stocks of black social capital to make it more likely for black women to run for office and to win elections. The history of black women in America is unlike that of other minority women. The Voting Rights Act of 1965 was enacted to ensure local and state governments did not adopt policies that denied minorities of their right to vote (Casellas and Wright, 2017). However, most blacks and Latinos experienced barriers trying to vote and run for office long after the act was enacted. In addition to the barriers that all minorities faced, black women in particular were plagued with very negative stereotypes that effect these women in the electoral arena (Carew, 2016).

Because of the unique history of black women in America, black voters are the strongest body of support for these women. There are important politically related effects of racial identity. The shared experiences of blacks has resulted in what can be understood as a form of “solidarity” among blacks. Group consciousness refers to the beliefs, thoughts, and feelings defining the identity of a group of people and is a group-based resource with many benefits. The linked fate theory, or black utility heuristic, highlights that blacks feel their lives are powerfully affected by their race and this results in blacks feeling that their individual life prospects are inextricably connected to the life prospects of other blacks, regardless of their education or class (Dawson, 1994). As a result, blacks often consider their race group utility, not individual utility, when evaluating political candidates

(Gay, 2004)(547). Once in an election, highly engaged and connected blacks constitute a major source of voter support for black female candidates as voting remains quite a racially polarized (Bedolla and Scola, 2006). The presence of minority female candidates stimulates the turnout of black (women) (Stokes Brown and Dolan, 2010), black female voter support has important benefits for the representation of black women Philpot and Hanes Walton (2007), and high levels of social capital lead to increased minority female political participation (Uhlener and Scola, 2016) - thus providing minority women with the electoral support necessary for their success. Black voters are also more likely to support black candidates (Swain, 1993) and blacks - regardless of gender- are more motivated to vote as the percentage of blacks elected to office increases (Uhlener and Scola, 2016).

Questions concerning the importance of descriptive and substantive representation for traditionally under-represented groups have existed for years (Mansbridge, 1999), but minority women have garnered very little attention. While there is an extensive line of research highlighting important, unique *substantive* effects of minority female representation (Barrett, 1995; Bratton and Haynie, 1999; Fraga et al., 2005; Orey et al., 2006; Owens, 2005; Reingold and Smith, 2012; Tate, 2004), this line of research offers limited insight on the factors that shape their decision to run and their ultimate electoral fate. As minorities *and* women, women of color are at a unique intersection. This placement has resulted in an implicit assumption that minority female representation can be explained using the same factors that are important for the electoral success of minorities or women. However, this assumption is not warranted as the interactive effects of race *and* gender creates a unique “social space” for minority women and this space can’t be fully explained by focusing on only *one* social identity (Bowleg, 2008; Shields, 2008). This is the premise of intersectional research, which argues that it is important to study the interactive effects of social identities and not the effects of a single entity (Collins, 2015). That is, since individuals are comprised of multiple identities, only

examining the effects of one identity - such as race, gender, *or* political ideology - only offers partial insight on the effects of social identity, particularly for individuals comprised of multiple *marginalized* social identities (Crenshaw, 1989). This study contributes to the growing body of political science research that uses the intersectional approach (Bedolla, 2007; Cammisa and Reingold, 2004; Dhamoon, 2011; Hancock, 2007) to explore the intertwining effects of race and gender (Jordan-Zachery, 2007; McCall, 2005; Simien, 2007).

Even with the limited attention centering on minority women, politically informed and engaged blacks will be an important resource for minority women. I expect high stocks of black social capital to make it more likely for black women to be motivated to run and have the voter support that is necessary for these women to be elected to office. In recent years, blacks have participated more in politics (Tate, 1993) and there have been more minorities elected to office (Grofman and Handley, 1991; Orey et al., 2006). Interestingly, since the mid-1990s, increases in minority representation have been driven by more minority *women* being elected to office. So, what explains the emergence and electoral success of black women, and ultimately the over-representation of minority women?

A unique blend of the factors shape black female representation. Some common determinants of female office holding explain the emergence and electoral success of white women more than minority women (Scola, 2006). Although factors impact women of color and white women differently, there are certain factors that are consistently important for the emergence and electoral success of minority women. For example, being asked to run for office, receiving information and developing skills through campaign training, programs, etc. (Sanbonmatsu, 2015), and being in districts with sizable black / majority minority voters contribute to the representation of these women. However, there is an

important caveat regarding the importance of minority voters. While the literature highlights the importance of the size of the minority population, I argue that there are important benefits from highly engaged, connected, and politically active blacks (i.e. blacks in high social capital states). This distinction is important to note because while the size of the non-white population has significant effects on minority female representation, black representation is not its highest in places with the largest shares of black population (Hardy-Fanta et al., 2007). There are several reasons why the size of the black population will contribute to minority female representation - for example, some women suffer from “election aversion” (Kanthak and Woon, 2015), so the presence of voters who will support them may help women overcome this deterrent - but the level of engagement and political participation is critically important.

There are unique substantive effects from minority female representation. Despite their small percentages in American political institutions, there is a growing understanding that minority women have meaningful effects when they are in office. Although research on minority women is sparse, much of the work that exists suggests that minority women behave differently than their legislative counterparts Fraga et al. (2007). These women have unique policy interests that neither minority men *or* majority women completely pursue. Minority female representatives were the strongest countervailing effect to policies limiting generosity during the Welfare reform Reingold and Smith (2012), are more likely to support spending for issues that are important to blacks (Tate, 2004), and stimulate positive attitudes and political participation of racial and ethnic minorities and low income members of the public (Banducci and Karp, 2004; Tate, 2001). Black women are more likely to support spending on issues important to black members of society (Owens, 2005; Tate, 2004), black female state legislators as a collective share agenda priorities that are different from black male state legislator and other minorities (Barrett, 1995); these effects remain even with partisan affiliation is accounted for (Orey et al., 2006). Black

representatives consistent garner high levels of political support from members of their racial group (Uhlener and Scola, 2016).

There is an extensive line of research that highlights that intersecting social hierarchies shape the access women have to political power. Despite this, few scholars have studied the determinants of candidate emergence and electoral success for women of color separately from white women (Hughes, 2013) (489). Even so, there are certain things that are necessary for representation - an individuals must decide to run for office *and* must have voters to support them in order to win an election. Because of this a civically engaged, interactive, and connected black population will be more likely to offer black women the motivation they need to run for office and the voter support necessary for these women to be elected. The importance of black voters, being asked to run for office, and the shared history and connectedness among blacks, shape my next hypothesis. I expect:

Hypothesis 3b: Black Social Capital is positively associated with black female candidate emergence and electoral success.

I also expect high stocks of Latino social capital to benefit Latina representation. There are differences in the percent of elected black women and Latinas, so I give separate consideration to these women. Latinos comprise a growing sector of the American public, but the size of Latinos in the American public is not reflected in Latino representation. Latinos remain under-represented; that is, their size in the public is far larger than the percent of Latinos in American government. For example, Latinos comprise 17% of the population, but are only 9% of state legislators. The largest percentage of Latinos are in states such as Arizona, California, and New Mexico, but there is significant variation in Latino representation across US states.

I expect a positive relationship between Latino social capital and Latina candidate

emergence and electoral success. First, Latino voters have an important role in Latino representation. The level of Latina representation across states (Fraga et al., 2007) varies and Latinas travel unique routes to reaching electoral office (Ramírez and Burlingame, 2016). Nonetheless, there is a connection between Latino candidates and Latino voters. Latino voters are consistently mobilized by co-ethnic candidates (Barreto, 2007) and Latinos are more likely to vote when they are in close proximity with Latinos who are politically engaged. Second, there is (mixed) support for the linked fate theory for Latinos and if Latinos feel “linked” or connected to one another, then we should expect benefit to Latina representation due to highly engaged Latinos in a state. However, the connection resulting from linked fate develops because individuals share a history, life experiences, etc. Although “Latino” encompasses individuals from very different backgrounds, there is some (albeit limited) reason to expect a sense of connectivity between individuals who share a Latino identity. For example, Latinos who express feeling a sense of linked fate with other Latinos, are more likely to desire a Latino representative Wallace (2014). Latinos with a sense of “linked fate” or connectedness with other Latinos and less acculturation generally desire co-ethnic representatives (Schildkraut, 2013).

However, there is mixed support for linked fate and group consciousness in Latinos. Linked fate and group consciousness are two of the reasons I expect black social capital to improve black female representation. As mentioned, there is mixed support for linked fate in Latinos, and there is also mixed support for the idea of group consciousness in these individuals. There are still questions about whether the positive expected effects of a clear sense of group consciousness and linked fate exists for non-black minorities. One of the key reasons linked fate is strong for blacks is because of the shared history of discrimination and life experiences of most blacks in the US. This history does not exist for Latinos as there is a significant amount of in-group variation with individuals who identify as “Latino”. Unlike blacks, Latinos do not share a common history of discrimination in the

US and therefore may not be as “linked” as blacks. There are some findings that offer support for this view. For example, while measures of linked fate and group consciousness are effective for blacks, they are not as strong for other minority groups, such as Hispanics (Sanchez and Vargas, 2016). Perceptions of shared fate among Latinos decline across generations and if a sense of linked fate exists, it may occur in a more complicated nature than the nature of linked fate for blacks. Nonetheless, I expect high stocks of Latino social capital to act as a resource for Latinas. My final hypothesis is:

Hypothesis 3c: Latino Social Capital is positively associated with Latina candidate emergence and electoral success.

2.3 Data and Methods

I test these hypotheses using originally collected data on all candidates in general elections for state legislative office in 2012. I focus on 2012 US State legislative general elections because these are the first elections following the 2010 Census redistricting. Historically, there are more open seat elections and new state legislators than years before and after redistricting. My data includes the race, gender, political experience, and other important individual-level factors as well as variables that account for district-level and state-level factors. In 2012, 43 state senates and 43 state houses held elections; a total of 6,015 state legislative seats were up for election.² The dataset I created for this paper builds on the *State Legislative Election Return Series* from (Klarner et al., 2013); it includes information from all 43 states that held legislative elections and nearly 11,000 candidate-level entries.

Dependent Variables

My dependent variables capture the presence and electoral success of female

²Alabama, Louisiana, Maryland, Michigan, Mississippi, New Jersey, and Virginia are the states that did not have state legislative elections in 2012.

candidates in general elections for state legislative seats. Following (Juenke, 2014), I recognize that accounting for election *losers* is important for a comprehensive understanding of minority female representation as not every individual that runs for office will be elected to a seat. I account for this by using two sets of dichotomous measures as dependent variables - one set captures candidate emergence and the second set captures the electoral success of candidates. The first set of dependent variables are coded as “1” when a specific candidate is in an election and “0” otherwise; the second set of dependent variables are coded “1” when a specific candidate *wins* an election. I use this coding for each of the four sets of dependent variables and I focus on four sets of women: 1) white women, 2) minority women (no distinction of minority group), 3) black women, and 4) Latinas.

The descriptive statistics for the dependent variables are in Table 1. The table shows that white women ran in an average of 18.35% of 2012 state legislative elections and that white women won nearly 11% of elections. This suggests that when white women run for office they have fairly good odds of winning an election. There is a similar pattern for minority women - though minority women emerge at smaller percentages. Minority women - without distinction for the specific racial/ethnic group - run in slightly more than 6% of elections and win 4% of elections. Accounting for the race/ethnicity reveals differences in the emergence and electoral success of black women and Latinas. Black women ran in approximately 2% of the 2012 state legislative elections and won 1.5% of elections. The emergence and electoral fate of Latinas is slightly better as Latinas ran in 3.5% of elections and won 2% of elections.

[Table 1 About Here]

Key Independent Variable

I create a social capital index using the 2011 Current Population Survey (CPS) Civic Engagement Supplement. The CPS is conducted by the US Census every November. I rely on data from the 2011 CPS Civic Engagement Supplement to validate measures of overall social capital, white social capital, black social capital, and Latino social capital. I use Civic Engagement Survey items on charitable activity, community volunteerism, community and organizational involvement, engagement in public affairs, and informal sociability. The charitable activity items I use capture whether and how often respondents donate money, clothing, food, and engaged in fundraising activity. Community volunteerism items include questions on whether respondents have helped to fix a problem in their community and the reason they abstained if they did not. Questions on community and organization life ask respondents about their civic organization participation, while the engagement in public affairs items center on broader aspects relating to political participation, such as whether the respondent is registered to vote, discusses politics with their friends, or voted in the last election. Lastly, I use items on informal sociability. Examples of these items include whether or not the respondent does favors for her/his neighbors. These items allow me to develop a measure that parallels the conceptualization of social capital by Putnam and (Hawes, Rocha and Meier, 2012).

Similar to the steps used to generate other, recent social capital measures, I aggregate individual-level responses to CPS items to the state (Hawes, Rocha and Meier, 2012) then I use factor analysis to estimate the state-level social capital indexes. I develop several social capital indexes. The overall social capital captures the social connectedness and civic engagement of all individuals in a given state - regardless of their race, gender, or other demographic features. On the other hand, female social capital reflects the stock of social capital held by women. The CPS Civic Engagement Supplement is collected by the US Census, which means there are representative samples of racial groups at the state-level. Because of this, I am also able to develop three additional social capital

indexes: one for whites, one for blacks, and one for Latinos. Having these measures allows me to examine whether there are differences in the stock of social capital held by different race-groups and the effects of specific types of racial social capital. Similarly, I use the CPS data to generate a social capital index for women; this measure captures the connectedness of the women in a given state.

Because the social capital measures I use in this study are standardized factor indexes, a value of “0” reflects states with average levels of social capital. Small values on this index reflect low levels of civic engagement and volunteerism, while larger values reflect greater connectedness, interaction between people, and civic engagement in a state. There is significant variation in social capital across the 43 states that had legislative elections in 2012. Table 2 presents the descriptive statistics for the independent and control variables I use in this study. The top portion of the table contains information on the social capital indexes. This study relies on five social capital indexes: overall social capital, female social capital, white social capital, black social capital, and Latino social capital.³ There are major differences in the five social capital indexes. The overall social capital index has a mean value of -0.19, which means that the connectedness of an individual in the US (without considering gender or race) is slightly negative. The mean of female social capital is 0.50, which reveals that the average connectedness of women is positive. Comparing the overall social capital index and the female social capital index reveals that female social capital is more positively skewed than overall social capital. There is also variation in the race/ethnic group social capital measures. The mean of the white social capital index is 0.42, the mean of black social capital is -1.31, and the Latino social capital index has a mean of -2.22. This suggests that the skew of the black social

³The three social capital indexes for racial/ethnic minorities (white, black, and Latino) capture the connectedness of members of each racial/ethnic group. This index does not distinguish the connectedness along gender. That is, these indexes capture the connectedness along race/ethnicity, but do not distinguish minority women from minority men.

capital index and Latino social capital index is more negative than the white social capital index. In other words, the average white individual has a social connectedness that is positive leaning, while the average black and the average Latino has a social connectedness that is more negatively leaning.⁴

[Table 2 About Here]

Control Variables

I include control variables to account for alternative explanations for the emergence and electoral success of women and minority women. I account for macro-level factors, election-related factors, and individual-level characteristics in all of my empirical models.

I control for several macro-level factors in my empirical models. Having women who are already elected to the state legislature makes it more likely for other women to run for office. Similar having minorities elected to legislative office aids the election of additional minorities to office. I include a *previous female representatives* and a *previous minority representatives* measure to account for the percent of women and minorities that served in the state legislature in 2009. District composition is also an important factor in shaping the electoral fate of women (and minority women). Black and Latino representatives benefit from majority-minority districts (Casellas, 2009), so I include a *majority-minority district* variable in my models and I code this measure as “1” for all districts with a minority population that comprises at least 50.1 percent of the total population and “0” otherwise. I expect *majority-minority districts* to positively effect the emergence and electoral success of women (and minority women). Table 2 shows that there is an average of 8.7% majority minority districts in the data. Since women are a vital source of voter support for these candidates, I also include a *female population* variable to

⁴Given the possibility of endogeneity in the factors I focus on in this paper, I examine the effects of different measures of social capital in 2011 on the emergence and electoral success of female candidates in 2012 elections for state legislatures.

account for the size of the female population. I expect this measure to positively effect the candidate emergence and electoral success of these candidates. I also control for citizen ideology using (Berry et al., 1998)'s citizen liberalism scale because I expect more women (and minority women) to run for office and to be elected in liberal states than in more conservative states. The average citizen ideology is 49.8 %, which suggests the level of liberal citizens and conservative citizens is comparable. Lastly, I include a measure to account for county-level poverty rates.⁵.

I also account for election-related factors that have important effects on candidate emergence and electoral success. For example, electoral rules and term limits have important consequences in what legislators view as their roles as representatives (Cooper and Jr., 2006). Women and black women, specifically, fare better in multi-member districts than single member districts (King, 2002) and black women, specifically, are most likely to be elected in multi-member district systems (Darcy, Hadley and Kirksey, 1993). To account for this, I include a variable, *SMD*, that is coded "1" for legislative districts that are single member districts and districts that use other electoral rules are coded "0". I expect the common understanding to hold - that SMD elections will negatively effect the electoral success of women and minority women. Table 2 shows 89.3% of the elections for US state legislature are SMD. Because I expect these candidates to fare better in elections with more candidates, regardless of the electoral rules, I include a *number of candidates* variable. This is a count of the total number of candidates in each election. Because of the incumbent advantage in American politics, I also include an *Open Seat* variable that is coded "1" if there is not an incumbent running in an election and "0" if there is an incumbent. I expect women (and minority women) to fare better in elections without an incumbent. Term limits also affect state legislators (Herrick and Thomas, 2005) and voter turnout rates in state legislative elections (Kuhlmann and Lewis, 2017). The *term*

⁵For legislative districts comprised of more than one county, I use the average poverty rate

limit variable is a dichotomous measure that is coded “1” for all states that have term limits and “0” in states that do not. Though term limits were initially implemented under the theory that they would benefit female candidates, there are mixed findings on the effects of term limits for female candidates and minority candidates. Though I don’t have directional expectations on the effects of term limits, I include a control, *term limit* to account for their potential influence on the emergence and electoral success of female and minority female candidates. According to Table 2, nearly 29% of states have enacted a term limit. Legislative professionalism and level of competition for a legislative seat will shape the electoral prospects for women (and minority women). The average salary of a legislator in a given state offers a sense of how competitive an election for a legislative seat may be, so I include an *average legislator salary* variable in all models. I code this variable as the salary of legislators in each state in ten thousand dollars. The total number of seats in each legislature, and the vote margins offer insight on professionalism of a legislature and the competitiveness of a given election, so I include control variables to account for each of these factors. Because women are election averse (Kanthak and Woon, 2015), both women and minority women will likely fare worse in more competitive elections than in less competitive elections. As such, I expect higher salaries, legislatures with fewer seats, and smaller vote margins to negatively effect female and minority female candidate emergence and electoral success.

Lastly, I also account for candidate-related factors. The characteristics of candidates themselves are also important in understanding who runs for legislative office and which candidate ultimately wins an election. Partisan affiliation is an important determinant of voter support in elections, so I include a *party* variable that captures the party identification of each candidate. I code this variable “0” for non-partisan candidates, “1” for Republican candidates, “2” for Independent candidates, and “3” for Democratic candidates. I expect female candidates and minority female candidates affiliated with

the Democratic Party to have more electoral success. The qualifications of a candidate is important to her electoral fate as well. I include an *experience* variable that captures whether a woman has previous experience working in the public sector. This variable is coded “1” for candidates who have such experience and “0” for candidates that do not. The average for this variable is 73% which suggests most of the candidates for state legislature had some type of experience. I also include a variable for the age of candidates. Table 2 shows that the age of candidates who ran for legislative office in 2012 ranged from 19 - 96 years old. Lastly, I control for the campaign contributions each candidate received; I expect an increase in candidate contributions to increase the electoral success of female and minority female candidates.

Model Specification

Understanding the election process is a two-stage process, I specify two probit regression models. The first model captures the probability of a particular woman running for office and the second model captures the probability of a woman winning an legislative election. I use clustered standard errors by districts to account for how candidate-level information is nested with election-level information in my data. ⁶

2.4 Findings

In *H1a* I argue that overall social capital will improve female candidate emergence and electoral success and in *H1b* I argue that the effects of overall social capital will be different for white women and minority women. Table 3 presents the effects of overall social capital on the emergence of female candidates; the left column presents the findings

⁶I also specified a two-stage selection model with the first stage set as whether there is a female candidate and the second state set as whether a female candidate *wins* an election (see Heckman (1979) for more information on sample selection bias, which is can occur when modeling the type of relationship I explore in this paper.). The significance and direction of key variables in the selection model specification are comparable to the results I obtain using the two probit models. I present two probit models, so that I can generate and discuss predicted probability figures in this paper.

for white female candidates running and the right column presents the findings for minority female candidates. According to the table, overall social capital increases the probability of a white woman emerging as a candidate for legislative office in 2012. This means white women are more likely to run for office in states where individuals are highly connected, networked, and civically and politically active than in states where individuals are not. This column of findings offers support for my expectations in *H1a*. There are also many control variables that have significant effects on the emergence of white female candidates. For example, white women are more likely to run for office in states with liberal citizens and in states with a greater percent of previous female state legislators than states with smaller percentages. This aligns with existing research that suggests that liberal voters are an important source of support for female candidates as well as the literature on the role model effect, or the importance of seeing a woman in office to female candidate emergence. White women are also more likely to run in states where term limits are enacted, larger state legislatures (i.e. those with more seats), as they become older, and are most likely to be affiliated with Democratic Party. However, some factors make it less likely that white women will run for office. Table 3 shows that majority-minority districts negatively affect the emergence of white female candidates and large female populations do not statistically affect the emergence of white female candidates. County-level poverty rates and larger vote margins also make it less likely for white women to run for office.

[Table 3 About Here]

Table 3 also presents the findings for the effects of overall social capital on minority women. The right side of Table 3 contains the results for the models on minority female candidate emergence. These findings reveal that minority women are actually *negatively* affected by high stocks of overall social capital. That is, minority women are less likely

to emerge as candidates in states with an overall population that is highly politically and civically engaged, informed, and connected. The overall social capital index does not account for gender or race/ethnic and these findings do not align with my expectations regarding candidate emergence that I put forth in *H1a*, where I posit that overall social capital will benefit female candidate emergence. Instead, these findings suggest that the benefits of overall social capital do not “disperse” to all segments of the population equally. Minority women also do not benefit from term limits, high salaries for state legislators, or legislatures having a greater number of total seats. In other words, minority women are more likely to run for legislative office in states without term limits, smaller salaries (generally less competitive), and small state legislatures. There are also other beneficial factors. For example, minority women are more likely to run in states with a larger percent of previous female legislators, larger percent of minority legislators, and in majority-minority districts.

I also generated predicted probability figures so that I am able to fully assess the effect of overall social capital. Figure 1 presents the effects of overall social capital on female candidate emergence by race; the figure for white women is on the left and the figure for minority women is on the right. Focusing on the sub-figure on the left reveals that as the overall social capital index increases, white women are much more likely to run for state legislative office. There is a 10% increase in the probability of a white woman running for office across the full range of the overall social capital index and the effect of overall social capital on the emergence of white female candidates is statistically significant. The direction of the effect in the figure on the right is in the opposite direction. Figure 1 shows that as the stock of overall social capital increases, it becomes less likely that a minority woman will run for office. The effect of overall social capital is also statistically significant. Taken together, these findings offer support mixed support for *H1a*, but offer support for *H1b*.

[Figure 1 About Here]

Table 4 presents the effects of overall social capital on the electoral success of white female candidates and minority female candidates. I expect a positive relationship between overall social capital and the probability that a female candidate wins an election, but I expect the magnitude of the effect to be different for white female candidates and minority female candidates. As shown in Table 4, white female candidates are more likely to win an election for legislative office in 2012 in states with higher stocks of overall social capital than in states with lower stocks. As expected, overall social capital acts as a resource for white women.⁷ Many of the control variables I include also have statistical significance. The percent of previous female legislators and liberal-citizen ideology improve the electoral success of white women, while majority minority districts and county-level poverty make it less likely for white women to win an election. Although white women are less likely to win an election for a legislative seat with a high salary, they are more likely to win in term limited states, larger state legislatures, and with greater vote margins. All of the candidate-level factors I include are important; white women are more likely to win an election as Democratic candidates, with more experience and campaign contributions, and when they are older.

[Table 4 About Here]

However, the conclusion is quite different for minority women. The right side of Table 4 presents the effects of overall social capital on minority female electoral success. As shown, increases in the stock of overall social capital makes it less likely for a minority woman to win an election for a state legislature. This does not align with my expectations for *H1a*, where I posit that overall social capital will benefit female candidate emergence,

⁷These findings hold when I distinguish elections for state seats from elections for state senate seats.

but does offer support for *H1b* that the stock of overall social capital will affect white women and minority women differently. Although overall social capital increases the probability of electoral success for white women, increases in overall social capital *decrease* that probability for minority women. However, many of the control variables I include have more promising effects of the electoral success of minority women. Minority women are more likely to win an election in states with a large percent of previous female state legislators, previous female state legislators, and as expected, minority women fare better in majority minority districts and when they are affiliated with the Democratic Party. Women of color also fare better with experience and high levels of campaign contributions and unlike white women, minority women are more likely to win an election when they are younger.

Figure 2 presents the effects of overall social capital on female candidate electoral success by the race of the candidate. The figure for white women is on the left and the figure for minority women is on the right. The conclusion from this figure is quite comparable to that from Figure 1. Figure 2 shows that as overall social capital increases, it becomes more likely that white women will win an election. On the other hand, increases in the stock of overall social capital reduce the likelihood of a minority woman winning an election. This suggests that while high levels of overall connectedness and engagement of the individuals in a state acts as a resource for white female candidate emergence *and* electoral success, but hinders the emergence and electoral success of minority women.

[Figure 2 About Here]

Next, I explore the results relating to my second set of hypotheses. In *H2a* I argue that high stocks of female social capital will increase the emergence and electoral success of female candidates, but in *H2b* I note that the effects of female social capital will

affect white women and minority women differently. The results for the effects of female social capital on female candidate emergence are presented in Table 5. Focusing on the column for white female candidate emergence in Table 5, I find that female social capital increases the likeliness of a white woman running for state legislative office. That is, white women are more likely to emerge as candidates in states with a highly connected female population than in states where women are not as connected. This offers support for *H2a* as (white) female candidate emergence increases with increased female social capital. Similar to the models for *H1*, many of the control variables have statistically significant effects. The findings suggest that white women are more likely to run for office in states with a higher percent of former female legislators than states with a lower percent, in states with term limits, to be affiliated with the Democratic Party, and as their age increases. However, factors such as majority minority districts and county-level poverty rates *negatively* affect the emergence of white female candidates. White women are also less likely to emerge as candidates in large state legislatures and when there are larger gaps in the margins between candidates.

[Table 5 About Here]

The right column of Table 5 presents the results for the effects of female social capital on minority women. Increases in the female social capital index make it less likely that a minority women will run for state legislative office. While female social capital benefits white female candidates, it has the opposite effect on minority women. Control variables also have important effects. Although white women are negatively affected by majority minority districts, these districts make it more likely that a minority woman will run for legislative office. Minority women are more likely to run for office in states with higher percentages of previous female state legislators and minority state legislators than in states with smaller percentages of these legislators, and are more likely to run when

affiliated with the Democratic Party than the Republican Party. Interestingly, increases in the female population negatively effect the emergence of minority female candidates; term limits and a larger number of total seats also negatively effect minority female candidate emergence. There are differences in the direction of effects for white women and minority women; this highlights the importance of not assuming that factors affect these two sub-groups of women the same.

The predicted probabilities for the effect of female social capital are in Figure 3. The probabilities for white women are on the left side of the figure and the probabilities for minority women are on the right. This clearly shows that the effects of female social capital are completely opposite for these two groups of women. The figure for the emergence of white female candidates shows that as the female social capital index increases white women are more likely to run for office. Again, there is an increase of nearly 10% in the likelihood of white women running across the female social capital index. The right side of Figure 3 shows that the opposite is true for minority women. That is, as female social capital increases minority women are less likely to run for state legislative office. This reflects a similar pattern to the effects of overall social capital on white women and minority women - it is white women who receive the “benefits” from high stocks of female social capital. It would be less problematic if female social capital had no effect on minority women, however, that is *not* the case as female social capital actually *negatively* affects the emergence of minority female candidates. These findings offer mixed support for *H2a* and strong support for *H2b*.

[Figure 3 About Here]

The findings for the effects of female social capital on the electoral success of white female candidates and minority female candidates are presented in Table 6. White female candidates are more likely to win an election in a state rich in female social

capital than in a state with lower levels of female social capital. Similar to other models, white female candidates benefit from the percent of female legislators, liberal-citizen ideology, term limits, high legislative salaries, and greater vote margins in elections. All of the candidate-level factors (affiliating with the Democratic Party, experience, age, and campaign contributions) make it more likely for a white woman to win an election.

[Table 6 About Here]

High stocks of female social capital make it *less* likely that a minority woman was the winner of an election. Similar to the effects of all of the social capital measures I have explored up to this point, female social capital negatively affects the electoral success of minority female candidates. It is important to note that most of the other significant variables have positive effects. That is, many of the control variables I include in these models make the success of minority female candidates more likely, including previous female and minority legislators, majority minority district, and vote margins. Similar to white women, all of the candidate-level factors I account for have important effects on the electoral success of minority women. The only difference is the direction of the effect of candidate age; minority women are less likely to win an election as they age, while white women are more likely to win an election as they get older.

[Figure 4 About Here]

Figure 4 presents the predicted probabilities for the effects of female social capital on the electoral success of white women (sub-figure on the left) and minority women (sub-figure on the right). There is a positive relationship between white female candidate electoral success and the stock of female social capital in a state. Yet, again, larger stocks of social capital have negative consequences for minority women as minority women are

less likely to win an election for state legislature as the stock of female social capital in a state increases. Female social capital is an important resource for white female representation because it improves the prospects for the emergence of white female candidates *and* their electoral success. The positive effects of female social capital on white women offers support for *H2a* and *H2b*, however these effects are the total opposite for minority women. Taken together, I find mixed support for *H2a* and *H2b*.

In the final three hypotheses I examine whether social capital is a “club good” that only yields benefits for in-group members. In *H3* I argue that higher stocks of white social capital benefit the emergence and electoral success of white female candidates. Table 7 presents the findings related to this hypothesis. As expected, white social capital increases the likelihood of a white woman running for office and the likelihood of a white women winning a legislative election. In states where white individuals are highly connected to one another, civically engaged, and politically informed and active, white women are more likely to emerge as candidates than in states with less active white individuals. Once they are candidates in an election, white women are also more likely to win legislative office in states with high stocks of white social capital than in states with lower stocks. Similar to findings relating to *H1* and *H2*, the percent of previous female legislators, presence of term limits, increased age, and affiliation with the Democratic Party all shape the white female representation by making it more likely for a white woman to run for office. The electoral success (that is, attaining a legislative seat) of white female candidates is more likely when there is a large percent of previous female legislators, a more liberal citizenry, term limits enacted, and as these women get older and have high levels of campaign contributions. White women affiliated with the Democratic Party are more likely to win an election than white women who are not.

[Table 7 About Here]

Figure 5 presents the predicted probabilities for the effect of white social capital on emergence of white female candidates (sub-figure on the left) and electoral success (sub-figure on the right). Figure 5 shows that white social capital improves both of aspects of the electoral process. As the white individuals in a state are more interactive with one another and civically engaged, white women are more likely to emerge as candidates for legislative elections and are more likely to be elected. This conclusion is also true for the effect of white social capital on the electoral success of white women - as the stock of white social capital increases, white women are more likely to win an election. These findings offer support for *H3*. In light of the other findings presented in this paper, it is accurate to conclude that highly connected communities are a very valuable resources for white women as these women benefit for high stocks of all three measures of social capital that we have discussed thus far. High stocks of overall, female, *and* white social capital each make it more likely for white women to decide to run for office and to win the election when they decide to run.

[Figure 5 About Here]

In this section, I determine whether black social capital acts as a resource for black female candidate emergence and electoral success. The results of my models are presented in Table 8 and the predicted probabilities are in Figure 6. Table 8 shows black social capital positively affects the emergence of black female candidates. The percent of female legislators and minority legislators, majority minority districts, increases in the female population make it more likely for a black woman to run for legislative office. Although single member districts have no effect on the emergence or success of black women, increases in the salary of the legislators make it more likely for a black women to run for office. Two of the candidate-level factors (party affiliation and campaign contributions) also have important benefits.

The probability of a black woman winning a state legislative election is not significantly affected by the stock of black social capital. I offer for insight on why this may occur in the coming paragraph; I also argue that this finding does not change the importance of black social capital as a political resource that improves the representation of black women. At this point, I will discuss the control variables that have important effects on the electoral success of black women. All of the macro-level factors I include in the empirical models are statistically significant. An increase in four macro-level factors - the percent of previous female and minority legislators, majority minority districts, and the size of the female population - makes it more likely that a black women will win a legislative election, while two factors (liberal citizen ideology and county-level poverty rates) make it less likely that a black women will win an election. Black women have better electoral fates when there are larger vote margins, with more experience and campaign contributions, and when they are affiliated with the Democratic Party.

[Table 8 About Here]

[Figure 6 About Here]

The predicted probabilities for the effect of black social capital on black female candidate emergence and electoral success are presented in Figure 6. Figure 6 reveals an interesting dynamic in the effects of black social capital - increases across the black social capital index result in black women being more likely to run for legislative office. However, the sub-figure on the right reveals that black social capital has a statistically insignificant effect on a black woman winning an election. This suggests that while high stocks of black social capital may mobilize black women to run for office, this social capital does not promote the electoral success of these minority women. These findings offer mixed support for *H3b*, but do support my argument that social capital is a “club good” with important

benefits. Getting individuals from traditionally under-represented groups to run for office is a crucial component of ensuring groups are represented in American politics. Scholars often highlight that when women, minorities, and even minority women decide to run for office, these candidates are just as successful at being elected as others. In other words, once in an election, minority women are just as electorally successful as other candidates, so identifying the factors that make it more likely for an increased number of black women to run for office may be key to increasing the political representation of these women. The positive relationship between black social capital and the emergence of black female candidates suggest that greater attention to the role of social capital may offer insight on the interesting puzzle of the over-representation of minority women in state legislatures. I offer several ways that this can be explored in future research in the conclusion.

[Table 9 About Here]

In the final set of results, I explore the relationship between Latino social capital and the emergence of Latina candidates and their electoral success. Table 9 above presents the effects of Latino social capital on Latinas. Latino social capital has a negative, statistically significant effect on Latina candidate emergence and electoral success. The predicted probabilities associated with these effects are presented in Figure 7. The direction of the relationship in both of the sub-figures in Figure 7 is negative. Increases in Latino social capital results in a decreased probability of Latinas running for legislative office and in these women winning an election. Although this finding does not align with my expectations, it is not altogether counter-intuitive that increased connectedness and engagement of Latinos does not translate into a political resource for Latinas. As mentioned earlier in this paper, there is significant in-group variation for Latinos. This means we should take caution not to assume that all Latinos in the US have the similar experiences that cause linked fate to hold so strongly for black Americans. These findings

seem to highlight the importance of accounting for in-group variation of Latinos because there is a broad range of individuals who may fall into the classification of “Latino”. There is credence for this in findings from the existing literature on the relationship between the Latino population and Latina/o representation. A sizable portion of elected Latinas are not elected to represent majority Latino districts (Casellas, 2011) and there are an array of factors - other than the Latino population - that have important effects on the political representation of this group (Casellas, 2011). The findings presented in this paper gel with other recent work on social capital. Putnam (2007) examines the effects of social capital in light of changing population dynamics and finds that in the short run, increasing levels of immigration and growing racial and ethnic diversity actually challenge social solidarity and inhibit the beneficial effects of social capital. This highlights the importance of considering in-group variation of Latinos and different contextual factors when studying the factors that contribute to the representation of Latinas. In the conclusion, I offer avenues for building on this finding.

[Figure 7 About Here]

Table 9 shows that many of the control variables reach statistical significance. For example the percent of previous female state legislators and minority state legislators, majority minority districts, county level poverty rates, and affiliation with the Democratic Party all form a positive relationship with the emergence and election success of Latina candidates. Factors such as experience and age actually have a negative effect, that is, they make it less likely that a Latina will run for office. The effects of Latino social capital lead me to conclude that this social capital does not act as a resource for Latinas. I argue that the negative effects of Latino social capital on Latina candidate emergence and electoral success is due to the broad cluster of individuals that are considered “Latino”. After all, the logic that motivates my argument that social capital may be a club good

is that individuals with shared backgrounds may support one another in a way that individuals who do not share a background should not be expected to. It is quite possible that I get the results presented in this paper because “Latino” encompasses so many different sub-groups, many of which are comprised of individuals who do not have any significant connections to one another. I offer several suggestions for addressing this in the conclusion.

2.5 Conclusion

In this paper I posit social capital as an important overlooked factor that contributes to the emergence and electoral success of female candidates for state legislative office. I theorize that this will occur because areas with a high stock of social capital are conducive to women receiving the encouragement they need to run for legislative office as well as the voter support that leads to these women being elected. I deviate from the existing literature in 3 key ways: 1) focusing on women in state legislatures, 2) considering female candidates *and* women who win a legislative seat, 3) applying the intersectional approach to explore the strength of the theory for white women *and* minority women.

I study the effects of five newly developed social capital measures. I examine the effects of overall, female, white, black, and Latino social capital. Using these social capital indexes, original data on state legislative elections in 2012, and applying the intersectional approach reveals that social capital is a form of “political capital” for women seeking legislative office. The findings of this paper suggest that both overall social capital and female social capital have important benefits for white female candidates. In the second half of the paper, I explore social capital as a club good by assessing the effects of specific sub-group measures of social capital; the findings for white women and black women align with my general expectations.

This study contributes to growing scholarly understanding of the effects of social capital. The existing literature reveals important political-related benefits from social capital. For example, high stocks of social capital have been associated with improved educational attainment (Coleman, 1988), political engagement (Putnam, 2000), increased likeliness of political participation, and facilitates cooperation and action between individuals. However, this study contributes an important caveat by highlighting that the benefits from high stocks of social capital do not accrue equally to all sub-groups. In this paper, most of the benefits of high stocks of social capital are obtained by white women, while black women only benefit from high stocks of black social capital and Latinas do not derive benefits from any of the measures of social capital. The benefits of black social capital for black female representation offer insight on the “puzzle” of the *over*-representation of minority women.

This paper can lead to several promising lines of research. First, the literature would benefit from greater focus on Latina representation. Although, social capital acts as a resource for white women and black women, it does not benefit Latinas. This suggests that a growing trend in scholarly research - studying *minority* women as a monolithic group - may be problematic as factors do not affect women who belong to different minority groups the same. “Latino” can refer to individuals from very different backgrounds and the in-group heterogeneity likely complicates any potential benefits from high levels of social capital. However, the nature of my findings concerning Latinos highlights the need for more research focusing on this group. Latinos are a fast growing minority groups in the US, yet remain disproportionately represented (their percent as representatives is smaller than their size in the population). There is considerable variation in the patterns and level of Latina representation across states (Fraga et al., 2007) and though some scholars have given attention to Latinas (Fraga et al., 2005; Ramírez and Burlingame, 2016), additional research on these women would be insightful.

For example, future research can develop and explore the effects of a more “refined” measure of Latino social capital (i.e. a measure that accounts for the in-group variation of Latinos, that relies on different factors that result in social capital development, etc) on Latina representation. Developing a measure of social capital that accounts for the potential influence of factors such as country of origin, generational status, etc. is also important for future research. Relatedly, developing a measure that accounts for bridging/bonding social capital could also be promising, particularly given the stereotypes that surround women of color.

Second, it will also be insightful to extend consideration to different types of elections. This study focuses on general elections for state legislature in 2012, but can be extended in several promising directions as social capital may have benefits for a wider array of elections. For example, it will be insightful to consider primary elections for state legislature, extending consideration of state legislature elections for years other than 2012, and even looking at elections for other offices (local elections, statewide executive offices, Congressional, etc.) in an effort to examine whether the benefits of social capital extend to elections at different levels of government.

Studying the mechanism that allows social capital to act as a political resource will also be important. In this paper, I offer a theory on why social capital is beneficial to minority women. One of the biggest obstacles that limits women from running for office is women do not receive encouragement to run for office. I argue that women are more likely to receive encouragement and support necessary to motivate them to run for office in states with high stocks of social capital. The mechanism I put forth could be furthered explored by shifting focus from the emergence and electoral success of minority women, to candidate training programs. It may be the case that high stocks of social capital make it more likely for women (of color) to attend a candidate training program to get

additional information about running for office. However, to be clear, my theory centers on *one* possible mechanism. Because there are several possible reasons that social capital results in more women and women of color running for office, exploring how social capital affects contributions to (minority) female candidates, voter turnout, and other possible mechanisms offers additional fruitful lines of future research.

3 OCCUPATIONAL HIERARCHY VS. EMPLOYMENT SECTOR: A COMPARISON OF SOCIAL CAPITAL EFFECTS ON FEMALE REPRESENTATION

Abstract: Social capital is one of the most extensively studied concepts in scholarly research. Many scholars associate high stocks of social capital with wide-ranging benefits on policy outcomes, organizational performance, and employment related factors. Growing attention has been given to how social capital (or social networks) affects one's prospects for being hired, salary, job tenure, and the hiring process more broadly. Although findings from the extant research highlight promising benefits of high stocks of social capital on female labor force participation, there is only limited attention to how social capital directly affects the representation of women across jobs with different statuses. The limited existing research on this topic generally examines how networks affect whether or not a woman works for pay.

This study gives greater attention to how two very important factors - employment sector and occupational hierarchy - shape the relationship between social capital and female representation. I argue that social capital will be a resource for women seeking careers in executive or top-level positions and increase their representation, but will have limited benefits on the street-level representation of women. To test this argument, I compare the effects of newly developed social capital indexes on the level of female representation in executive-level positions and low / street-level positions. Using data from 2000-2012 on female representatives in government and bureaucrats in health, I find mixed support for my expectations and differences in the effects of social capital on women who belong to different racial and ethnic groups. This project offers many promising extensions that can be explored in future research.

3.1 Introduction

Social capital theory has been applied across disciplines to explore a host of phenomenon. The extant literature is rich with examples of the promising effects of high stocks of social capital. Although social capital has been measured with a variety of indicators, it is consistently associated with individual-level health and political participation in recent research (Kawachi, Kennedy and Glass, 1999; Kim, Subramanian and Kawachi, 2006; Putnam, 2000; Schultz, O'Brien and Tadesse, 2008). Scholars have also given attention to economic related effects of social capital. The concept has important effects on job searches, income, and formal labor market participation (Flap and Boxman, 1999; Smith, 2010).

Studies on the effects of social capital on labor force participation often compare the effects on the labor force participation along gender or along race. Gender and race are salient social identities that have important influences on employment, so it is common for scholars to assess the effects of social capital on women relative to men and minorities relative to whites. There are beneficial effects from high stocks of social capital as research suggests the social capital or social connections a woman has shapes the probability of her working for a salary (Stoloffa, Glanvillea and Bienenstock, 1999) and the likeliness that women will enter the labor force (Aguilera, 2002). There is growing attention to how contextual factors limit the benefits of social capital. The employment sector and hierarchy of an occupation are important contextual factors to consider when assessing how factors shape an individual's employment status. Despite the importance of these factors and the increased consideration for limits to social capital, few studies explore how sector and the level of an occupation shape the effects of social capital on women across racial/ethnic groups.

Women comprise a growing percent of the US labor force and in an increasing

number of sectors. In the past four decades there have been notable changes in the labor force activity of women. Over time, women are increasingly participating in the paid labor force, comprise more of the full-time work force than in decades before, and are completing higher levels of education. According to the Bureau of Labor Statistics, in 2012, 57.7% of women were in the labor force, 38% held college degrees, but their presence across sectors and in specific hierarchical occupations varies (BLS, 2013). For example, nearly 40% of women hold administrative positions in government, but comprise a far smaller percent of executive positions in government across states. Similar differences exist in the healthcare field - 90.6% of registered nurses were female in 2012, but only 34.3% of physicians and surgeons were women (BLS, 2013). There are also major differences in the occupations held by women who belong to different racial/ethnic groups.

It is important to identify the factors that influence a woman's decision to enter the workforce and the type of occupations women pursue. The important differences between the behavior of men and women and the benefits associated with increased female representation make understanding the factors that contribute to the representation of women in various sectors and occupation particularly important. Female representation in government is associated with increased political participation, political efficacy, and assessments of government from women in the public. There is a growing body of research that highlights the relevance of the "fourth branch of government" on policy outcomes of members in society (Aberbach, Putnam and Rockman, 1981). Some attention has been given to female bureaucrats. For example, female bureaucrats in health are associated with many promising benefits, including improved compliance with physician instructions, greater trust and patient satisfaction (Bertakis, 2009), increased patient-centered care (Hall and Roter, 2002), and thus contribute to improved health outcomes of women in society.

These important effects make it important to identify how social capital affects the careers of women. In this paper, I study the relationship between social capital and female labor force participation. The focus of this study is twofold: first, I compare how social capital shapes the number of women who attain executive positions and the number in street-level positions, and second, I focus on two employment sectors: government, where there is a history of women being under-represented, and health care, where women are represented quite well. The design of this study, particularly consideration for factors that may limit the benefits commonly associated with social capital, deviates from the norm established in previous research in several ways. I study this relationship from 2001-2011 instead of a snapshot in time, rely on a social capital index instead of single item measures of social capital, examine female employment across different areas instead of using a dichotomous variable, and compare the effects on white women, black women, and Latinas.⁸ Using a newly developed measure of overall social capital and original data on women in executive and street-level positions in government and in health, I examine the employment related effects of social capital on women who belong to different racial/ethnic groups. The findings suggest that social capital promotes the representation of women in executive-level positions in health, but is less of a resource for female representation in street-level positions.

3.2 Theory and Hypotheses

For decades, scholars have explored the effects of social capital. Although there are many different definitions and measures of the concept, this study views social capital as the networks, norms, relationships (Putnam, 1993, 2000), and the reciprocity, values, and web of social interactions that arise from these connections (Coleman, 1990; Putnam,

⁸I focus on the intersection of gender and race in the models that examine female representation in street-level positions in government.

1993; Schuller, Baron and Field, 2000). Modern social capital research emphasizes that the results of high stocks of social capital yields important benefits. This focus is largely a result from contemporary research. One of the leading scholars in social capital research is Robert Putnam, who conceptualizes the concept as the moral obligations and norms, social values, and social networks / voluntary associations (Putnam, 1993). Based on this definition, he measures social capital using indicators for organizational involvement, civic engagement, community volunteerism, informal sociability, and social trust. There are promising effects from high stocks of social capital, including increased political participation and low crime rates (Putnam, 2000), however, the decline of this connectedness between members of a community is associated with many social problems.

Many scholars have built on the notion of social capital as largely beneficial that is put forth by Putnam and others. The general pattern of positive framing of social capital is reflected in most social capital research. Social capital has been applied across political science, public administration, and health policy research. Economic scholars and scholars interested in understanding dynamics of the workforce examine how social capital affects health-related factors. Social capital is important to understanding employment decisions as nearly 50% of all jobs in the US are found from people getting help or information their friends or family Granovetter (1995). Having strong social networks is associated with increases wages (Nan, 2001) and results in individuals attaining more prestigious jobs (Lin, Ensel and Vaughn, 1981; Lin, 1999). Social networks are a major component of social capital and networks have important effects on job prospects as individuals who apply for jobs and have referrals from current employees are more likely to receive a job offer than job applicants without a referral (Petersen, Saporta and Seidel, 2000). Social capital also indirectly effects employment prospects and employment status by promoting knowledge transfers (Inkpen and Tsang, 2005) and improving the flow of job-related information (Aguilera, 2002).

Although social capital is often praised as generating promising *benefits*, there are limitations that should be accounted for. Since social capital is generated from relationships with others Coleman (1990), there are three assumptions that are unrealistic and problematic: 1) that all individuals in a community have the same stock of social capital, 2) that high stocks of social capital *always* yield beneficial effects, and 3) that social capital affects all sub-groups in society the same. Important caveats are necessary for our understanding of social capital. In part, the benefits associated with high stocks of social capital depend on context. The resources provided by social capital are limited according to the type of network an individual has (Fernandez-Kelly, 1995). It is important not to assume there is a connection between highly connected communities and the benefits of social capital. After all, not all network connections are created equally. Consider an example. If unemployed youths are highly connected to other unemployed youths, a highly connected youth will be less likely to gain employment than an unemployed youth with a different network (Fernandez-Kelly, 1995). There is variation in the nature of networks that individuals have and different networks have different effects. The people who comprise a network are important in shaping the effects of social capital. For example, acquaintances (individuals we are weakly tied to) and members of one's inner circle (individuals we are strongly tied to) do not have the same effect on individuals seeking employment (Granovetter, 1973), the wages a job seeker earns (Montgomery, 1992), or the hiring process more broadly (Erickson, 2001).

There are important caveats that should be addressed to offer a comprehensive picture of social capital. It is also important to consider the possibility that high stocks of social capital have negative effects on certain phenomenon, such as female participation in certain occupations in the labor force. With an understanding of the dual dynamics of social capital, it is not outlandish to note the possibility of social capital having negative impacts. Some research has noted possible limitations to social capital as a universal

mechanism to improving individual's mobility and policy outcomes (Portes, 1998, 2000). Social capital can limit social inclusion and social mobility, make it *more* difficult for communities to unite, and worsen policy outcomes (Aldridge, Halpern and Fitzpatrick, 2002). The networks and connections associated with social capital carry the potential of excluding individuals. This is comparable to the view Bourdieu offered in some of his social capital research. While Bourdieu (1986) posits individuals' networks as resulting in shared norms and values that can generate resources, he "nests" his understanding of the concept in a theory that highlights notions of power and conflict (Tzanakis, 2013). In his conceptualization, social capital can generate resources that are not accessible to all groups (Alvarez and Romani, 2017). Other scholars have studied this possibility and findings suggest that some of the not-so-beneficial effects of social capital can affect one's health (Villalonga-Olives and Kawachi, 2017) and result in difficulty introducing new ideas or knowledge (Edelman et al., 2004). There are also findings that target, or benefit, women more than men. For example, women are more likely to get assistance taking care of their children in places with high stocks of social capital and thus are likely to enter the workforce in these contexts compared to areas with low stocks of social capital (Stoloffa, Glanvillea and Bienenstock, 1999).

Taken together, there are important benefits to high stocks of social capital, but considering social context is also important before accepting social capital as wholly beneficial. The composition of one's network significantly shapes what can be expected from high stocks of social capital. The existing literature on the relationship between social capital and employment highlights the potentially promising effects of social capital. I argue that women will attain more executive or top-level positions in states with higher stocks of social capital because of the access to information, social networks and connections, and support that results from high stocks of social capital. The factors that are associated with high stocks of social capital promote job employment and are

particularly important to women pursuing positions that are traditionally difficult for them to attain, such as executive level occupations. There is a contextual nature to social capital. Women do not need networks or connections as strongly when pursuing street-level positions compared to more executive-level positions. Since the benefits associated with high stocks of social capital are not as important for women seeking employment in more street-level or less hierarchical occupations, I expect high stocks of social capital to have different effects on the type of careers women pursue. Stated as my first set of hypotheses, I expect:

Hypothesis 1: I expect high stocks of social capital will increase the representation of women in executive-level occupations.

Hypothesis 2a: I expect high stocks of social capital will increase the representation of women in street-level occupations.

Hypothesis 2b: I expect the increases on women in executive-level positions to be larger than the increases on women in broader, street-level occupations.

Many scholars highlight that consideration of race complicates contemporary understanding of the benefits of social capital. Contemporary understanding of social capital suggests that all members in society benefit equally from high stocks of social capital. Early social capital research concludes that 1) there were benefits to high stocks of social capital and 2) that all members in a community equally accrue any benefits that result from high stocks of social capital. However, scholars are increasingly exploring how accounting for race and ethnicity complicates the expected effects of social capital. Race shapes the lives, experiences, and career choices of Americans. Hero (2003) notes the fundamental role of race in shaping relationships in America and highlights that social capital and related factors do not bridge across racial / ethnic groups (113). His

research highlights the *negative* effects associated with social capital when racial/ethnic diversity is accounted for - in fact, some of his findings directly counter the expectations associated with social capital. Scholars have built on this type of research by generating new measures of social capital and paying more attention to the (generally) contrasting the effects of social capital and racial diversity (Hawes, 2017; Hawes and Rocha, 2010; Portes and Vickstrom, 2011).

Social capital is contingent on one's position in a social hierarchy and the social ties an individual has (Lin, 1999). Social capital captures the social connections, civic engagement, and informal sociability an individual has. The significance of race/ethnicity to everyday life in America suggests that members of different racial and ethnic groups likely have different levels of social capital. Scholars have noted the importance of dis-aggregating social capital along race (Hero, 1998) and that there are differences in the employment status and patterns of individuals who belong to different racial/ethnic groups (DeJong and Madamba, 2002). Considering these factors reflects the importance of exploring racial diversity and social capital, studying how social capital affects members of minority groups, and examining sub-group measures of social capital. While Hero and others have noted differences in the effects of social capital and racial diversity, there is also reason to expect social capital to differ based on the race/ethnicity of an individual. Aguilera (2002) finds major differences in how individuals across gender groups, racial/ethnic groups, and the intersection of the two benefit from high stocks of social capital. Relatedly, the importance of social networks in the hiring process acts as a disadvantage for minorities, or disadvantaged groups, who lack access to or have lower utilization of their social networks (Petersen, Saporta and Seidel, 2000). This leads to my final set of hypotheses.

Hypothesis 3a: I expect white social capital to increase the number of white women in

street-level positions in government and in health.

Hypothesis 3b: I expect black social capital to increase the number of black women in street-level positions in government and in health.

Hypothesis 3c: I expect Latino social capital to increase the number of Latinas in street-level positions in government and health.

3.3 Data and Methods

I test the hypotheses put forth in this paper using originally collected data on all of women employed as executives and street-level bureaucrats in government and in the healthcare sector, according to their race/ethnicity and a newly developed measure of social capital. I use a panel dataset in this paper, which allows me to explore this relationship from 2000-2012. The first two dependent variables capture female representation in government - one variable captures women in executive-level positions and the second variable captures women in lower or street-level positions; I measure the representation of female bureaucrats in health in the final two dependent variables, with the same distinction based on the hierarchy of the position.

Dependent Variables

First, I study female executives in government by focusing on female governors. In the US, governors are the chief executive officer, and thus the head of their state, so I focus on the level of female representation in these positions to assess how social capital affects executive-level employment of women in government. I rely on two data sources to get information on governors: the Book of States and Ballotpedia.com. These sources offer important information, including annual information on who the governor is, the salary the governor earns in each state, the staff size, as well as the nature of gubernatorial

elections (number of candidates, election results, etc.). There is a history of women being under-represented in government and this is particularly the case in executive-level positions. In 2000, 6% of governors were women and by 2012 the representation of women in these positions grew to 10%. Women comprise approximately 50% of the population, so although there was a small increase in the number of female governors from 2000-2012, women remain grossly under-represented in these executive-level positions. Nevertheless, I examine whether social capital can be a resource for the representation of women in these positions. I measure the presence of a female governor using a dichotomous variable; I code this variable “1” for each state with a female governor for a given year and “0” if there is not a female governor. Table 10 presents the descriptive statistics for all of the dependent variables in this study. Focusing on the row for female governors reveals that from 2000-2012 there were female governors in nearly 14% of states.

[Table 10 About Here]

The second dependent variable captures the representation of women in other civil service positions in government. I rely on data from the Equal Employment Opportunity Commission (EEOC), which has information on the number of state and local employees for each state. The EEOC has a bi-annual publication, “Job Patterns for Minorities and Women in State and Local Government”, which contains information on the number of full-time state and local government employees according to their race, gender, and the intersection of the two (white women, black women, etc.). Although the title of the publication suggests that this data may be available at the state *and* local level, there is only a national average of the state government employees. Because of this, I find it most appropriate to measure women who work for the government in street-level positions by dividing the number of women in full-time positions for state and local government by

the total number of state and local government employees.⁹ This measure includes all street-level positions in government - technicians, service /maintenance, administrative support, etc - and distinguishes female workers according to their race/ethnicity. Table 10 presents the descriptive statistics for this variable. Not surprisingly, the average for white women in largest - 75% of women in street-level positions for state and local government are white. The average across states during this time period was much smaller for black women - 18% - and Latinas - 7%.

The final two dependent variables in this study capture female representation in the health care sector. First, I measure top-level bureaucrats in health as the percent of female physicians in each state. To generate this variable, I use information from *Physician Characteristics and Distribution in the United States*. This book is published by the American Medical Association and is highly regarded as containing the most accurate data on physicians in the US. To be clear, I am using the term “executives in health” to refer to top-level health care bureaucrats in positions that are generally difficult for women to attain. In other words, I use this set of terms to refer to top-level health care bureaucrats; these bureaucrats are often highly regarded, highly prestigious positions that require significant years of education, and have high salaries. Aware of the blurred line between the public and private sectors (Bozeman, 1988), I do not distinguish female physicians based on the sectors they are employed in. There is variation in the number of female physicians from 2000 to 2012. In 2012, the average of female physicians across US states was nearly 30%, which was a slight increase from the 22.5% in 2000. Additional descriptive statistics for this variable are in Table 10. There was an average of 26% female physicians across all states from 2000-2012; 2.9% of the physicians were female in the state smallest level of female physicians and there were 42.1% of female physicians in the state

⁹These data are only available bi-annually, which significantly reduces the number of observations for models that include this variable.

with the greatest percent of these bureaucrats.

Lastly, the fourth dependent variable focuses on women who are in street-level positions in health. I measure the street-level representation of women in health by focusing on the ratio of female nurses to male nurses in each state.¹⁰ Table 10 reveals that the average ratio of female to male nurses is 3. This means that across states, there is an average of three female nurses for every one male nurse. There is variation in the range of this variable - the ratio was smallest in Wyoming in 2005 (0.02), while the ratio was highest in California in 2007 (72.6). Clearly, women are represented at high levels as nurses across states. I argue that this is one of the reasons it is important for me to test my hypothesis in the government sector and in the health sector; women are represented at different levels across these sectors and across occupations within each sector. The job market for these positions are also quite different, which highlights the importance of considering how contextual factors shape the influence of social capital on the labor force participation of women across employment sector and occupational hierarchy.

Key Independent Variable

The main independent variables in this study are the social capital indexes. I create this index using the Current Population Survey (CPS) Civic Engagement Supplement. This survey is conducted every November by the US Census. I use the Civic Engagement Supplement to validate a state-level measure of overall social capital from 2000-2012. I rely on Civic Engagement Survey items that ask survey respondents about their charitable activity, community volunteerism, community and organizational involvement, engagement in public affairs, and informal sociability. The charitable activity items I use

¹⁰To be clear, both physicians and nurses could be considered street-level positions in health, according to (Pitkin, 1967) classic definition of street-level bureaucrats. However, I am using the term “street-level” to highlight that this a position that more women have attained than in the more “executive-level” position of physician. This is not meant to reduce the important role of nurses or the difficulty in becoming a nurse; it is just to distinguish an occupational “hierarchy” within the health care sector.

capture whether and how often respondents donate money, clothing, food, and engaged in fundraising activity. Community volunteerism items include questions on whether respondents have helped to fix a problem in their community and the reason they abstained if they did not. Questions on community and organization life ask respondents about their civic organization participation, while the engagement in public affairs items center on broader aspects relating to political participation, such as whether the respondent is registered to vote, discusses politics with their friends, or voted in the last election. The last set of indicators ask respondents about their informal sociability. Examples of these indicators include whether or not the respondent does favors for her/his neighbors. Scholars have noted the weakness of using a single indicator metric to capture social capital [66-67](Putnam, 1993) and this index parallels the conceptualization of social capital in other social capital research, including Putnam's classic measure and more recent projects (Hawes, Rocha and Meier, 2012).

I use state-level social capital indexes. Similar to the steps used to generate other measures of social capital, I aggregate individual-level responses from the CPS to the state (Hawes, Rocha and Meier, 2012) then use factor analysis to estimate a state-level social capital index. The measures of social capital in this study are standardized factor indexes. This means that a value of "0" reflects states with average levels of social capital. Small values on this index reflect low levels of civic engagement and volunteerism, while larger values reflect greater connectedness, interaction between people, and civic engagement in a state. I was able to generate several social capital indexes: 1) overall social capital, 2) female social capital, and 3) race-group social capital. Each of these indexes captures the connectivity of different sub-groups in society. The CPS Civic Engagement Supplement is collected by the US Census, which means there are representative samples of racial groups at the state-level. Because of this, I am able to develop three additional social capital indexes: one for whites, one for blacks, and one for Latinos. Having these measures allows

me to examine whether there are differences in the stock of social capital held by different race-groups and the effects of specific types of racial social capital.

There is significant variation in social capital across states. Table 11 presents descriptive statistics on the independent variables and control variables used in this study. The top portion of the table contains the descriptive statistics for the social capital indexes used in this study. The skew of overall, female, and white social capital are quite comparable; the overall social capital index ranges from -2.08 and 3.20, female social capital ranges from -1.96 to 3.75, and white social capital -1.73 and 4.37. The average for these three indexes are positive. On the other hand, the skew of the two social capital indexes for minority groups are quite comparable. The averages for black social capital and Latino social capital are both negative. Given this, it is not surprising that the range of these indexes are similar. From 2000-2012, black social capital ranges from -4.01 to 3.48, while the range is from -5.36 to 1.68 for Latino social capital.

[Table 11 About Here]

Control Variables

I include control variables in the empirical models in this study to account for alternative explanations for female labor force participation. State-level contexts and individual-level characteristics of women are important in shaping the employment sector and type of occupation women pursue. In the models for female, executive-level representation in government (female governors), I include controls that capture the percent of female state legislators, the salary of the governor in each state, whether there is an incumbent in the election, liberal to conservative ideology (from Berry et al. (1998)), and legislative control. Many women in politics start at lower positions and work their way up. There is also an extensive line of research on so called, “role model effects” - as female representation or the presence of viable female candidates in an election is expected

to encourage more women to run for office. For this reason, I include a variable that captures the percent of female legislators in each state; I expect this variable to make the presence of a female governor more likely. I also expect female governors to emerge more in states with higher salaries for governors than in states with lower salaries; I measure this in dollars. The “incumbent advantage” is a term coined to refer to the high levels of success incumbents have when they run for re-election Ferejohn (1986). I use dichotomous coding for this variable; I code the incumbent variable “1” if there is an incumbent in the election for every state with elections and “0” if there is no incumbent. Female governors will be less likely in states with gubernatorial elections that have incumbents seeking re-election. I expect female governors to be more likely in states with a more liberal citizen ideology and in states with a legislature controlled by Democrats. I rely on the measure of citizen state ideology from (Berry et al., 1998) to capture the ideology of the citizens in each state. I code the variable that captures party control of the legislature as “1” when the Democratic Party is in control, “0.5” when there is a split government or Independents control the legislature, and “0” for Republican controlled legislatures.

I include additional control variables. I account for the number of married households in this state. I expect women who are married will be less likely to work in street-level positions in government and in health. In the models for female executive representation in health, I include a control for the number of medical schools in each state as access to medical school is an important factor in shaping whether a woman is able to become a physician; I expect more women to work as physicians in states with a larger number of medical schools than in states with a smaller number of medical schools. I also include a control that accounts for the minimum wage in each state; I also include the female nurses measure as a control in the models for female physicians. The benefits of social capital are often complicated by consideration of racial diversity (Hero, 1998). Existing research suggests that the impact of social capital is often opposite of the impact

of racial diversity (Hawes and Rocha, 2010), so I include a control to account for the racial diversity in each state. I expect increases in a state's population to increase all of the forms of female representation I study in this paper. On the other hand, I expect lower levels of female representation in government and in health in states with high poverty rates and unemployment rates. I expect increases in the diversity index to have the opposite effect of increases in the stock of social capital.

Model Specification

I use panel data in this study, so I specify a model that accounts for the nature of this data. I code the female governor variable "1" when a state has a female governor and "0" when the governor is male. Since I explore the relationship over time, I generate several panel probit regression models using the xtprobit procedure in Stata, and for all of the other dependent variables in the study I specify xtregression models (Rabe-Hesketh and Skrondal, 2008). I include time fixed effects in all of the empirical analyses presented in this paper.

3.4 Findings

In *H1* I argue that high stocks of social capital will increase the representation of women in executive-level occupations. The findings showing the effects of social capital on the presence of female governors are presented in Table 12. The results in the first column suggest that overall social capital does not have a statistically significant effect on the presence of female governors. There are similar findings for *H2*. The second column in Table 12 reveals that female social capital does not have a statistically significant effect on the presence of female governors. It seems that other, more politically relevant factors shape the number of female governors across states. The results presented in Table 12 counter my expectations in *H1* and suggest that executive-level representation of women

does not improve as a result of high stocks of social capital.

Many of the control variables I include in the empirical models presented in Table 12 are statistically significant in the the model for overall social capital and female social capital. In both models, an incumbent running for re-election makes the presence of a female executive less likely. This aligns with my expectation. Both models also show that an increase in the percent of female legislators, the unemployment rate, and diversity index make it less likely for a woman to hold a gubernatorial position. Although the effects of female state legislators aligns with the general expectation from the existing literature, the negative effect of Democratic control of the state legislature is a bit counter-intuitive. This variable has a negative and statistically significant effect in both models, however, there is an explanation for this finding. Many of the women who have served as governors are affiliated with the Republican Party. Because of this, a Democratically controlled state legislature does not yield the expected increase in female representation in these models. The right leaning trend in the party identification of female governors contributes to limited explanatory power of overall social capital and female social capital, as well. There is a general pattern of women aligning with the Democratic Party so the increased connectedness of women (i.e. high stocks of social capital) may target women who identify as Democrats.

[Table 12 About Here]

Table 13 presents the effects of social capital on the percent of female physicians in each state. These results offer insight on the effects of overall social capital and female social capital on the bureaucratic representation of women in the health care sector. The first column presents the results for overall social capital and suggests that increases in the stock of social capital lead to increases in executive-level female bureaucrats in health. As expected, as a community becomes more connected, highly networked, and engaged, there

are increases in the number of women who hold executive-level, bureaucratic positions in health. Shifting attention to the second column reveals important benefits from high stock of social capital. As the stock of social capital increases, the number of female bureaucrats does as well. Social capital acts as a resource that improves the representation of women in hierarchical positions in the health care arena. This finding is not surprising given the contextual nature of social capital and these findings offer support for the expectations I put forth in *H1*. The results in Table 12 and Table 13 offer mixed support for *H1*.

[Table 13 About Here]

Table 14 presents the findings regarding *H2*. I hypothesize that high stocks of social capital will increase female employment in street-level occupations in health *H2*. The first column shows the effect of overall social capital on the ratio of female nurses to male nurses.¹¹ As the stock of overall social capital increases, women are less likely to hold these street-level positions in health. To be clear, this means that the ratio between female and male nurses reduces in communities with high levels of connectedness. The second column reveals comparable effects from high stocks of female social capital - there is a negative relationship between female social capital and the ratio of female to male nurses. This does not offer support for *H2a*, but does align with the expectations I put forth in *H2b*. I offered one mechanism for this earlier in the study - that the stock of social capital acts as a resource when women pursue careers that they are traditionally, significantly under-represented in, but social capital does not seem to be as critical to helping women attain employment in jobs that they are heavily represented ins. I offer a direction for future research that may help to disentangle this finding in the conclusion.

[Table 14 About Here]

¹¹Using a measures of the physician assistants in each state yields results that are comparable; the results are in the same direction as the results I present in this paper, but the statistical significance is not consistent.

The final set of hypotheses center on how social capital impacts the number of women employed in street-level bureaucrats in government. Because of the data, I am able to examine how overall, female, and race-group social capital shapes the level of white women, black women, and Latinas working as broader notions of civil servants. Table 15 contains the effects of social capital on the representation of white women in street-level positions in government. All three measures of social capital improve the representation of white women in these broader notions of positions in government. Increased connectedness, engagement, and interaction acts as a resource of white women - whether these things occur in the overall population, female population, or white population in a state. The findings in Table 15 offer support for *H3a*.

[Table 15 About Here]

I offer a similar hypothesis about the effects of social capital on the street-level employment of black women in government. Table 16 presents the effects of overall, female, and black social capital on the number of black women in street-level positions in government. Looking across the first three rows of Table 16 reveals significant effects from two of the three social capital indexes. As overall social capital increases there is a reduction in the number of black women in street-level positions in government. This means as the overall population in a state (without accounting for gender or race) becomes more connected black women are less likely to hold these somewhat undesirable positions. One possible explanation for this finding is that higher stocks of social capital tend to exist in states with less racial/ethnic diversity. Female social capital also has a negative, statistically significant effect. That is, increases in the stock of female social capital lead to a reduction in black female labor force participation in street-level positions in government. These findings do not offer support for *H3b*. The diversity index is also statistically significant across all three models - the more racially and ethnically diverse a

state becomes, the more likely black women will be employed in street-level, government positions. This aligns with my expectation that the effect of social capital will be in the opposite direction of racial and ethnic diversity.

[Table 16 About Here]

The final set of analyses examines the effects of social capital on the employment of Latinas in a broader classification of jobs in government. I study the effects of overall social capital, female social capital, and Latina social capital. Both, overall and Female social capital have negative and statistically significant effects on Latina employment in government. As the stock of overall social capital in a state increases, Latinas are less likely to hold positions in government. This has been a consistent finding throughout the empirical analysis presented here - increases in various social capital indexes reduce the employment of women of color. Similar to my explanation for the previous set of models, it may be that social capital only acts as a resource when women of color pursue careers that they are traditionally, *under*-represented in. I discuss this as a promising avenue for future research to build on the results of this study.

[Table 17 About Here]

3.5 Conclusion

This analysis highlights the importance of not assuming all sub-groups in society are equally impacted by high stocks of social capital. Scholars have considered how race and racial diversity complicate many of the benefits that are expected from high stocks of social capital (Hawes, Rocha and Meier, 2012; Hero, 1998; Rocha and Hawes, 2009). This study aims to fill in the gap on the relationship between social capital and female labor

force participation based on employment sector and occupational hierarchy. I deviate from most of the existing literature by accounting for two important aspects of the US workforce by comparing how social capital affects on female bureaucrats employed in two job sectors (government and health) and in positions that vary in hierarchy (executive / top-level bureaucrats and street-level bureaucrats).

Using several newly developed, state-level social capital indexes, I argue that social capital will act as a resource that promotes female representation in executive-level positions but will not benefit female representation in street-level positions. In addition to the comparison across sectors and position types, I also compare how social capital affects women who belong to different racial/ethnic groups. I focus on white women, black women, and Latinas and the findings of this study suggest high stocks of social capital improve female representation in bureaucratic positions in health, but high stocks of social capital negatively impact female representation in executive-level positions in government and street-level positions in government and in health. These findings offer mixed support for my expectations and there are several ways future research can build on the line of reasoning I put forth in this study.

This study contributes to growing scholarly understanding of the effects of social capital and there are several directions for future research in related areas. One direction for future research involves building on this study with greater attention to minority women. Although the final set of hypotheses in this study focus on the effects of social capital on women along their race / ethnicity, future research can give greater attention to this understudied group of women. There are many important benefits that result from minority female representation. These benefits exist even when there are only small number of these women in government. Further exploration of the factors that shape the representation of minority women can be insightful for future research as the

representation of these women has promising effects even when there are only a small number of them in positions.

Second, it will also be important to examine how social capital affects female employment in other sectors and occupations. In this study, I examine how social capital affects female employment in occupations in government and in health. However, social capital may affect the employment of women in other sectors and other occupations. Future research can explore this possibility by examining how stocks of overall, female, and race-group measures of social capital shape the presence of women as more specialized doctors, percent of women with high levels of education, female lawyers, and women in male-dominated sectors, such as STEM fields.

Lastly, it will be important to explore whether social capital indirectly affects employment related factors. Many of the effects of social capital in this study are negative. It may be the case that social capital has more promising *indirect* effects of female labor force participation. Though social capital negatively affects the number of women who attain certain careers, it may affect other aspects of the employment process in a manner that benefits female workers. For example, there is a gender pay gap between the salaries of men and women across states. It will be insightful for future research to examine whether an improved flow of information, greater connectedness, higher levels of engagement, and more interaction between members of a given society (all expected effects of social capital) help to reduce this type of social inequality. There is significant variation in the family and medical leave policies across states. It may be the case that the benefits of high stocks of social capital result in individuals being more aware of the challenges associated with parenthood and thus more supportive of generous policies in this area. States with high stocks of social capital may be more likely to enact less punitive criminal justice policies. A possible connection between social capital and public

policy also makes it important to examine how social capital shapes the public's opinion toward public policy. The amount of disparity that exists across policy issue areas makes identifying ways of improving outcomes of particular import and these areas are all ripe for exploration.

4 WHAT ABOUT *SUBSTANTIVE* REPRESENTATION? THE EFFECTS OF FEMALE BUREAUCRATIC REPRESENTATION AND SOCIAL CAPITAL ON US INEQUALITY

Abstract: In this paper, I study the relationship between female bureaucratic representation, social capital, and social inequality. According to the theory of representative bureaucracy, bureaucrats have a critical role in policy implementation and representative bureaucracies may result in the interests of traditionally under-represented groups being represented. In certain contexts, scholars argue that a representative bureaucracy can lead to improvements in organizational performance and policy outcomes of clients. I tie this theory to social capital research to argue that female bureaucrats *and* high stocks of social capital are key to reducing social inequality. Because these factors affect different aspects of health care access, information, and resources available to the public, they should be considered together in order to fully understand their impact.

This study focuses on how a more representative bureaucracy and high stocks of social capital affect preterm birth rates and infant mortality rates. I test my theory using an original dataset on health outcomes, female bureaucrats in health (physicians), and two newly developed measures of social capital from 2000-2012. The effects of a representative bureaucracy and social capital are highly contextual and applying the intersectionality theory reveals interesting differences in how these factors shape the health outcomes of white women, black women, and Latinas.

4.1 Introduction

One of the most troubling aspects of American democracy is the history of poor health outcomes. The US is one of the most advanced democracies in the world, but similar to other nations, many Americans have poor health outcomes. Poor health outcomes and health inequality are a longstanding issue in the US. Many Americans suffer from poor health and there are also major health differences across groups. This is particularly problematic as poor health and health disparity exists along many social identities, including an individual's gender and race/ethnicity. Health disparities of this nature - along gender and race (which is a social construction) - suggest that social factors may have an instrumental role in reducing the health inequality that negatively affects the lives of so many individuals.

The research question I examine in this study is, "Do a representative bureaucracy in health and high stocks of social capital improve health outcomes and reduce disparities that exist along race/ethnicity?". Given the persistence and seriousness of the consequences of poor health and health disparities, many scholars have studied avenues for improving health outcomes and reducing the disparity between the health outcomes of people who belong to different racial/ethnic groups or gender. There is a significant body of scholarly research that focuses on health outcomes as political scientists, public administration scholars, and public health scholars have all given some attention to the topic. Although commonly studied separately, bureaucrats and social capital are commonly put forth as having important influences on public health. This study makes several important deviations from this norm. First, I study the effects of bureaucrats *and* social capital. Second, I apply the intersectional approach (also known as intersectionality or the intersectionality theory). This approach argues that a comprehensive understanding of inequality requires consideration for the possible reinforcing effects of different social

identities. I apply the intersectional approach to compare the effects of a representative bureaucracy and social capital on women who belong to different racial/ethnic groups. Lastly, I contribute to the extant literature by examining how bureaucrats and social capital affect health outcomes *and* health disparity. Health outcomes in the US are generally poorer than the outcomes of other, comparable nations. Understanding the factors that improve the health outcomes is important, but there are major differences in the health status of individuals according social identities, such as gender and race. This makes the focus of this study - on health outcomes and health disparity - particularly important to our understanding of health and social equity.

The theory of representative bureaucracy suggests that a more passively representative public workforce helps to ensure the interests of members of various social groups are considered during bureaucratic decision-making processes. Various social identities have been explored though gender, race, and ethnicity are studied the most often given their salience, influence on policy attitudes, and policy outcomes. Contemporary scholars commonly focus on salient social identities and argue that a more representative bureaucracy yields many promising results, including improved organizational outcomes and performance (i.e. outcomes viewed as the interests of those groups). A few public administration scholars have applied this theory, often choosing to focus on racial /ethnic minority groups and obtaining findings that align with the expectations of the theory of representative bureaucracy (Grissom, Nicholson-Crotty and Nicholson-Crotty, 2009; Hinderer, 1993; Meier, Stewart and England, 1990; Sowa and Selden, 2003). There is also a unique type of representation that findings suggest occur along gender (Dolan, 2000; Keiser et al., 2002; Meier and Nicholson-Crotty, 2006; Wilkins and Keiser, 2004). Although promising, much of the literature on representative bureaucracies is in the educational context Grissom, Kern and Rodriguez (2015) and growing attention has been given to the criminal justice arena (Hong, 2017; Riccucci, Ryzin and Lavena, 2014;

Wilkins and Williams, 2008). There are only a few public administration studies that apply the theory of representative bureaucracy to the health care arena, but those that exist suggest that female clients desire female bureaucrats (Thielemann and Jr., 1996) and female bureaucrats have important influences on health policy and health policy outcomes (Gofen, 2014; Schneider and Jacoby, 1996).

There is an extensive line of social capital research that spans several decades and across disciplines, including seminal research in public administration and management (Andrews and Brewer, 2014), political science (Putnam, 1988), and sociology (Bourdieu, 1986; Coleman, 1990). Despite being extensively studied, the picture surrounding social capital and health is not perfectly clear. Several definitions exist, but social capital can be understood as the networks, norms, and relationships between people (Putnam, 1993) and the reciprocity and values that arise from these things (Schuller, Baron and Field, 2000). Recent social capital studies argue that high levels of social capital yield important benefits that result from the social networks (who people know) and norms of reciprocity (what people are willing to do for one another) that individuals in a community develop. Studies by public health scholars suggest there are wide-ranging positive effects from social capital as high stocks of social capital are associated with fewer problems accessing health care (Hendryx et al., 2002) and higher self health ratings and lower mortality rates (Kawachi, Kennedy and Glass, 1999). A common critique, however, is that most of the extant social capital research is gender and power blind.

As the American public becomes more diverse - particularly as the size of women of color grows - identifying avenues for reducing health inequality is of crucial importance. In 2012, minority women comprised approximately 36% of the female population and 18% of the entire US population (Kerby, 2012). Estimates project that soon the racial and ethnic groups that are currently considered “minorities” will become the “majority”

in American society (US Census Bureau, 2015). However, there are major differences in the health status of women who belong to different racial/ethnic groups. There is an extensive history of women of color suffering poorer health outcomes than their white counterpart. For example, the preterm birth rates and infant mortality rates of minority women are consistently worse than the rates for white women. The rates of diabetes, obesity, heart disease, and incidence and mortality rates for certain types of cancer are higher for women of color than white women (Kerby, 2012, 4). In 2013, heart disease was a leading cause of death for black women as 23.6% of these women died due to heart disease; on the other hand, heart disease led to death for only 22.6% of Hispanic women and 22.4% of white women (Center for Disease Control, 2013). This means that black women are more likely to die from heart disease than white women and Hispanic women. There are many examples of health disparities between women of color and white women. What is particularly problematic about these disparities is factors such as class and education, which are emphasized key factors for improving health outcomes, do not reduce the disparity between groups. For example, the infant mortality rates for educated black women is 11.5 per 1,000 live births and higher than White women with comparable levels of education (4.2 per 1,000 live births).

This article fills a gap in the existing literature by offering an innovative theory that argues female bureaucrats and high stocks of social capital are critical to improving health outcomes *and* reducing the disparity in health outcomes of women who belong to different racial/ethnic groups. I address the common critique that social capital research focusing on health is gender and power blind by using a measure of female social capital and applying the intersectional approach to study how gender and race impact the effects of female bureaucrats and social capital on health outcomes. I focus on how female bureaucrats and social capital indexes affect preterm birth rates and infant mortality rates, two commonly used measures of health in health research that US consistently ranks

poorly in. Many of the findings align with expectations - female bureaucrats *and* social capital improve the health outcomes of women in the US. The importance of applying the intersectionality theory is revealed as bureaucratic representation and social capital do not affect white women, black women, and Latinas the same.

4.2 Theory and Hypotheses

Social capital has been studied across scholarly disciplines for several decades. As a result, there are several definitions of the concept. Lyda Hanifan (also known as L.J. Hanifan) is credited with introducing social capital in his research on rural school community centers in 1916. Since then scholars in public administration and management (Andrews and Brewer, 2014), political science (Putnam, 1988), and sociology (Bourdieu, 1986; Coleman, 1990) have examined the concept. There have been many definitions of the concept since Hanifan's research which describes the concept as the "tangible assets that count for most in the daily lives of people..." (Hanifan, 1916). For example, the Organization for Economic Cooperation and Development (OECD) defines social capital as "networks together with shared norms, values, and understandings that facilitate co-operation within or among groups", noting that networks can refer to the links or connections between groups or individuals in a society. Robert Putnam, a political scientist known for his seminal social capital research, notes that the concept refers to the collective values of all of the social networks an individual has and the norms of reciprocity that develop from them.

There are multiple definitions and measurements of social capital because it is studied across scholarly disciplines. One general component of most social capital definitions is the importance of norms, networks, and trust in enabling people to act collectively. The definitions of social capital shape how scholars measure the concept;

given the number of definitions for social capital, it should not be surprising that the concept has been measured many different ways. For example, it is common for social capital measures to rely on items from surveys as proxies that are theoretically linked to the concept, such as an item that asks respondents about their connections to members of their community, volunteer work, their participation in civic organizations, their trust or interaction with others, as well as their sense of belonging. There are other scholars, including social scientists, who elect to measure social capital using an index of multiple measures that span across time (Putnam, 2000) and states (Hawes and Rocha, 2010; Hero, 2007).

Although many recognize the importance of Robert Putnam's social capital research, there is an extensive line of social capital research that dates back to the work of Durkheim, Bourdieu, and Coleman. Durkheim was one of the first scholars to explore the connection between social capital and health. His research posits suicide rates as a reflection of the level of social capital in a given area. Unlike most contemporary social capital research, Bourdieu did not view social capital as having largely beneficial effects. Bourdieu was a sociologist who defined the concept as the "sum of resources... that accrue to an individual or a group by virtue of possessing a durable network of more or less institutionalized relationships of mutual acquaintance and recognition" (Bourdieu and Wacquant, 1992)(118-119). His research highlights the complexity between social capital and social class as social capital can be an avenue for the dominant class in society to maintain their position in society. Coleman's version of social capital shifts social capital from a resource that an individual possesses to a resource that is *available* to individuals in a community and argues that social capital can manifest as improved access to information and can facilitate certain actions (Coleman, 1988)(104-105).

Given the popularity of Robert Putnam's social capital research, many public

health scholars have studied the effects of social capital. Scholars who have studied the health-related effects of social capital find that individuals who have high levels of trust for their neighbors (a measure of social capital) were less likely to develop major depression than people who expressed low levels of trust of their neighbors (Fujiwara and Kawachi, 2008), high stocks of social capital can result in the spreading of healthy norms (Kawachi, Kennedy and Glass, 1999) or knowledge about health (Kim, Subramanian and Kawachi, 2008), thus likely contributing to improved health outcomes. Higher stocks of social capital are also associated with lower death rates (total mortality) and fewer deaths due to heart disease (Lochner and Buka, 2003). Social capital also shapes how individuals perceive their health. Higher levels of social trust were associated with a lowered probability of self-reports of poor health (Subramanian, Kim and Kawachi, 2002), ranking high on measures of social capital reduce the odds of rating oneself as having fair/poor health (Kim and Kawachi, 2006), and people who trust their neighbors were twice as likely to rate their health as ‘good’ compared to people who did not express trust in their neighbors (Eriksson et al., 2010). The connection between social capital and self-rated health remains when endogeneity is accounted for (Schultz, O’Brien and Tadesse, 2008).

Irrespective of the definition or measure, the premise of social capital is that social networks have value. Social capital can be understood as “features of social organization, such as trust, norms, and networks that can... facilitate coordinated actions...” (Putnam, 1993)(167). The value of social capital is reflected in the development of trust, reciprocity, shared information, and cooperation among individuals in a community. Community networks, civic engagement, and reciprocity are important drivers of social capital that can also contribute to good health in members of the public (Kushner and Sterk, 2005). Because of this connection, I argue that the resources that result from high stocks of social will lead to improved policy outcomes, particularly in health. I focus

specifically on the effects of female social capital. Female social capital captures the networks and connections of women in a community and I expect this connectedness to yield many significant benefits on health outcomes. I expect some of the effects of high stocks of female social capital to include an increased flow of information, norms of reciprocity, collective action, norms of equality and notions of solidarity, and mobilization to address solutions for problems that exist in society. All of these effects should lead to improvements in policy outcomes of women, particularly in the area of health. Health is traditionally understood as a “women’s issue” and since gender is a salient social identity, I expect female social capital to increase communication between women about their health concerns, facilitate the information flow about any poor outcomes (or disparities) that exist, and will encourage the individuals providing health care services to behave in a way that improves the health outcomes of women, particularly since prenatal care is key to improving the outcomes I focus on in this study.

The intersectional approach argues that a comprehensive understanding of social inequality requires consideration for multiple, intersecting social identities. After all, individuals are comprised of more than one social identity - that is, gender is not the only social identity that will be important for understanding the experience of women. Since social inequality often exists along gender *and* race it is important to consider how these two social identities shape any effects of female social capital. Although I expect female social capital will be important in improving health outcomes, I expect differences in the effect of female social capital on women who belong to different racial / ethnic groups. Race and ethnicity are also both salient social identities that have important consequences on the lives of Americans. There is an extensive history of these factors significantly shaping the quality of life of individuals. In most social policy areas, the outcomes of racial and ethnic minorities are worse than those of whites. Although I do not focus on the effects of minority social capital in this project, I expect female social capital to improve

the health outcomes of minority women because of the salience of gender. However, I also expect that the race of a woman will influence how much she benefits from high stocks of social capital. Stated as my first hypothesis, I expect:

Hypothesis 1: I expect increases in the stock of female social capital will improve the health outcomes of women who belong to different racial and ethnic groups.

Because of the central role of bureaucrats in policy implementation, I also expect increased female bureaucratic representation to improve health outcomes. Public administration scholars have studied how the bureaucracy affects social inequality. There are two types of representation - passive representation, which refers to the diversity of a bureaucracy along demographic characteristics such as race and gender, and active representation, which refers to bureaucrats who advocate for members of the public who share a demographic feature with them (Mosher, 1968). The theory of representative bureaucracy connects these two types of representation by suggesting a more descriptively representative bureaucracy will result in active representation in the form of policy outcomes that benefit members of the public, particularly when bureaucrats have discretion (Marvel and Resh, 2015; Meier and Bohte, 2001; Sowa and Selden, 2003). There is support for the theory of representative bureaucracy as findings from existing research suggest there are benefits that result from diverse bureaucracies. A diverse bureaucracy shapes policy outputs (Selden, 1997) and leads to benefits across policy contexts, including the criminal justice system in the US (Meier and Nicholson-Crotty, 2006; Riccucci, Ryzin and Lavena, 2014) and the UK (Hong, 2017), welfare provision (Watkins-Hayes, 2011), and the education arena (Conner, 2016; Grissom, Nicholson-Crotty and Nicholson-Crotty, 2009; Keiser et al., 2002; Meier and England, 1989; Meier, Wrinkle and Polinard, 1999; Rocha and Hawes, 2009; Weiher, 2000).

Despite the poor health outcomes and severity of health disparities in the US, few scholars have studied how bureaucrats affect these disparities. Although the theory of representative bureaucracy has been tested in various policy contexts, it is often noted that the theory of representative bureaucracy is only holds in certain contexts and depends on the nature of the group being focused on (Watkins-Hayes, 2011). Some studies examine this theory in the health care context. Of the studies that exist concerning the connection between passive and active representation, many of the findings surrounding female bureaucrats have been mixed. The crux of the theory of representative bureaucracy is that there are promising effects from descriptive representation, or health care professionals sharing a salient social identity with their clients. There is some support for this key component of the theory as shared social identity improves patient satisfaction with health care programs and services (Gade and Wilkins, 2013). Research also highlights the importance of factors such as institutional context (Keiser et al., 2002) and discretion (Meier, 2009) as key to establishing a connection between passive representation and active representation in most policy contexts. There is support for the connection between passive and active representation for female bureaucrats, particularly in gendered policy areas that are tangentially related to health policy, such as child support Wilkins and Keiser (2004). Despite limited attention being given to the context of health care and the specific effects of health bureaucrats, scholars find a representative bureaucracy in education (Atkins and Wilkins, 2013; Zhu and Walker, 2013) and gender parity in state legislatures (Homan, 2017) have important effects on health outcomes.

Since bureaucrats are the frontline workers responsible for providing health care services, I expect increases in female health bureaucrats will improve the health outcomes of women across different racial and ethnic groups. Since the focus of this study is on health, I view physicians as the key bureaucrats in health. I argue that women who are pregnant will prefer receiving health care services from a female health care providers

and thus will be more likely to obtain health care services when there are more female physicians available to them. I expect female physicians will make the delivery of health care services more comfortable for their female clients; women who have a female physician will likely feel more comfortable asking questions, more likely to comply with the instructions they receive from these physicians, and female physicians will also be more understanding of the experiences of their female clients given the shared gender identity between two.

I also expect that female physicians will be particularly aware of their gender, which will help them better relate to and provide health care services to female patients. Though there are potentially promising effects from a representative bureaucracy, women are traditionally under-represented in most health-related bureaucratic positions. Despite comprising approximately 50% of the US population, women were 34% of the professionally active physicians in the US in 2017, but men were 66% of professionally active physicians. There is significant variation in the number of female physicians across states. There are several explanations for this trend of under-representation of women, including selection bias in deciding to pursue medical school, sexism and gender bias in attaining a residency once women are in medical school, pay gaps in the salary of male physicians and female physicians, and maintaining a healthy work-life balance. Gender clearly shapes the experiences of female physicians at every point of their careers. I expect this to result in female physicians having a heightened awareness of the needs of their female patients. If my expectations are correct, female physicians are key to improving the health outcomes of female patients, which means even a small increase in the number of female health bureaucrats has the potential to significantly shape the health outcomes of the women they provide services to. For all of these reasons, I expect increases in the bureaucratic representation of women in health to improve health outcomes of women. However, similar to theory motivating my expectations for H1a and H1b - I do not

expect that all women will equally benefit from the improved representation of female bureaucrats. Race *and* gender have important effects on the health outcomes of an individual. This suggests that minority women may be “doubly disadvantaged” - given that the health outcomes of women are generally poorer than men and racial and ethnic minorities generally suffer from poorer health than whites. The nature of the influence of gender and race on health leads me to expect differences in the beneficial effects of female health bureaucrats for white women and women of color. Stated as my second set of hypotheses, I expect:

Hypothesis 2a: I expect increases in female bureaucratic representation to improve the health outcomes of women who belong to different racial and ethnic groups.

Hypothesis 2b: I expect increases in female bureaucratic representation to benefit white women more than black women or Latinas.

I expect the interaction of high stocks of female social capital *and* increases in female bureaucratic representation to be key to reducing health disparity between white women and women of color. That is, I expect stronger benefits from a representative bureaucracy in areas with greater stocks of social capital. Scholars argue that improvement in the outcomes of one group may occur at the expense of another group. Attention has been given to whether that is an unexpected consequence of having a more representative bureaucracy (Meier, Wrinkle and Polinard, 1999) and some scholars have given attention to the topic I focus on in this study (Meier et al., 2001; Nielsen and Wolf, 2001). Though this has received limited attention, the possibility of differential effects between groups is important to consider - after all, it is not very beneficial if there are improvements in the outcomes of one group but the disparities between groups persists. Because of this, I include one additional set of analyses that explores how bureaucratic representation *and*

social capital affect health disparity.

Scholars have argued that a representative bureaucracy may benefit one group at the expense of another and similar consideration has been given to social capital. I expect female bureaucrats to improve the health outcomes of women across racial/ethnic groups. However, it is important to ensure that these expected benefits do not reduce the equity in outcomes of individuals who belong to different racial / ethnic groups. In their study on the effects of a more representative bureaucracy in the educational context, Meier, Wrinkle and Polinard (1999) find that improvements in the educational outcomes of minority students do not occur at the expense of white students; actually, the results of this research suggest that the outcomes of minority and white students improve as a result of a more representative bureaucracy. There have been calls for greater consideration of this possibility in social capital research. Although social capital has been heralded as yielding many important benefits that distribute evenly to different segments of society, many scholars have raised questions about whether or not that is actually the case. Rodney Hero was one of the first contemporary scholars to highlight the lack of attention to racial diversity in social capital research. His work and the work of others after him reveal differences in the effects of racial/ethnic diversity and high stocks of social capital on policy outcomes (Hawes and Rocha, 2010; Hero, 2000, 2003, 2007). That is, high stocks of social capital may disproportionately benefit whites in certain contexts (Meier, Favero and Compton, 2016) and may not always improve the outcomes of racial and ethnic minorities (Hawes, 2017).

Context is very important in shaping the effects of a representative bureaucracy and the effects of social capital. This makes it very important to consider how these factors interactively impact health disparity across different sub-groups in society. Although promising findings in the existing literature suggest a representative bureaucracy

does not benefit minorities by negatively affecting the outcomes of the whites, the possibility of a trade-off in the expected benefits of social capital is a bit blurrier. That is, in some contexts, high stocks of social capital benefit minorities and in other contexts whites disproportionately accrue the beneficial effects of high stocks of social capital. Given the extant literature and the importance of studying the dynamics surrounding health disparity, I explore how female bureaucratic representation and social capital affect health disparity. As stated earlier in this paper, I expect high stocks of social capital and female bureaucratic representation to reduce the impact of factors that negatively affect health outcomes and thus improve health outcomes. I expect the benefits of social capital to be reinforced in environments with an increased presence of female bureaucrats and that the interaction of these two factors will lead to a reduction in health disparity. Stated as my final hypotheses, I expect:

Hypothesis 3a: I expect increases in female bureaucratic representation and high stocks of female social capital to reduce health disparity between black women and white women.

Hypothesis 3b: I expect increases in female bureaucratic representation and high stocks of female social capital to reduce health disparity between Latinas and non-Hispanic white women.

4.3 Data and Methods

To test the hypotheses put forth here, I use originally collected data on the health status of white women, black women, and Latinas, female health bureaucrats, and female social capital across US states from 1999-2013. There are many important benefits from studying this period. For example, I am able to explore the relationship between female bureaucrats, social capital, and health disparity over time. Another promising aspect of

this period is that it includes time before and shortly after the implementation of key aspects of the Patient Protection and Affordable Care Act (henceforth, ACA), which was implemented with a primary goal of improving the health status of Americans. The data I use for this project also include important individual-level and state-level factors that affects an individual's health across these years. My data contain 750 entries from 2000-2012.

Dependent Variables

I measure health outcomes by focusing on preterm birth rates and infant mortality rates. These are two commonly used benchmarks of health and the US consistently ranks poorly in both indicators. In addition to poor outcomes, there is major racial and ethnic disparity along these indicators. A preterm birth occurs when a woman gives birth to a baby before completing 37 weeks of pregnancy, while infant mortality rates refer to the number of deaths of infants under one year old per 1,000 live births and is commonly used as a indicator of health across countries; I use this standard measurement. The US consistently ranks worse than other comparable, industrialized countries on these two indicators. Approximately 10% of babies born in the US are born prematurely and despite falling nearly 10% from 2007-2014, there has been a recent uptick in preterm births. According to a March of Dimes report and data from the Centers for Disease Control and Prevention, in 2017 more than 32 US states and the District of Columbia had preterm birth rates 9.3% and above. This is very troubling as preterm births make babies immediately more susceptible to life-threatening health problems than babies born after a full-term pregnancy.

The trend in the infant mortality rate in the US is different than the trend for preterm birth rates. Although infant mortality rates have been on the decline for the past 15 years, rates for the US are still not better than those in other developed countries

and there is significant variation across US states. According to the Centers for Disease Control, in 2017, US infant mortality rates were 5.9%. Considering preterm birth rates and infant mortality rates reveals a very troubling reality. Stated bleakly - this fact means that babies in the US are born with a higher risk of not surviving their first year of life than babies born in other rich countries.

There is also racial and ethnic disparity in the preterm birth rates of white women and women of color, with women of color often suffering from a higher rate of preterm births. High preterm birth rates and infant mortality rates exist for women of all racial/ethnic groups, but there are major disparities between the health outcomes of white women, black women, and Hispanic women. According to a 2017 March of Dimes report, the preterm birth rates of black women are 50% higher than the rate among white women and rates are higher for Hispanic women than white women. Wide racial and ethnic disparities also exist in infant mortality rates. The infant mortality rate for black women is 2.2 times the rate for non-Hispanic whites. According to the Center for Disease Control these births have dangerous, and sometimes lifelong, complications for children born prematurely. I measure preterm births using data from the Center for Disease Control and Prevention (CDC Wonder).

I present several tables with the average preterm birth rates for women across different racial/ethnic groups. Figure 9 presents the average preterm birth rate for white women. There is variation in these birth rates across states. While preterm births are the largest in states that include Mississippi, Louisiana, Kentucky, and Alabama, these rates are smallest in Connecticut, Vermont, California, and Alaska. I examine the health outcomes of black women and Latinas separately. Figure 10 presents the average preterm birth rates for black women in each state in 2012. Comparing Figure 10 to Figure 9 reveals some overlap in the states that rank highest and lowest in average preterm birth

rates for black women and white women. Focusing on Figure 10 reveals that Louisiana and Mississippi are still among the states with the highest average preterm birth rates, however black women in Montana, Vermont, and Wyoming also have high preterm birth rates. Figure 11 contains the average preterm birth rates for Latinas in 2012. There is variation in the preterm birth rates of these women across states. While the preterm birth rates for Latinas are highest in Vermont, West Virginia, and Alabama, these rates are lowest in California, Oregon, New Hampshire, and Alaska.

[Figure 9 About Here]

[Figure 10 About Here]

[Figure 11 About Here]

The second dependent variable is infant mortality rates. Infant mortality rates are also a widely used indicator of population health. These rates refer to the death of children under the age of one year and I measure infant mortality rates as the deaths of children under one year old per 1,000 live births using data from National Vital Statistics Reports. Although there have been reductions in recent years, infant mortality rates in the US are higher than those in comparable wealthy, sizable OECD countries, including Canada, the UK, and Switzerland. Given this trend, it is important to explore and identify avenues that will contribute to the improved health of women in the US.

I have generated several figures to show the average infant mortality rates of women who belong to different racial and ethnic groups. Figure 12 presents the infant mortality rates of white women in 2012. The rates are lowest in New Jersey and Hawaii, North Carolina and South Carolina rank near the median, and New Mexico and South Dakota are the states with the highest infant mortality rates for white women. The infant

mortality rates for black women are in Figure 13. Iowa had the highest rate in 2012, while black female infant mortality rates were the lowest in Massachusetts. The average infant mortality rates of black women fell between 12 to 13 for most states in 2012. Lastly, Figure 14 presents the average information for Latinas. The rate is higher than 35 for New York and Florida in 2012 and is its lowest - less than 5- for Washington, Utah, Wisconsin, Arkansas, Alabama, Nevada, New Hampshire, and Tennessee.

[Figure 12 About Here]

[Figure 13 About Here]

[Figure 14 About Here]

The third set of dependent variables capture the disparity in the preterm birth rates and infant mortality rates of white women and women of color. To examine the interactive effects of social capital and bureaucratic representation, I use a ratio of the preterm birth rates of 1) black women to white women, and 2) Latinas to white women; I also use a ratio to measure disparity in the infant mortality rates and white women are also the baseline category in that measure.

Table 18 presents the descriptive statistics for the dependent variables included in this study. The table lists information on preterm birth rates at the top of the table. Focusing on the mean reveals that average preterm birth rates are higher for black women than white women and Hispanic women. The average preterm birth rate for black women is 16.26, while the average for white women is 10.62 and the average for Hispanic women is 11.55. This means the average for black women is more than 6% higher than white women and around 5% more than the rate for Hispanic women. Although the minimum preterm birth rate is 1.16 for Latinas and 15.6 for white women, the minimum value for black

women is 5.35. Similarly, while the preterm birth rates for white women and Latinas are comparable, 16.93 and 16.7, respectively, the rates of black women are more than double (38.53) the rates of the other two groups of women.

A similar pattern exists in the infant mortality rates of white women, black women, and Latinas. The bottom half of Table 18 shows the infant mortality rates for white women, black women, and Hispanic women. The average infant mortality rate for white women (5.64) is lower than the average rate for black women (13.13) and Hispanic women (11.9);¹² the average infant mortality rates for black women is higher than rates for the other two groups of women. Infant mortality rates for Hispanic women are particularly noteworthy. There is more variation in the infant mortality rate for Hispanic women; these women have the lowest infant mortality rate (2.73) and the highest rates (53.67). There is a similar, wide range in the infant mortality rates of black women - the smallest infant mortality rate for black women is 5.33, while the largest rates for these women is 20.96. There is range is smaller for the infant mortality rates of white women as the minimum is 2.92 and the maximum is 8.81.

[Table 18 About Here]

Key Independent Variables

Female Bureaucrats

Since this study centers on health outcomes, I measure female bureaucrats as the percent of female physicians. Physicians are the frontline health care workers responsible for providing health care services. The overlap in private and public institutions results in significant complexity in distinguishing the public and private sector. The work of (Bozeman, 1988) and others notes the blurring of public and private sectors that has occurred and growing variation in our understanding of “publicness”. Because of this, I

¹²This contains information on Hispanic women who belong to all racial groups.

do not limit my focus on physicians in the public sector. Instead, I explore the effects of female health bureaucrats by concentrating on all female physicians in health - irrespective of their sector of work. This is not an uncommon approach as similar conceptualization has been used in other health related research (Zhu and Walker, 2013). These bureaucrats have direct interactions with female clients and discretion to carry out their work-related responsibilities, which the representative bureaucracy literature highlights as being critically important to passive representation connecting to active representation (Meier and Bohte, 2001; Riccucci, 2005). I measure female bureaucrats as the percent of female physicians in each state; that is, I divide the number of female physicians by the total number of physicians in each state. I include the percent of female physicians for all 50 states and DC. I develop this measure using annual data available via the American Medical Association (Physician Characteristics and Distribution Reports).

Table 19 presents the descriptive statistics for independent variables and control variables in this study. Descriptive statistics for the percent of female physicians are in the first row. The average percent of female physicians in the US is 26%. There is a significant range in this independent variable as the percent of female physicians ranges between 2.9 to 42.7. This means there are major differences in the percent of female physicians across states. In 2012, DC, Illinois, Maryland, Massachusetts, New York, and Rhode Island had more than 35% of female physicians. On the other hand, the states with the smallest percent of female physicians include Idaho, Mississippi, Utah, and Wyoming. These major variations in the percent of female physicians across states make the focus on this study appropriate.

[Table 19 About Here]

Social Capital Index

The second independent variable is a lagged measure of female social capital. I created this index using the Current Population Survey (CPS) Civic Engagement Supplement. The CPS is conducted by the US Census every November and I use the CPS Civic Engagement Supplement to validate a measure of female social capital. My social capital index includes Civic Engagement Survey items on charitable activity, community volunteerism, community and organizational involvement, engagement in public affairs, and informal sociability. The charitable activity items I use ask respondents whether they donate money, clothing, food, or engaged in fundraising activity and how often they engaged in these activities. Community volunteerism items include questions on whether respondents have helped to fix a problem in their community and the reason they abstained if they did not. Questions on community and organization life ask respondents about their civic organization participation, while the engagement in public affairs items center on broader aspects relating to political participation, such as whether the respondent is registered to vote, discusses politics with their friends, or voted in the last election. Lastly, I use items on informal sociability. Examples of these items include whether or not the respondent does favors for her/his neighbors. These items allow me to develop a measure that parallels the conceptualization of social capital in recent scholarly research.

Similar to the steps used to generate other, recent social capital measures, I aggregate individual-level responses to CPS items to the state (Hawes, Rocha and Meier, 2012) then I use factor analysis to estimate a state-level index for female social capital. This study includes female social capital, which captures the social connectedness and civic engagement of the women in a given state. Because these social capital measures are a standardized factor index, a value of “0” reflects states with average levels of social capital. Small values on this index reflect low levels of civic engagement and volunteerism, while larger values reflect greater connectedness, interaction between people, and civic engagement in a state.

Table 19 contains descriptive statistics on the female social capital index in the second row. The descriptive statistics show the range of the index includes significant variation. Figure 8 presents female social capital ranked by state in 2012. As the figure shows, the index is slightly right leaning. There is variation in the female social capital index across states. While states such as Utah, Vermont, Oregon, and Alaska are among the states with the higher stocks of female social capital, Louisiana, Nevada, Florida, Arkansas, and New York are the states with the lower stocks of this social capital. States with low stocks of female social capital are those where women are not as connective, civic and organizationally engaged, and have lower levels of informal sociability.

[Figure 8 About Here]

Control Variables

Although my theory centers on the effects of female bureaucrats and female social capital, there are many factors that shape health outcomes. Given the alternative explanations that are possible, I include several control variables in the empirical models in this study. Specifically, I account for several state-level factors that will likely have significant influence on health outcomes. Table 19 presents descriptive statistics on the control variables I include in this study. I include the ratio of female to male nurses as well as the percent of female legislators as controls in my empirical models. Legislators shape the type of bills that are developed and ultimately what becomes policy / law. There is a line of legislative research that suggests that female legislators have different policy priorities and behave differently than their male counterparts. Female legislators are more likely to put forth and support bills addressing “women issues” and since health care is traditionally understood as a “woman’s issue”, I expect increases in the presence of female state legislators leads to reductions in preterm birth rates and infant mortality rates. I include this control to account for the potential influence of female legislators. I also

include a variable that captures health care spending. The health care spending variable captures state per capita spending on health care (in dollars). On average, states spend \$6,107 per capita on health care. There is significant variable in health care spending across states as the minimum value this variable takes is \$646 and the highest per capita health care spending is \$50,484. Although spending is often expected to have important effects on health care outcomes, there are debates about whether or not that is actually the case. Despite the amount of money spent on health care, the US still suffers from very poor health outcomes.

I include controls for poverty rates, WIC participation, diversity index, and uninsured rates.¹³ I use data from the US Census Bureau to account for the poverty rate of each state. Table 19 shows that the average poverty rate is 13.29. Similar to many of the other variables I include, there is major variation in the poverty rates across US states. These rates range from 5.3 to 24.2 and there is a standard deviation of 3.4. I expect increased poverty rates to increase the number of women who have preterm births and the infant mortality rate. I also account for the uninsured rates in each state. The uninsured rate ranges from 4 to 25.8% and the average rate is nearly 14%. Having access to health care services is a major determinant of health status. Because of this, increases in uninsured rates should result in increased preterm birth rates and infant mortality rates. I also account for WIC Participation; I measure this variable as the number of WIC recipients in each state. The US Department of Agriculture Food and Nutrition Services describes the Special Supplement Nutrition Program for Women, Infants, and Children (WIC) as a program that provides federal grants to states and as involving many important provisions, including health care referrals and nutrition education for

¹³Due to high levels of correlation with other variables in the model, I can not include uninsured rates in the models presented in this paper. The results presented here contain the poverty rate and WIC participation variables. There are no significant changes in the findings when I replace these variables with the uninsured rates variable.

low-income pregnant women among other things. Being a WIC recipient should improve the health outcomes of women and because it targets *low*-income women participation in this program should reduce the disparity between white women and non-white women. As shown in Table 19, the average number of people who receive WIC benefits across states is 156,420. The take-up rate varies across states - the smallest value this variable takes is 2,261 and the largest level of participation is 1,472,347. Given the extensive literature on the relationship between social capital and racial diversity, I include a measure that captures the racial and ethnic diversity. Using this diversity index allows me to capture the relative population sizes of different racial / ethnic groups in each state. A value of “0” on this index reflects a perfectly homogeneous population while a diversity index value of “1” reflects a perfectly heterogeneous population. From 2000-2012, the value of the diversity index ranges from 0.06 to 0.80 from 2000-2012.

I also include a control for the composition of the legislature. I use data from the National Conference of State Legislatures to generate a measure of legislative control. I code this variable based on the political party with the majority in each state legislature. When Democrats comprise the majority, the legislative control variable is coded “1”, “0.5” when the legislature is split or if Independents are the majority, and “0” if Republicans are the majority party in the legislature. The descriptive statistics show that the average value of the legislative control variable is “0.52”. Since independents being a majority is rare, this average can be interpreted as Democrats and Republicans having comparable time as the majority across state legislatures from 2000-2012.

The behavior a woman chooses to engage in directly impacts her pregnancy and the health of the child she is carrying. I account for this by including behavior-related factors. First, I account for the percent of women who smoke in each state. I expect preterm birth rates and infant mortality rates to be higher in states with a larger percent of women

who smoke than in states with a smaller percent of smoking women. From 2000-2012, the average for the percent of female smokers was 19%, with a range of 7.7% to 30.5%.¹⁴

Model Specification

I develop several regression models to test the hypotheses put forth in this paper. The analysis focuses on the relationship between bureaucratic representation, social capital, health outcomes, and health disparities from 2000-2012. Given the measurement of the dependent variables in this study, I use an xt regression model to test my hypotheses; I time set my data using a “year” variable and specify “states” as the panels in this analysis.

4.4 Findings

In *H1* I explore the relationship between female social capital and health outcomes. Table 20 contains the results that relate to my first set of hypotheses. The findings for white women are in the first column, the findings for black women are in the second, and the last column contains the findings for Latinas. The results for female physicians are in the first row and suggest that an increase in female physicians only reduces the preterm birth rates for white women; there are no statistically significant effects on the preterm birth rates of women of color. Shared gender identity between health care provider and client is enough to improve the health of white women, but shared gender does not result in reduced preterm birth rates for black women and Latinas. The intersection of gender *and* race may be important to improving the health of these women. I expand on this as a promising possibility for future research in the concluding section of this paper. Results on

¹⁴As a robustness check, I also include a control that captures whether a woman receives late or no prenatal care. Prenatal care directly shapes the services women receive during their pregnancy, so receiving this care late in their pregnancy or not receiving this care at all can have dangerous consequences for one’s pregnancy. Including these behavior variables drastically reduces the number of observations in each model, but does not change the findings of my empirical models. This empirical analysis is included in the appendix.

the effects of female social capital are in the second row. These results show that increases in the stock of female social capital, reduce the preterm birth rates of all three groups of women. That is, states with highly connected, engaged, and interactive women are associated have smaller preterm birth rates white women, black women, and Latinas than states with women with lower stocks of female social capital. This improvement of health occurs for all women, regardless of racial and ethnic background, and this finding offers support for my expectations in *H1*.

Table 20 also presents the results for the second set of hypotheses. The second row of the table shows the effects of female bureaucrats in health. Interestingly, the table reveals significant differences in how female physicians affect the health outcomes of women who belong to different racial/ethnic groups. Focusing on the first column in Table 20 reveals that the percent of female physicians has a negative, statistically significant effect on the preterm birth rates of white women. This means as the percent of female health bureaucrats increases, there is a reduction in the preterm birth rates of white women. This aligns with the expected effects of bureaucratic representation according to the theory of representative bureaucracy. Though promising results exist for white women, the percent of female health bureaucrats does not have a statistically significant effect on the preterm birth rates for women of color. As shown in Table 20, the effect of female bureaucratic representation on preterm birth rates for black women and Latinas was not statistically significant, though it occurs in the expected direction. Taking the results for all three groups of women into consideration suggests that race may complicate the benefits associated with a representative bureaucracy because increases in female health bureaucrats improves the health outcomes of white women, not women of color. These findings offer partial support for *H2a* and full support for *H2b*.

[Table 20 About Here]

Several of the control variables presented in Table 20 have statistically significant effects. An increase in the percent of female legislators results in a statistically significant reduction in preterm birth rates. However, this effect exists for white women and Latinas, not black women. This is similar to the effects of female bureaucrats and suggests that shared gender identity may have limited effects on women of color. I offer a suggestion for how future research can address this limitation by considering the effects of gender *and* race in the conclusion section of this paper. Turning back to Table 20 reveals that participation in WIC, a social program aimed at providing health related resources to pregnant women and parents of young children, has a statistically significant effect in the expected direction for white women, but not for women of color. This finding - though seemingly confusing - aligns with existing research that highlights Medicaid and WIC programs can be implemented in a way that disproportionately benefits white women and their children (Copeland and Meier, 1987). The table also reveals that as the poverty rate and the percent of female smokers in a state increases, there is an increase in the preterm birth rates of white women and black women. Not surprisingly, this finding suggests that women in poorer states suffer from worse health outcomes than in states with more resources. Health care spending, the diversity index and legislative control variables do not have statistically significant effects on preterm birth rates.

Table 21 below presents the relationship between social capital on infant mortality rates. Focusing on the first row suggests that increases in female physicians reduces the infant mortality rates of white women. The second row suggests that female social capital has important effects on infant mortality rates. In these models, as the level of WIC participants in a state increases, there is a reduction in the infant mortality rates of white women, but an increase in the rates for Latinas; there is no statistically significant effect on black women. This aligns with previous studies on WIC / government spending and infant mortality rates. Although high stocks of female social capital reduce

infant mortality rates, these benefits do not affect the health outcomes of all women equally. Unlike the results for preterm birth rates, high stocks of female social capital only improves the health outcomes of white women and Latinas - the benefits do not occur in the infant mortality rates of black women, though the direction of the effect is in the expected direction. The female social capital index is negative and statistically significant in two of the three models; this offers additional, albeit mixed, support for *H1*.

[Table 20 About Here]

Table 21 also reveals promising effects for increased female bureaucratic representation in health. In *H2a* I hypothesize that increases in female bureaucratic representation in health will improve the health outcomes of women, but that there will be differences based on the race/ethnicity of the woman (*H2b*). The results in Table 21 suggests that a more descriptively representative bureaucracy yields promising results for white women and black women. While the results in Table 21 reveal that female social capital does not meaningfully affect the infant mortality rates, the findings in Table 21 suggest that bureaucrats are key to improving this health indicator for black women. Focusing on more than one health indicator reveals differences in the effect of female social capital and female bureaucratic representation. This also highlights the importance of considering more than one indicator in research that examines health outcomes as all outcomes are not affected uniformly. This finding offers mixed support for *H2a* and full support for *H2b*.

[Table 21 About Here]

Table 21 suggests that there are also important control variables in the model for infant mortality rates. The factors relating to income and finances significant affect this

measure of health. As the number of WIC participants increases across states, there is a reduction in the infant mortality rates of white women. However, increases in these participants actually *increases* the infant mortality rates and this control variable does not have any statistically significant effect on the infant mortality rates of black women. The positive relationship between WIC participation in a state and the infant mortality rates of Latinas suggests that these women are not attaining the benefits associated with this program. This may be due to differences in the take-up rates for WIC programs across states along race and ethnicity. Relatedly, a similar conclusion can be drawn based on the lack of significance this variable has on the infant mortality rates of black women. The benefits expected from participation in WIC are targeted to white women, not women of color. This is another finding that highlights the importance of applying the intersectional approach in scholarly research because this is another variable that affects women who belong to different racial / ethnic groups differently.

The final set of hypotheses focuses on the interactive effects of female social capital and female bureaucratic representation on health disparity. I test *H3a* and *H3b* using an interaction term and I explore the effects of that interaction term on disparity in preterm birth rates and disparity in infant mortality rates along race/ethnicity. The results for disparity in preterm birth rates are presented in Table 22. The interaction term is negative for both disparity models. The negative coefficient on this term suggests that the combined effect of female representation and female social capital is smaller than the sum of their separate effects. To further explore this result, I have generated predicted probability figures - in all of the figures, female representation held constant to examine the effects of low-level, moderate-level, and high-levels of female social capital. The results for the disparity of black women are presented in Figure 15 and Figure 16

[Table 22 About Here]

I generated two predicted probability figures to examine the effects of the interaction term I use to test *H3*. The disparity in preterm birth rates of black women compared to white women is presented in Figure 15 below. The figure shows that as the stock of female social capital increases, the disparity in the preterm birth rates of black women and white women decreases, when female representation is held at its mean. The preterm birth rates of black women are nearly three times the preterm birth rates of white women when the stock of social capital is low. However, as the stock of social capital increases to higher values, the disparity between the two sub-groups of women is around “0”. This offers support for my expectation that there are promising effects of the interaction of social capital and female representation on disparity in preterm birth rates. I am able to draw a similar conclusion for Latinas - the effects of female social capital and female representation on the disparity in preterm birth rates of Latinas and white women are presented in Figure 16 below. There is a statistically significant reduction in the disparity in preterm birth rates of Latinas and white women as the stock of female social capital increases. That is, highly networked, connected, and engaged women contribute to a reduction in disparity in preterm birth rates. This supports my argument that social capital and female representation likely impact different factors that contribute to reduced disparity in the health outcomes of women who belong to different racial/ethnic groups.

[Figure 15 About Here]

[Figure 16 About Here]

Table 23 presents the effects of the interaction of female social capital and bureaucratic representation on disparity in infant mortality rates. Focusing on the column for disparity between black women and white women shows that increases in the interaction of female social capital and female representation increases the disparity

in infant mortality rates of black women and white women. Increases in both female physicians and female social capital reduce the disparity. Some of the control variables are also statistically significant. WIC participation also reduces the disparity in the infant mortality rates of black women and white women. On the other hand, increases in married households and poverty rates in each state increase the disparity.

[Table 23 About Here]

To further examine the effects of the interaction of female representation and female social capital, I generated predicted probabilities. Figure 17 presents the predicted probabilities for the model for disparity in the infant mortality rates of black women and white women. The figure shows the effects of increases in the stock of social capital, while holding the level of female representation at its mean. When the stock of female social capital is low, the disparity between black women and white women is at its highest value. However, as the stock of female social capital increases the disparity in the infant mortality rates of these two sub-groups of women reduces. This offers support for *H3a* and is a promising finding that suggests social capital has beneficial effects on the *disparity* in the infant mortality rates of black women and white women.

[Figure 17 About Here]

The second column in Table 23 presents the disparity between Latinas and white women in infant mortality rates. In this model, the interaction of female social capital and female representation as well as the constituent terms fail to attain statistical significance. Figure 18 presents the predicted probabilities for this model. There is a slight increase in the disparity between Latinas and white women as the stock of female social capital increases from low to high; this slight increase is not statistically significant. This finding

does not support the expectations I put forth in *H3b* - as increases in the stock of female social capital does not impact the disparity in the infant mortality rates of Latinas and white women.

[Figure 18 About Here]

4.5 Conclusion

There is an extensive history of social inequality in the US. The seriousness of this issue has resulted in significant scholarly attention being given to avenues of improving policy outcomes and reducing disparities. The persistent and troubling nature of health inequality motivates me to focus on the health outcomes and disparity in health outcomes in this study. Recognizing the importance of reducing or at least mitigating health disparity, in this article, I argue increased female bureaucrats and high stocks of female social capital are critical to improved health outcomes. Aware that health outcomes vary for women along their race/ethnicity, I apply the intersectionality theory to study how female bureaucrats and social capital effect the health of white women, black women, and Latinas.

A representative bureaucracy will make it more likely for the interests of members of traditionally under-represented to be represented. I expect a more representative bureaucracy will make it more likely for members of traditionally under-represented groups to seek health care services, comply with instructions given by their health care provider, and attend follow-up appointments. As a result, I expect a more representative bureaucracy will be associated with improved health outcomes. High stocks of female social capital suggest that the women in a given community are very connected, interactive, and likely supportive of with one another; I expect women in areas with a high stock of female social capital to be more likely to receive information, support,

and suggestions concerning their health, and thus will be more likely to obtain health care services and to have improved health outcomes. I expect the interaction of female social capital and female bureaucratic representation to have important effects on health disparity.

The findings of this study support many of the expectations I put forth. As expected, high stocks of female social capital reduce the preterm birth rates and infant mortality rates of all three groups of women. Female bureaucratic representation also plays an important role in improving health outcomes - though most of the benefits are directed to white women and black women, not Latinas. This finding reflects the contextual nature of the benefits of a representative bureaucracy and the importance of using the intersectionality in this type of research. The findings from the second half of analysis suggest the interaction of bureaucratic representation and social capital is key to explaining disparity in infant mortality rates. Although these factors improve the preterm birth rates and infant mortality rates, the interaction of bureaucratic representation and social capital does not have significant effects on disparity in preterm birth rates. This result may be viewed as promising as this means the outcomes of white women are not improving at the expense of women of color and vice versa. On the other hand, this interaction has a meaningful effect on infant mortality rates, but the interaction affects the disparity black women face and the disparity Latinas face very differently.

All in all, the findings in this study suggest that preterm birth rates may be strongly shaped by factors that affect access to health care and the connectedness of individuals. These findings highlight the importance of intersectionality research as there are differences in the effects of female bureaucrats on the health outcomes of women who belong to different racial/ethnic groups. Common explanations for improving health outcomes do not have the same explanatory power for women of color as white women and

reveal the importance of more scholarly attention being given to this area. Overall, the findings of this study reveal that high stocks of overall and female social capital, as well as female bureaucrats (for the health outcomes of white women) are important in decreasing preterm birth rates and infant mortality rates.

This study offers insight on possible mechanisms for addressing problems that plague many Americans and the findings of this study point to several promising directions for future research. First, future research can explore a wider range of health indicators. This study focuses on preterm birth rates and infant mortality rates. There are other health outcomes that can be considered including HIV / AIDS diagnoses, deaths due to preventable diseases, and the average life span of members of different groups among others. It will be insightful to determine whether the beneficial effects of social capital hold across health policy outcomes / indicators and if female health bureaucrats have a stronger influence on some health indicators than others.

A second, and related direction for future research is greater attention to the factors that explain *disparities*. The differences in the explanatory power of bureaucratic representation and social capital in the health outcome models and the health disparity models highlights a need for greater attention on disparities. Most of the existing literature on social capital and the literature that examines the theory of the representative bureaucracy focuses on how social capital or representation affect policy outcomes of a specific group. This may result in conclusions being drawn that do not fully reflect the effects of social capital or bureaucratic representation. This study and others like it that explore disparities or differences between groups offer important insight that research that solely focuses on the outcomes of groups may overlook. Our scholarly understanding would greatly benefit from giving greater attention to how social capital, bureaucratic representation, and other factors affect the disparities between groups as well

as how these troubling disparities can be reduced.

Future research would also benefit from sgreater attention and use of the intersectionality theory. In this study, I apply the intersectional approach and focus on the health outcomes of women who belong to different racial/ethnic groups. It is important for future research to continue considering how gender *and* race affect factors that shape the health statuses of individuals in the US. Relatedly, it will be insightful for future research to apply to bureaucrats. Minority physicians are more likely to provide care to under-served populations (Xu et al., 1997) and more likely to locate / practice in places that have a need for physicians from their racial/ethnic group (Brown, Liu and Scheffler, 2009). In light of this, it will be interesting to apply the intersectionality theory and explore how the interaction of race and gender shapes the behavior of minority female physicians as well as their effects on various health outcomes and health disparity across health outcomes.

5 CONCLUSION: DIRECTIONS FOR FUTURE RESEARCH

This dissertation focuses on social inequality in health. Poor health outcomes and health disparity across different social identities are not a new phenomenon in the US. Compared to other countries, there is a history of Americans suffering from poorer health outcomes than individuals in countries who spend far less than the US on health and health care related services. The growing relevance of social identities in shaping means the quality of life an individual lives can increasingly be predicted by one's gender and race. This increased relevance of social identities undermines the fundamental tenets of a democracy and has resulted in a significant amount of scholarly attention centering on health outcomes and health disparities.

Given the persistence of social inequality in health, I use this dissertation to examine how two factors - social capital and female representation - affect health. A major contribution of this project is that it connects two previously disjointed lines of research in an effort to examine the health-related effects of social capital and representation. I argue that social capital and female representation should be studied in combination with one another to better inform our understanding of social inequality in health. The research question that motivates this dissertation is: "Do social capital and female representation improve health outcomes and reduce health disparity?". I use each of the three studies in this dissertation to approach this question from related yet different angles.

In the first empirical paper, "All Women *Not* Affected Equally: Social Capital and Minority Female Representation in American States", I examine how the stocks of different social capital indexes affect minority female representation in state legislatures in 2012.

In the second empirical paper, “Occupational Hierarchy vs. Employment Sector: A Comparison of Social Capital Effects on Female Representation” I explore the effects of social capital on female representation, more broadly. Because female state legislators are not the only women that can potentially influence health outcomes, I also study how social capital affects the representation of women in government and in health. I find that female social capital has important effects on female bureaucratic representation in health.

The focus of the last empirical paper, “What about *Substantive* Representation? The Effects of Female Bureaucratic Representation and Social Capital on US Inequality”, is determining how female representation affects health outcomes and health inequality. This final study ties the project together by exploring how social capital and bureaucratic representation affect health outcomes and health inequality. This dissertation yields many important insights on the nature of social inequality in health in the US and offers many promising directions for future research.

Extension 1: Expanding Data on Female Political Representation

One promising avenue for extending this dissertation project is expanding the data on female political representation. The first study in this project examines how the stock of social capital affects minority female representation in state legislatures. Most research on determinants of descriptive representation focus on representation along gender *or* race or solely center attention on the winners of elections. I make two important contributions by accounting for the gender *and* race of every candidate in the general elections for state legislature in 2012, not just the winners of these elections.

While this is an insightful study, the analysis presented here can be extended in two promising ways. First, it will be important to examine the effects of social capital on female representation over time. The study in this dissertation focuses on state legislative elections in 2012. 2012 was an important year to explore because the 2012 elections

were the first following the redistricting that occurred as a result of the 2010 Census. nonetheless, future research can explore whether the patterns of this relationship exist when a longer period of time is examined. Second, future extensions can account for the emergence and electoral success of minority female candidates in primary elections for state legislatures. The first study of this dissertation focuses on the 2012 general elections for state legislature elections. Focusing on these elections are important as these are the elections who determine which candidate will be elected to political office. Since many of the effects of social capital are highly contextual, it could be insightful to study the effects of social capital on minority female representation on primary elections. Third, future extensions can focus on elections for Congress. State legislators have important effects on the public and on the policymaking process, but most scholarly research focuses on representation on Congress. One of the primary reasons this occurs is that data on representatives in Congress is widely available, while data on state legislatures is much more sparse and requires significant time and effort to collect. Extensions of this project can explore the relationship between stocks of social capital and minority female representation at the congressional level.

Extension 2: Considering Minority Female Health Bureaucrats

A possible extension of this project would examining the effects of minority female health bureaucrats. Although, I examine how social capital affects the descriptive representation of these women in 2012 state legislatures, the second and third studies in this dissertation focus on female bureaucratic representation more generally. Understanding the determinants and the effect of female bureaucratic representation on the health status of women in the public is an crucially important *first* step, but future research can build on this dissertation project by focusing on minority female bureaucratic representation. In the second chapter, I examine the relationship between social capital

and female representation in government and in health. This study includes consideration for how social capital affects the representation of women of color in street-level positions in government. Relatedly, the third study in this dissertation examines how female bureaucrats and female state legislatures affect actual health outcomes and health disparity of minority women. I could not focus on these women and explore dynamics between social capital, minority female representation, and social inequality in health in this project due to a lack of state-level data from this time period. This data may be publicly available in the future and it will be insightful to extend this dissertation by examining how social capital affects the representation of *minority* women in government and in health and how the presence of minority female physicians affects the health outcomes and health disparity faced by minority women in the public.

Extension 3: Distinguishing Physicians by Public / Private Sector

Thirdly, I can explore whether the divide between public and private sector of physicians. Bozeman (1988) has noted the increased difficulty of distinguishing public and private health sectors. As a result many scholars who study the effects of physicians do not distinguish physicians who work in the public sector from those employed in the private sector. Some public administration scholars and scholars more generally may argue that the decision to view physicians as bureaucrats - without a distinction for their sector of employment - is problematic. Data on the sector of employment of female physicians are available from 2000-2003. As a robustness check, I examined whether using this measure had any meaningful changes to the results presented in this dissertation.¹⁵

Scholars concerned about the accounting for the sector of female physicians when studying

¹⁵This alternative measure accounts for the sector of employment of female physicians, but the data to develop this measure is only available for three years. While including this alternative measure in my empirical analysis, does not change the direction of the effects of social capital (the second study in this dissertation) or the affect of female bureaucratic representation on health outcomes and health disparity (the third study in this dissertation). However, the effects of this variable are not statistically significant as there are only a few observations of this variable (less than 200 observations).

the effects of health “bureaucrats” can extend the focus of this dissertation by making this distinction.

Extension 4: Studying a broader range of outcomes

Lastly, extensions of this dissertation can focus on different outcomes. The first two studies in this dissertation focus on how social capital affects the representation of women in positions that are traditionally associated with improving the health of the public and the third study examines whether these factors and social capital effect health outcomes and health disparity. I apply the intersectional approach, which highlights that different social identities may reinforce the level of social inequality an individual faces, in every study included in this dissertation. This approach is traditionally applied by focusing on social identities that are associated with lack of power or oppression - such as gender and race. Focusing on preterm birth rates and infant mortality rates allows me to account for the potential influences of gender and race on the health of women in the US and results in findings that reveal major differences in how factors affect the health of women who belong to different racial / ethnic groups. There are important benefits from the focus of this dissertation, including that studying these outcomes allows me to examine the founding principles of the intersectional approach and identify avenues for improving the health of members of some of the most vulnerable groups in America. Extensions of this project can focus on a broader range of health indicators. For example, insight on how social capital affects life expectancy, deaths due to preventable causes, and the mortality rates associated with various diseases would be insightful to the broader effects of social capital and will improve scholarly understanding of whether social capital has different effects on the outcomes of men and women who belong to different racial and ethnic groups. As mentioned earlier in this dissertation, social inequality exists across policy issue areas. This also makes examining the effects of social capital on outcomes and disparities

in other public policy areas promising.

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Table 1: Descriptive Statistics of Dependent Variables in Chapter 2

Variable	Mean	Std. Dev.	Min	Max
<i>Electoral Outcomes</i>				
White female candidate running	0.1835	0.3871	0	1
White female candidate winning	0.1069	0.3089	0	1
Minority woman running	0.0642	0.2452	0	1
Minority woman winning	0.0413	0.1990	0	1
– Black female candidate running	0.0194	0.1378	0	1
– Black female candidate winning	0.0150	0.1216	0	1
– Latina candidate running	0.0345	0.1824	0	1
– Latina candidate winning	0.0203	0.1411	0	1

Table 2: Descriptive Statistics of Independent and Control Variables in Chapter 2

Variable	Mean	Std. Dev.	Min	Max
<i>Social Capital</i>				
Overall social capital	-0.1851	0.8248	-1.7056	2.2846
Female social capital	0.5112	1.0362	-1.3212	2.8732
Black social capital	-1.3063	1.1000	-3.7698	3.2638
Latino social capital	-2.2068	1.7086	-3.9604	4.3641
<i>Macro-Level Factors</i>				
% female legislators in the previous legislature	25.9090	8.8242	0	56.9
% minority legislators in the previous legislature	10.0470	10.6237	0	49
Liberal citizen ideology	49.7803	14.7200	13.4824	87.9141
Female population	50.6622	0.6246	48.1	51.6556
County-level poverty rate	14.7355	5.0716	4	63.3
Single-Member districts	0.8903	0.3125	0	1
Term limit	0.2863	0.4521	0	1
Total seats	120.7356	90.36288	20	400
Average Legislator Salary	29.1286	27.0578	0	97.1970
<i>Election-Related Factors</i>				
Number of candidates	2.3330	1.8409	1	22
Open-seat election	0.3050	0.4604	0	1
Vote margins (percent)	38.7798	35.0072	0	100
<i>Individual-Level Factors</i>				
Female Incumbent	0.1054	0.3071	0	1
Minority Incumbent	0.089	0.2848	0	1
Age	52.6285	12.9578	19	96
Campaign contribution	8.782	22.82	-.0785	65.4040
Experience	0.7330	0.4424	0	1
Party affiliation	1.9826	0.9725	0	3

Table 3: Effects of Overall Social Capital on Female Candidate Emergence, by Race

Variables	White Female		Minority Female	
	Running Coeff.	(SE)	Running Coeff.	(SE)
Overall Social Capital	0.0921**	(0.0224)	-0.0732*	(0.0357)
<i>Macro-level Factors</i>				
% Female Legislator	0.0064**	(0.0021)	0.0143**	(0.0026)
% Minority Legislator	————	————	0.0068**	(0.0026)
Majority Minority District	-0.7087**	(0.0814)	0.7066**	(0.0640)
Female Population	-0.0404	(0.0333)	-0.0709	(0.0441)
Liberal Citizen Ideology	0.0027*	(0.0013)	-0.0028	(0.0019)
County-level Poverty Rates	-0.0082*	(0.0040)	0.0036	(0.0047)
<i>Election-level Factors</i>				
Single Member Districts	0.0932	(0.0654)	0.0412	(0.1082)
Number of Candidates	-0.0078	(0.0082)	0.0133	(0.0214)
Open-seat Election	-0.0477	(0.0343)	-0.0089	(0.0491)
Term Limit	0.1072**	(0.0366)	-0.0871 [†]	(0.0505)
Average Legislator Salary	-0.0009	(0.0007)	-0.0003**	(0.0009)
Total Seats	0.0005*	(0.0002)	-0.0009**	(0.0004)
Vote Margins	-0.0009 [†]	(0.0005)	0.0011	(0.0007)
<i>Candidate-level Factors</i>				
Party Affiliation (R - D)	0.1696**	(0.0162)	0.2400**	(0.0240)
Experience	-0.0233	(0.0370)	0.2400**	(0.0240)
Age	0.0105**	(0.0012)	-0.0028	(0.0017)
Campaign Contribution	0.0009	(0.008)	0.0001	(0.0001)
N	9,530		9,530	

Note: Robust standard errors in parentheses. ** p<0.01, * p<0.05, † p<0.1.

Table 4: Effects of Overall Social Capital on Success of Female Candidates, by Race

Variables	White Female		Minority Female	
	Winning Coeff.	(SE)	Winning Coeff.	(SE)
Overall Social Capital	0.0798**	(0.0247)	-0.0781 [†]	(0.0443)
<i>Macro-level Factors</i>				
% Female Legislator	0.0071**	(0.0022)	0.0114**	(0.0032)
% Minority Legislator	—	—	0.0069*	(0.0030)
Majority Minority District	-0.7241**	(0.0918)	0.7351**	(0.0698)
Female Population	-0.0428	(0.0358)	-0.0591	(0.0520)
Liberal Citizen Ideology	0.0051**	(0.0014)	-0.0018	(0.0022)
County-level Poverty Rates	-0.0066	(0.0046)	-0.0064	(0.0054)
<i>Election-level Factors</i>				
Single Member Districts	-0.0218	(0.0716)	-0.0178	(0.1222)
Number of Candidates	-0.0172	(0.0117)	0.0271	(0.0229)
Open-seat Election	-0.0303	(0.0381)	0.0766	(0.0580)
Term Limit	0.0888*	(0.0406)	-0.0414	(0.0601)
Average Legislator Salary	-0.0002*	(0.00008)	0.0001	(0.0001)
Total Seats	0.0008**	(0.0002)	-0.0004	(0.0004)
Vote Margins	0.0036**	(0.0002)	0.0046**	(0.0008)
<i>Candidate-level Factors</i>				
Party Affiliation (R - D)	0.1316**	(0.0192)	0.3018**	(0.0304)
Experience	0.4109**	(0.0476)	0.3105**	(0.0687)
Age	0.0088**	(0.0014)	-0.0047*	(0.0020)
Campaign Contribution	0.0002*	(0.0006)	0.0002*	(0.0008)
N	9,626		9,626	

Note: Robust standard errors in parentheses. ** p<0.01, * p<0.05, † p<0.1.

Table 5: Effects of Female Social Capital on Emergence of Female Candidates, by Race

Variables	White Female		Minority Female	
	Running Coeff.	(SE)	Running Coeff.	(SE)
Female Social Capital	0.0809**	(0.0192)	-0.0859**	(0.0307)
<i>Macro-level Factors</i>				
% Female legislator	0.0071**	(0.0021)	0.0140**	(0.0026)
% Minority Legislator	————	————	0.0057*	(0.0027)
Majority Minority District	-0.7030**	(0.0815)	0.7017**	(0.0640)
Female Population	-0.0215	(0.03439)	-0.0918*	(0.0456)
Liberal Citizen Ideology	0.0014	(0.0013)	-0.0020	(0.0020)
County-level Poverty Rates	-0.0079*	(0.0040)	0.0033	(0.0048)
<i>Election-level Factors</i>				
Single Member Districts	0.1046	(0.0655)	0.0413	(0.1073)
Number of Candidates	-0.0078	(0.0081)	0.0131	(0.0214)
Open Seat Election	-0.0484	(0.0343)	-0.0099	(0.0490)
Term Limit	0.0962**	(0.03622)	-0.0849†	(0.0503)
Average Legislator Salary	-0.0004	(0.0007)	0.00002*	(0.00009)
Total Seats	-0.0004†	(0.0002)	-0.0009*	(0.0004)
Vote Margins	-0.0009†	(0.0005)	0.0011	(0.0007)
<i>Candidate-level Factors</i>				
Party Affiliation (R - D)	0.1695**	(0.0162)	0.2404**	(0.0007)
Experience	-0.0237	(0.0370)	-0.0477	(0.0522)
Age	0.0104**	(0.0012)	-0.0027	(0.0017)
Campaign Contribution	0.0009	(0.0008)	0.0001	(0.0001)
N	9,530			

Note: Robust standard errors in parentheses. ** p<0.01, * p<0.05, † p<0.1.

Table 6: Effects of Female Social Capital on Success of Female Candidates, by Race

Variables	White Female		Minority Female	
	Winning Coeff.	(SE)	Winning Coeff.	(SE)
Female Social Capital	0.0708**	(0.0211)	-0.0936*	(0.0376)
<i>Macro-level Factors</i>				
% Female Legislators	0.0077**	(0.0022)	0.0112**	(0.0031)
% Minority Legislator	————	————	0.0056 [†]	(0.0031)
Majority Minority District	-0.7192**	(0.0920)	0.7290**	(0.0698)
Female population	-0.0255	(0.0370)	-0.0813	(0.0538)
Liberal citizen ideology	0.0040**	(0.0014)	-0.0010	(0.0023)
County-level Poverty Rates	-0.0063	(0.0046)	-0.0068	(0.0054)
<i>Election-level Factors</i>				
Single-member districts	-0.0113	(0.0717)	-0.0215	(0.1212)
Number of candidates	-0.0171	(0.0116)	0.0267	(0.0229)
Open-seat election	-0.0309	(0.0381)	0.0757	(0.0580)
Term limit	0.0795*	(0.0401)	-0.0389	(0.0598)
Average Legislator Salary	0.0001*	(0.00008)	0.00007	(0.0001)
Total seats	0.0007**	(0.0002)	-0.0004	(0.0004)
Vote margins	0.0035**	(0.0006)	0.0046**	(0.0008)
<i>Candidate-level Factors</i>				
Party affiliation (R - D)	0.1316**	(0.0192)	0.3022**	(0.0304)
Experience	0.4108**	(0.0477)	0.3103**	(0.0687)
Age	0.0087**	(0.0014)	-0.0046*	(0.0020)
Campaign contribution	0.0002*	(0.0006)	0.00002*	(0.000008)
N	9,626		9,626	

Note: Robust standard errors in parentheses. ** p<0.01, * p<0.05, † p<0.1.

Table 7: Effects of White SC on Emergence and Success of White Female Candidates

Variables	White Woman Winning Coeff.	(SE)		
White Social Capital	0.0868**	(0.0222)	0.07322**	(0.0246)
<i>Macro-level Factors</i>				
% Female legislator	0.0071**	(0.0051)	0.0077**	(0.0022)
Majority Minority District	-0.7153**	(0.0812)	-0.7299**	(0.0917)
Female population	-0.0202	(0.0350)	-0.0265	(0.0378)
Liberal citizen ideology	0.0015	(0.0013)	0.0041**	(0.0014)
County-level Poverty Rates	-0.0078 [†]	(0.0013)	-0.0063	(0.0046)
<i>Election-level Factors</i>				
Single-member districts	0.1036	(0.0654)	-0.0125	(0.0715)
Number of candidates	-0.0076	(0.0082)	-0.0171	(0.0116)
Open-seat election	-0.0484	(0.0343)	-0.0307	(0.0381)
Term limit	0.1006**	(0.0364)	0.828*	(0.0403)
Average Legislator Salary	-0.0006	(0.0007)	0.0001*	(0.0008)
Total seats	0.0005*	(0.0002)	0.0007**	(0.0002)
Vote margins	-0.0010 [†]	(0.0005)	0.0035**	(0.0006)
<i>Candidate-level Factors</i>				
Party affiliation (R - D)	0.1700**	(0.0162)	0.1321**	(0.0192)
Experience	-0.0232	(0.03701)	0.4112**	(0.0476)
Age	0.0104**	(0.0012)	0.0087**	(0.0014)
Campaign contribution	0.0007	(0.0008)	0.0002*	(0.0006)
N	9,530		9,626	

Note: Robust standard errors in parentheses. ** p<0.01, * p<0.05, † p<0.1.

Table 8: Effects of Black SC on Emergence and Success of Black Female Candidates

Variables	Black Woman		Black Woman	
	Running Coeff.	(SE)	Winning Coeff.	(SE)
Black Social Capital	0.0791 [†]	(0.0424)	0.0643	(0.0602)
<i>Macro-level Factors</i>				
% Female legislator	0.0106 [†]	(0.0057)	0.0134*	(0.0065)
% Minority legislator	0.0172**	(0.0046)	0.0153**	(0.0053)
Majority Minority District	0.8644**	(0.1001)	0.8751**	(0.1127)
Female population	0.2153 [†]	(0.1163)	0.2278 [†]	(0.1266)
Liberal citizen ideology	-0.0173**	(0.0036)	-0.0227**	(0.0040)
County-level Poverty Rates	-0.0081	(0.0076)	-0.0153 [†]	(0.0090)
<i>Election-level Factors</i>				
Single-member districts	0.1767	(0.2537)	0.1918	(0.2992)
Number of candidates	0.0281	(0.0248)	0.0394	(0.0265)
Open-seat election	-0.0440	(0.0928)	0.1590	(0.1054)
Term limit	0.0077	(0.1010)	0.0093	(0.1237)
Average Legislator Salary	0.0003 [†]	(0.0002)	0.0002	(0.0008)
Total seats	-0.0001	(0.0007)	0.0005	(0.0007)
Vote margins	0.0048**	(0.0011)	0.0088**	(0.0014)
<i>Candidate-level Factors</i>				
Party affiliation	0.3941**	(0.0506)	0.6992**	(0.1037)
Experience	0.1080	(0.0938)	0.6277**	(0.1460)
Age	0.0027	(0.0029)	0.0040	(0.0036)
Campaign contribution	0.0008**	(0.0003)	0.0003*	(0.0002)
N	9,530		9,392	

Note: Robust standard errors in parentheses. ** p<0.01, * p<0.05, † p<0.1.

Table 9: Effects of Latino SC on Emergence and Success of Latina Candidates

Variables	Latina Running Coeff.	(SE)	Latina Winning Coeff.	(SE)
Latino Social Capital	-0.0739**	(0.0258)	-0.1135**	(0.0333)
<i>Macro-level Factors</i>				
% Female legislator	0.0106**	(0.0031)	0.0134*	(0.0038)
% Minority legislator	0.0094**	(0.0026)	0.0112**	(0.0032)
Majority Minority District	0.2795**	(0.0805)	0.2716**	(0.0899)
Female population	-0.0665	(0.0528)	-0.0780	(0.0649)
Liberal citizen ideology	0.0044	(0.0029)	0.0084*	(0.0034)
County-level Poverty Rates	0.0096†	(0.0054)	-0.0033	(0.0064)
<i>Election-level Factors</i>				
Single-member districts	-0.0722	(0.1256)	-0.1797	(0.1424)
Number of candidates	0.0179	(0.0234)	0.0281	(0.0237)
Open-seat election	-0.0543	(0.0578)	0.0289	(0.0690)
Term limit	0.0077	(0.0599)	0.1180	(0.0746)
Average Legislator Salary	0.0001	(0.0001)	0.0002	(0.0002)
Total seats	-0.0001	(0.0004)	-0.0006	(0.0005)
Vote margins	-0.0009	(0.0009)	0.0023*	(0.0010)
<i>Candidate-level Factors</i>				
Party affiliation (R - D)	0.1554**	(0.0282)	0.1778**	(0.0343)
Experience	-0.1050†	(0.0605)	0.1897*	(0.0773)
Age	-0.0035†	(0.0021)	-0.0071**	(0.0024)
Campaign contribution	0.0001	(0.0008)	0.0002*	(0.0008)
N	9,523		9,626	

Note: Robust standard errors in parentheses. ** p<0.01, * p<0.05, † p<0.1.

Figure 1: Effects of Overall Social Capital on Female Candidate Emergence by Race

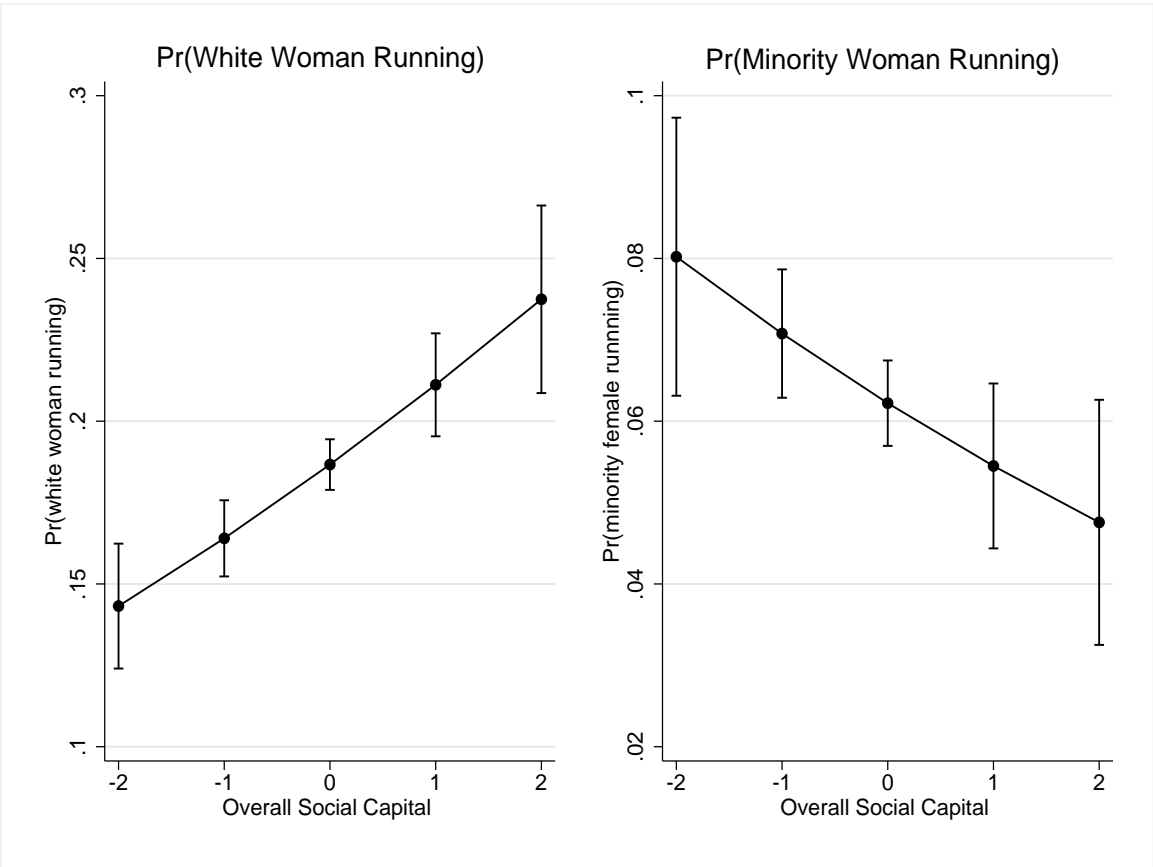


Figure 2: Effects of Overall Social Capital on Female Candidate Success by Race

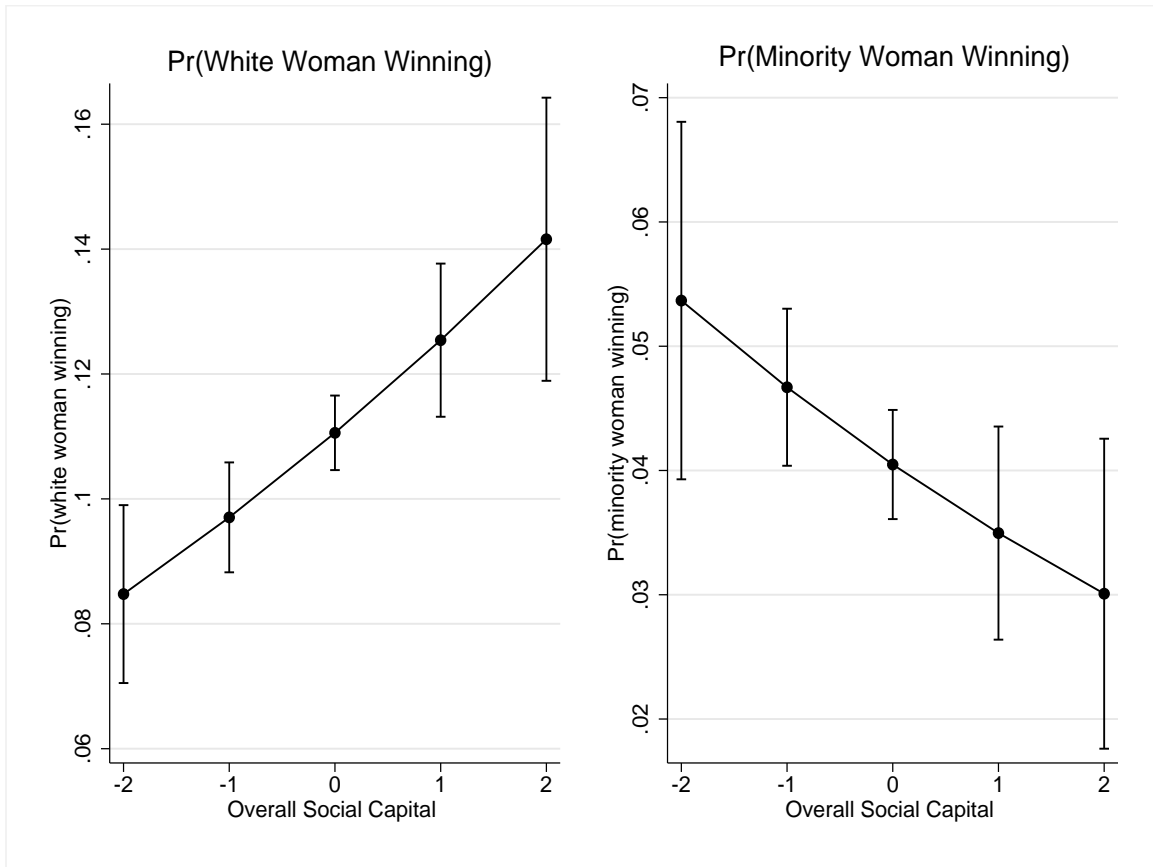


Figure 3: Effects of Female Social Capital on Female Candidate Emergence by Race

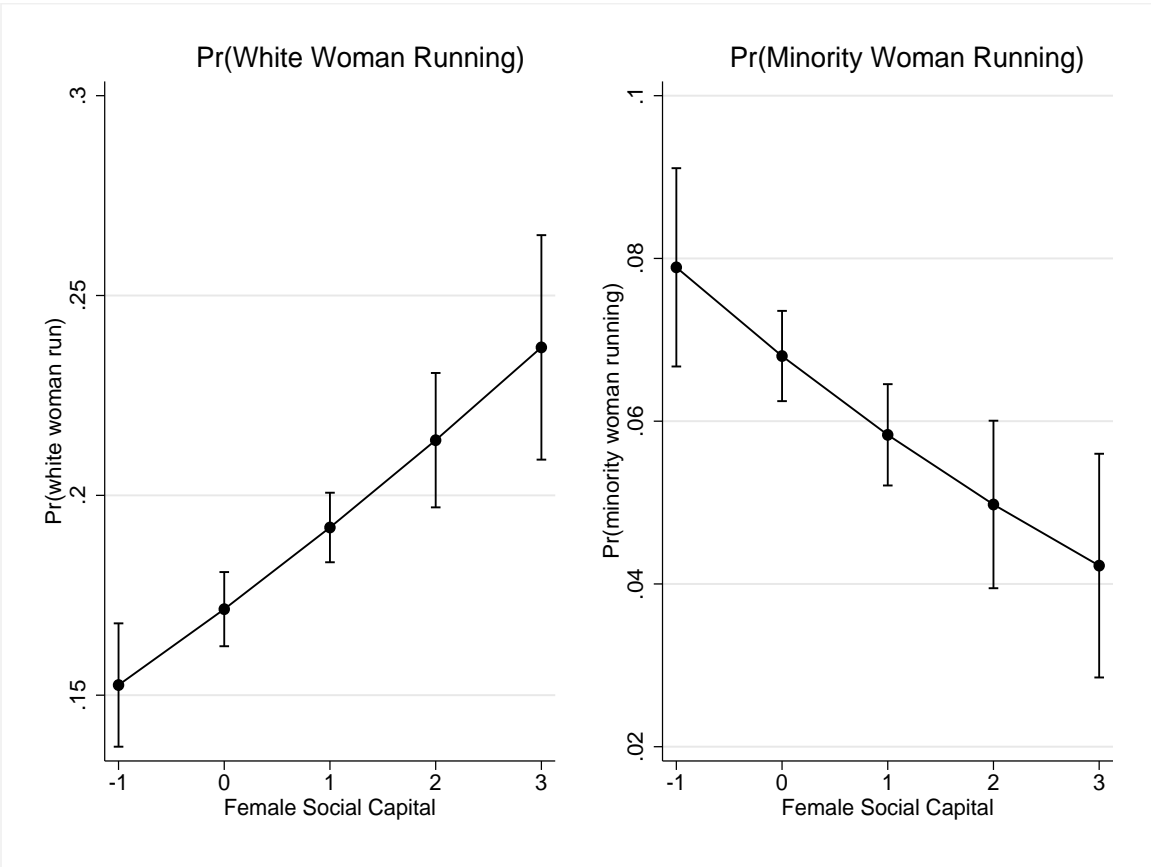


Figure 4: Effects of Female Social Capital on Female Candidate Success by Race

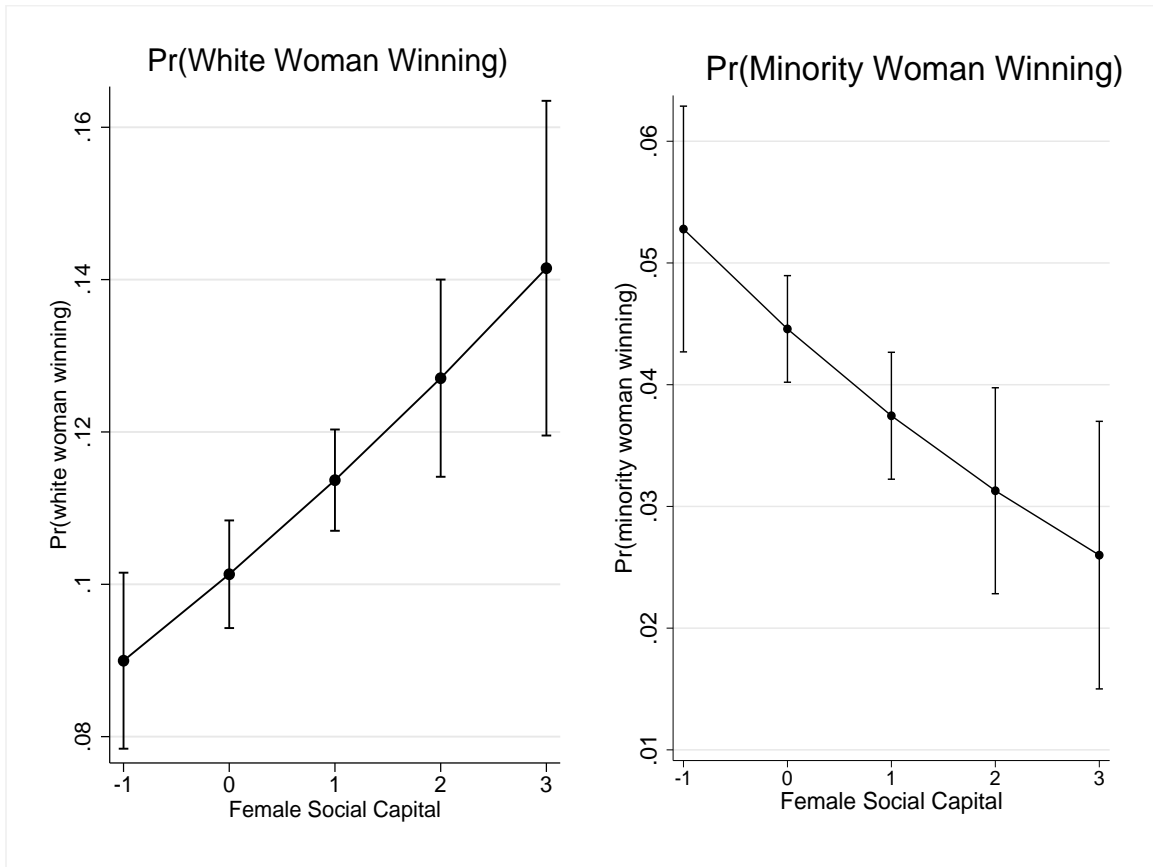


Figure 5: Effects of White Social Capital on White Female Candidate Success

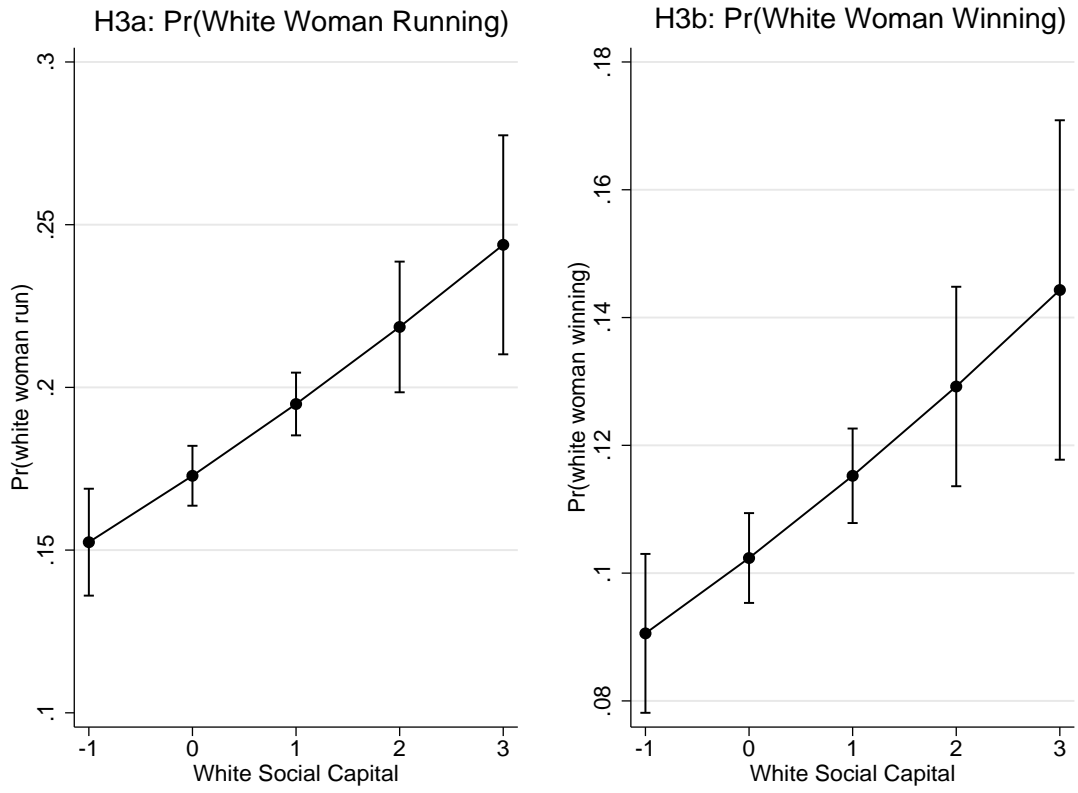


Figure 6: Effects of Black Social Capital on Black Female Candidate Success

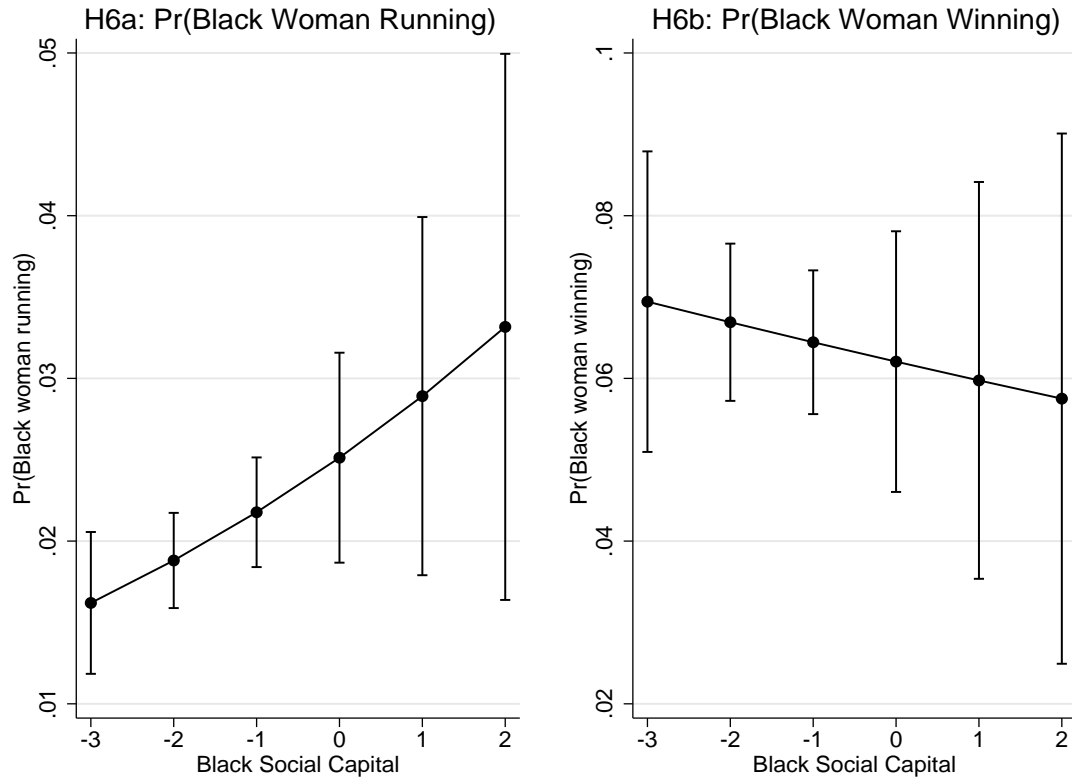


Figure 7: Effects of Latino Social Capital on Latina Candidate Success

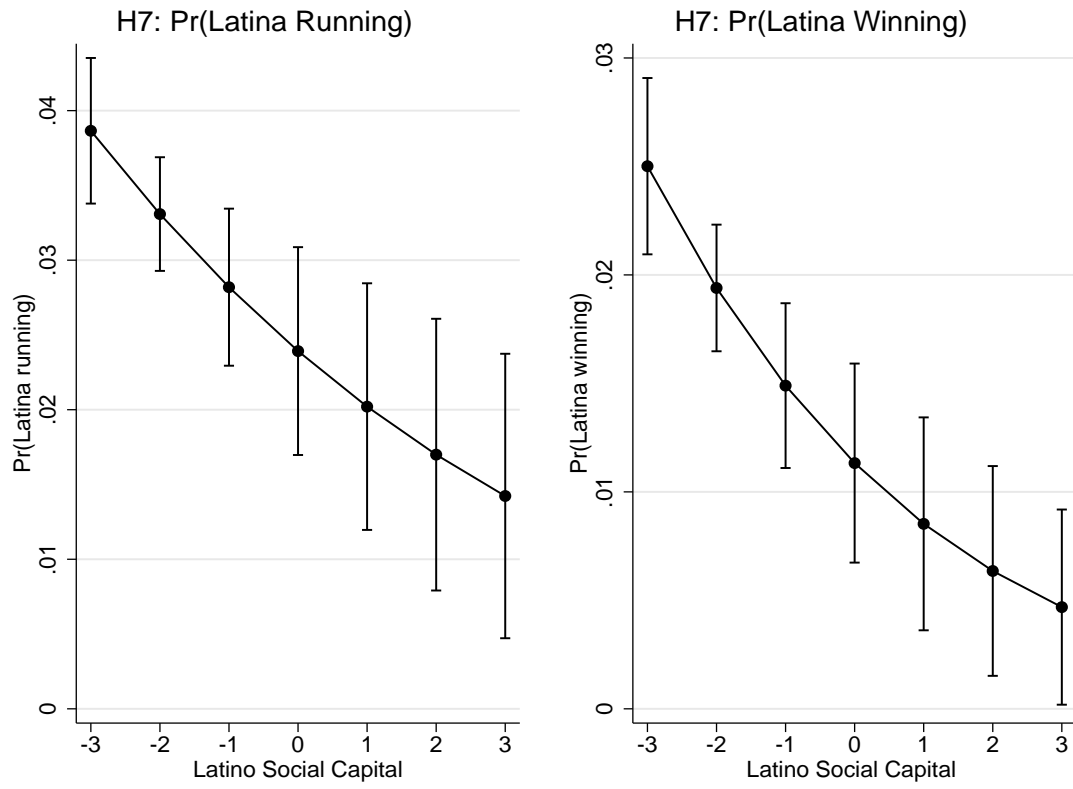


Table 10: Descriptive Statistics of Dependent Variables in Chapter 3

Variable	Mean	Std. Dev.	Min	Max
<i>Representation in Government</i>				
Female Governors	0.14	0.35	0	1
Street-level Bureaucrats				
– White Women	0.7558	0.1817	0.3277	0.9951
– Black Women	0.1768	0.1579	0	0.52
– Latinas	0.0675	.1146	0.0013	0.6524
<i>Representation in Health</i>				
Female Physicians	26.2	4.8	2.9	42.1
Female Nurses	3.03	6.09	0.19	72.58

Table 11: Descriptive Statistics of Independent and Control Variables in Chapter 3

Variable	Mean	Std. Dev.	Min	Max
<i>Independent Variables</i>				
Overall Social Capital	0.0015	1.0000	-2.0845	3.1997
Female Social Capital	0.4489	1.2003	-1.9619	3.7536
White Social Capital	0.6083	1.1648	-1.7314	4.3725
Black Social Capital	-1.3316	1.0840	-4.0120	3.4774
Latino Social Capital	-2.2830	1.0548	-5.3587	1.6845
<i>Control Variables</i>				
HS Graduates	55661	62900	1745	386220
Bachelor's Degree	27.1377	5.5864	15.1	53
% Female Legislators	23.1214	7.0650	5.7	41
Governor Salary	119785	29129	12210	212179
Incumbent	0.53	0.50	0	1
L-C Ideology	51.5677	15.8338	8.4500	95.9717
Legislative Control	0.5298	0.4441	0	1
Married Households	50	4.88	21.3	63.8
Number of Medical Schools	2.6968	2.8835	0	14
Population	5755680	643821	494300	3800000
Poverty Rate	13.24	3.36	5.3	24.2
Unemployment Rates	5.9243	2.1867	2	14.6
% Female Smokers	18.49	3.60	7.7	28.1

Table 12: Effects of Social Capital on Female Executives in Government

VARIABLES	(1) Female Governor Overall Social Capital	(2) Female Governor Female Social Capital
Overall Social Capital	0.0236 (0.111)	
Female Social Capital		-0.0134 (0.0891)
Governor Salary	0.0044 (0.0036)	0.0043 (0.0036)
Governor Staff	-0.0098*** (0.0032)	-0.0099*** (0.0032)
Incumbent	-0.593*** (0.202)	-0.588*** (0.202)
% Female Legislators	0.117*** (0.0174)	0.116*** (0.0173)
Dem. Legislative Control	-0.775*** (0.233)	-0.784*** (0.233)
Unemployment Rate	0.161** (0.0669)	0.162** (0.0669)
Education	-0.0245 (0.0272)	-0.0207 (0.0266)
Diversity Index	4.130*** (0.757)	4.043*** (0.740)
Constant	-4.541*** (0.854)	-4.573*** (0.848)
Observations	434	434

NOTE: Standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Table 13: Effects of Social Capital on Female Executives in Health

VARIABLES	(1) Percent Female Physicians	(2) Percent Female Physicians
Overall Social Capital	0.578** (0.231)	
Female Social Capital		0.323* (0.179)
Female Nurses	-0.0159 (0.0793)	-0.0150 (0.0796)
% Female Legislators	0.0070 (0.0187)	0.0086 (0.0188)
Dem. Legislative Control	0.592*** (0.224)	0.584*** (0.225)
Education	0.225*** (0.0395)	0.235*** (0.0393)
Unemployment Rate	0.0367 (0.0536)	0.0371 (0.0539)
Diversity Index	2.067 (1.370)	1.934 (1.369)
Married Households	-0.341*** (0.0678)	-0.328*** (0.0672)
Number of Medical Schools	0.301*** (0.107)	0.294*** (0.107)
Minimum Wage	-0.0566 (0.0818)	-0.0689 (0.0821)
Constant	33.27*** (3.886)	32.29*** (3.848)
Observations	504	504

NOTE: Standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Table 14: Effects of Social Capital on Street-level Representation of Women in Health

VARIABLES	(1) Female Nurses	(2) Female Nurses
Overall Social Capital	-1.576** (0.630)	
Female Social Capital		-1.370*** (0.494)
% Female Legislators	0.103 (0.0704)	0.106 (0.0700)
Dem. Legislative Control	-1.078 (0.916)	-1.111 (0.911)
Education	0.106 (0.114)	0.0950 (0.111)
Unemployment Rate	0.343 (0.231)	0.330 (0.231)
Diversity Index	-0.780 (3.776)	-0.983 (3.713)
Married Households	0.0858 (0.200)	0.0825 (0.195)
Constant	-7.132 (11.24)	-6.099 (10.83)
Observations	488	488

NOTE: Standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Table 15: Effects of Social Capital on the Representation of White Women in Street-level Positions in Government

VARIABLES	(1) White Women Street-level (Gov't)	(2) White Women Street-level (Gov't)	(3) White Women Street-level (Gov't)
Overall Social Capital	0.0193** (0.0089)		
Female Social Capital		0.0203*** (0.0066)	
White Social Capital			0.0120* (0.0063)
% Female Legislators	-0.0009 (0.0006)	-0.0010* (0.0006)	-0.0009 (0.0006)
Dem. Legislative Control	-0.0031 (0.0082)	-0.0046 (0.0082)	-0.0028 (0.0082)
Unemployment Rate	-0.0008 (0.0017)	-0.009 (0.0017)	-0.0007 (0.0017)
Education	0.0013 (0.0018)	0.0012 (0.0017)	0.0014 (0.0018)
Diversity Index	-0.148** (0.0735)	-0.143* (0.0729)	-0.142* (0.0736)
Minimum Wage	0.0026 (0.0022)	0.0025 (0.0022)	0.0025 (0.0022)
Constant	0.787*** (0.0544)	0.783*** (0.0537)	0.780*** (0.0544)
Observations	210	210	210

NOTE: Standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Table 16: Effects of Social Capital on Representation on Black Women in Street-level Positions in Government

VARIABLES	(1) Black Women Street-level (Gov't)	(2) Black Women Street-level (Gov't)	(3) Black Women Street-level (Gov't)
Overall Social Capital	-0.0191*** (0.0060)		
Female Social Capital		-0.0177*** (0.0046)	
Black Social Capital			-0.0018 (0.0024)
% Female Legislators	0.0005 (0.0004)	0.0006 (0.0004)	0.0005 (0.0005)
Legislative Control	-0.0004 (0.0057)	0.0007 (0.0058)	-0.0014 (0.0065)
Education	-0.0553 (0.0012)	-0.0141 (0.0012)	-0.0004 (0.0014)
Unemployment Rate	0.0006 (0.0012)	0.0006 (0.0012)	0.0002 (0.0014)
Minimum Wage	-0.0016 (0.0016)	-0.0015 (0.0016)	-0.0019 (0.0018)
Diversity Index	0.178*** (0.0498)	0.191*** (0.0502)	0.162*** (0.0558)
Constant	0.109*** (0.0362)	0.108*** (0.0361)	0.143*** (0.0433)
Observations	210	210	175

NOTE: Standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Table 17: Effects of Social Capital on the Representation of Latinas at the Street-level in Government

VARIABLES	(1) Latinas Street-level (Gov't)	(2) Latinas Street-level (Gov't)	(3) Latinas Street-level (Gov't)
Overall Social Capital	-0.0174* (0.0092)		
Female Social Capital		-0.0151** (0.0072)	
Latino Social Capital			-0.0057 (0.0058)
% Female Legislators	0.0005 (0.0010)	0.0005 (0.0010)	0.0011 (0.0012)
Dem. Legislative Control	0.0003 (0.0132)	0.0006 (0.0131)	0.0044 (0.0153)
Education	0.0023 (0.0019)	0.0021 (0.0019)	0.0010 (0.0022)
Unemployment Rate	0.0005 (0.0030)	0.0006 (0.0030)	0.0003 (0.0035)
Minimum Wage	0.0014 (0.0039)	0.0020 (0.0039)	0.0032 (0.0044)
Diversity Index	-0.1270* (0.0754)	-0.1310* (0.0751)	-0.1650* (0.0939)
Constant	-0.0147 (0.0528)	-0.0039 (0.0529)	-0.0046 (0.0689)
Observations	210	210	175

NOTE: Standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Table 18: Descriptive Statistics of Dependent Variables in Chapter 4

Variable	Mean	Std. Dev.	Min	Max
<i>Health Outcomes</i>				
Preterm Birth Rates				
– White women	10.59	1.86	3.45	16.9
– Black women	16.39	3.08	5.35	38.53
– Latinas	11.12	2.29	1.16	16.7
Infant Mortality Rates				
– White women	5.64	1.01	2.92	8.81
– Black women	13.13	2.43	5.3	20.96
– Latinas	11.90	8.90	2.73	53.67

Table 19: Descriptive Statistics of Independent and Control Variables in Chapter 4

Variable	Mean	Std. Dev.	Min	Max
<i>Independent Variables</i>				
% Female Physicians	26.18	4.78	2.9	42.1
Female Social Capital	0.45	1.20	-1.96	3.75
<i>Control Variables</i>				
% Female State Legislators	23.1	7.07	5.7	41
Health Care Spending	6138.82	2284.43	646	50484
Legislative Control	0.53	0.44	0	1
Poverty Rate	13.24	3.36	5.3	24.2
WIC Participation	157049	226316	2261	1472347
Diversity Index	0.29	0.15	0.06	0.80
Legislative Control	0.53	0.44	0	1

Figure 8: 2012 State Ranking of Female Social Capital

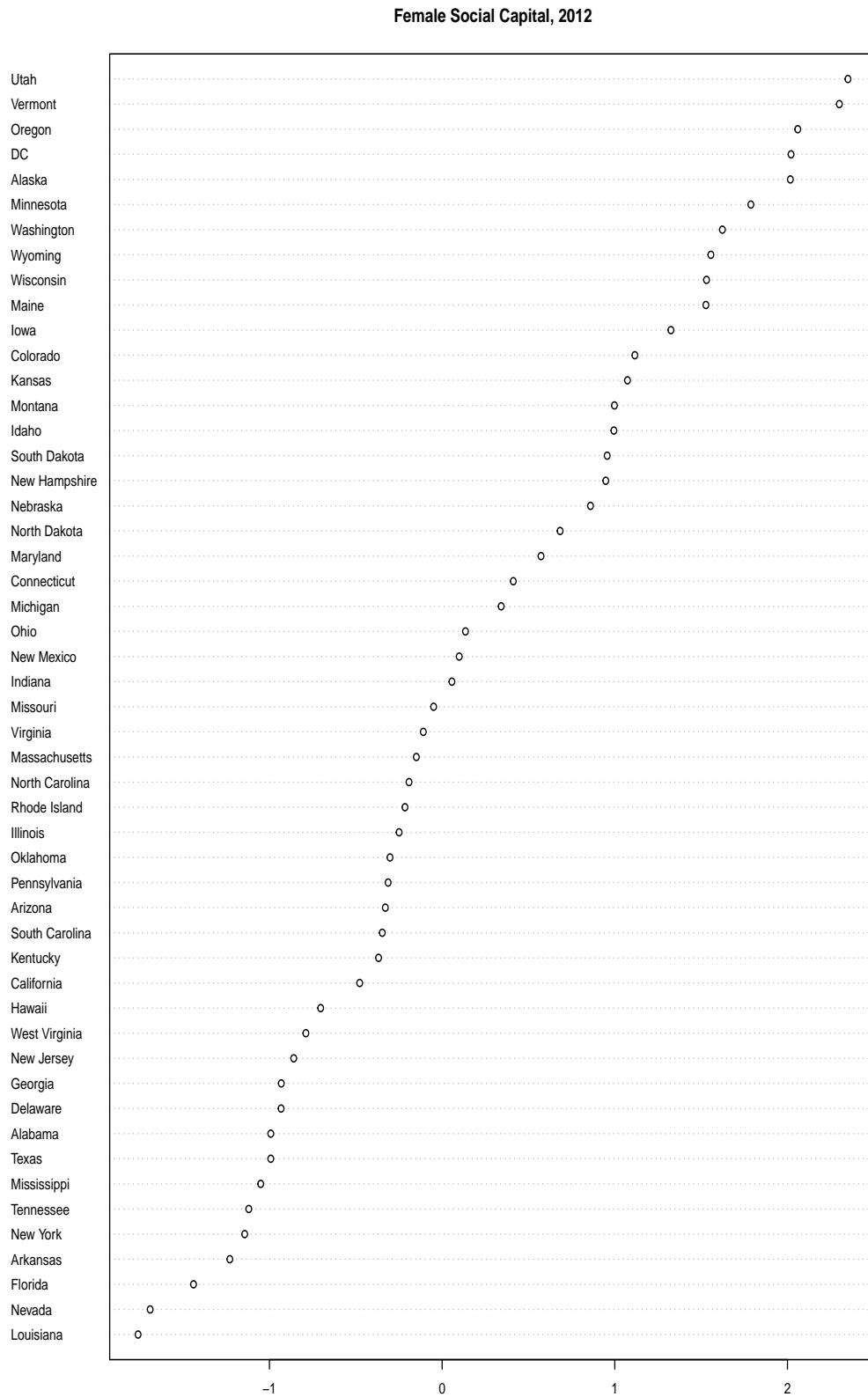


Figure 9: Average Preterm Birth Rates for White Women in 2012

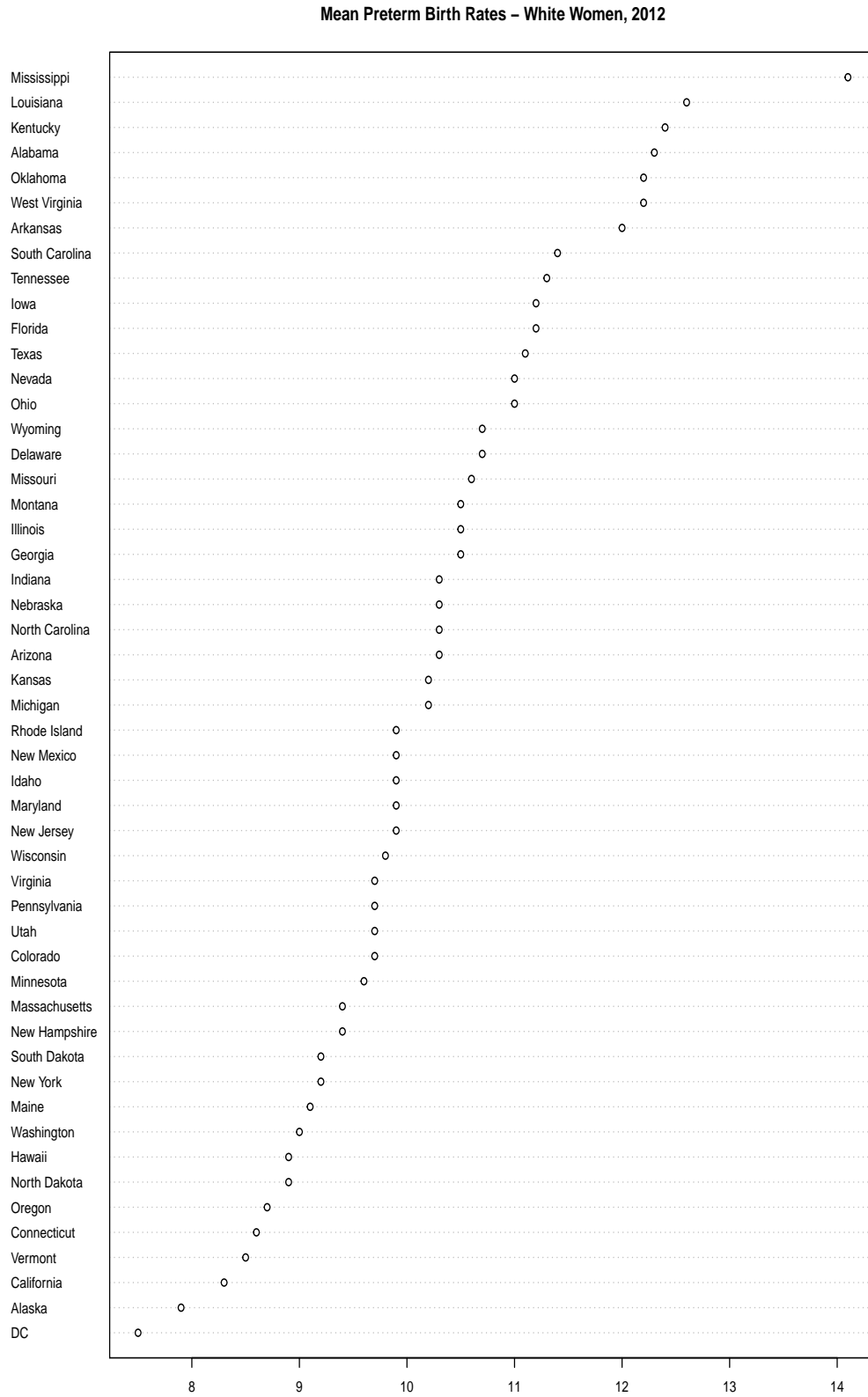


Figure 10: Average Preterm Birth Rates for Black Women in 2012

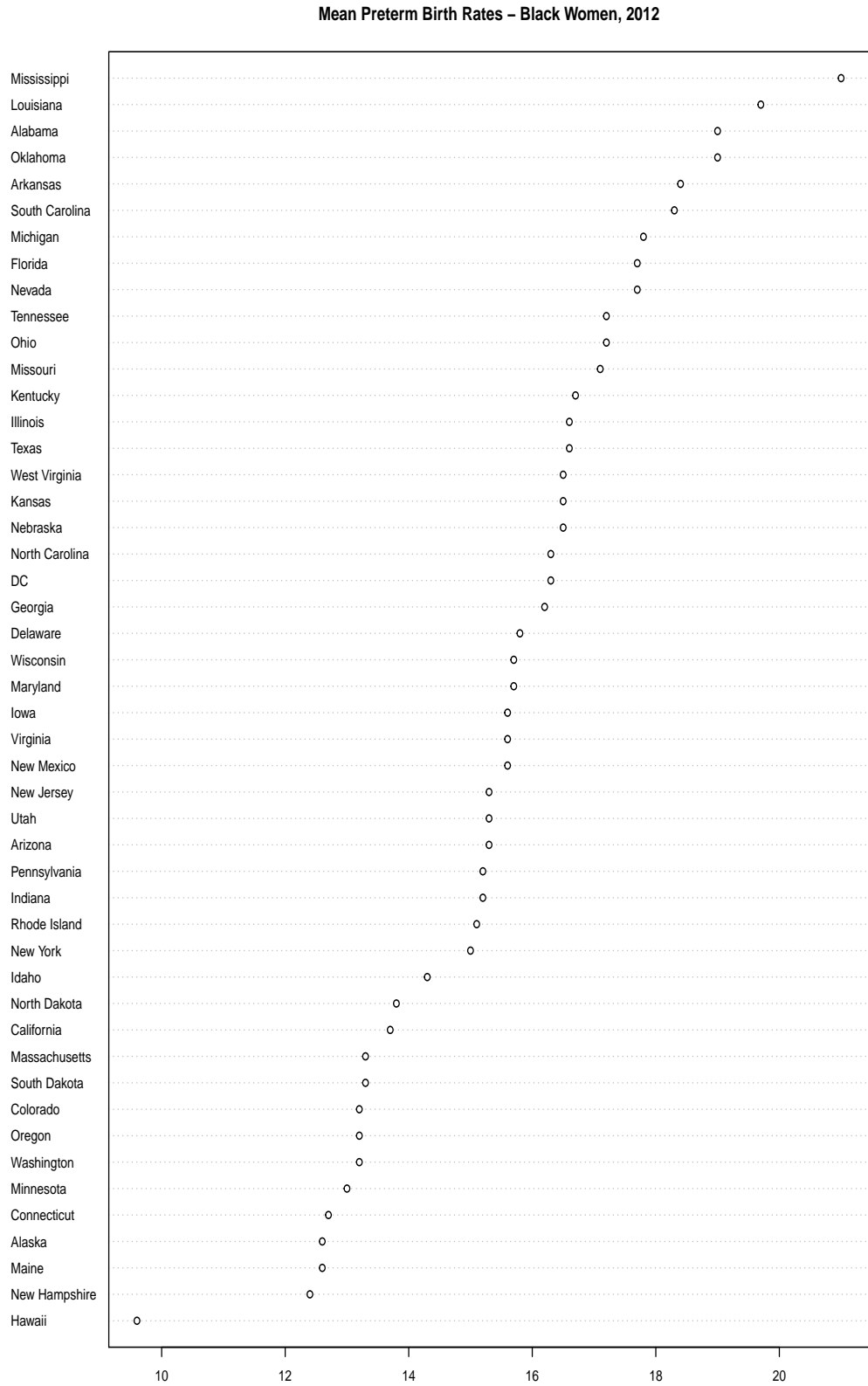


Figure 11: Average Preterm Birth Rates for Latinas in 2012

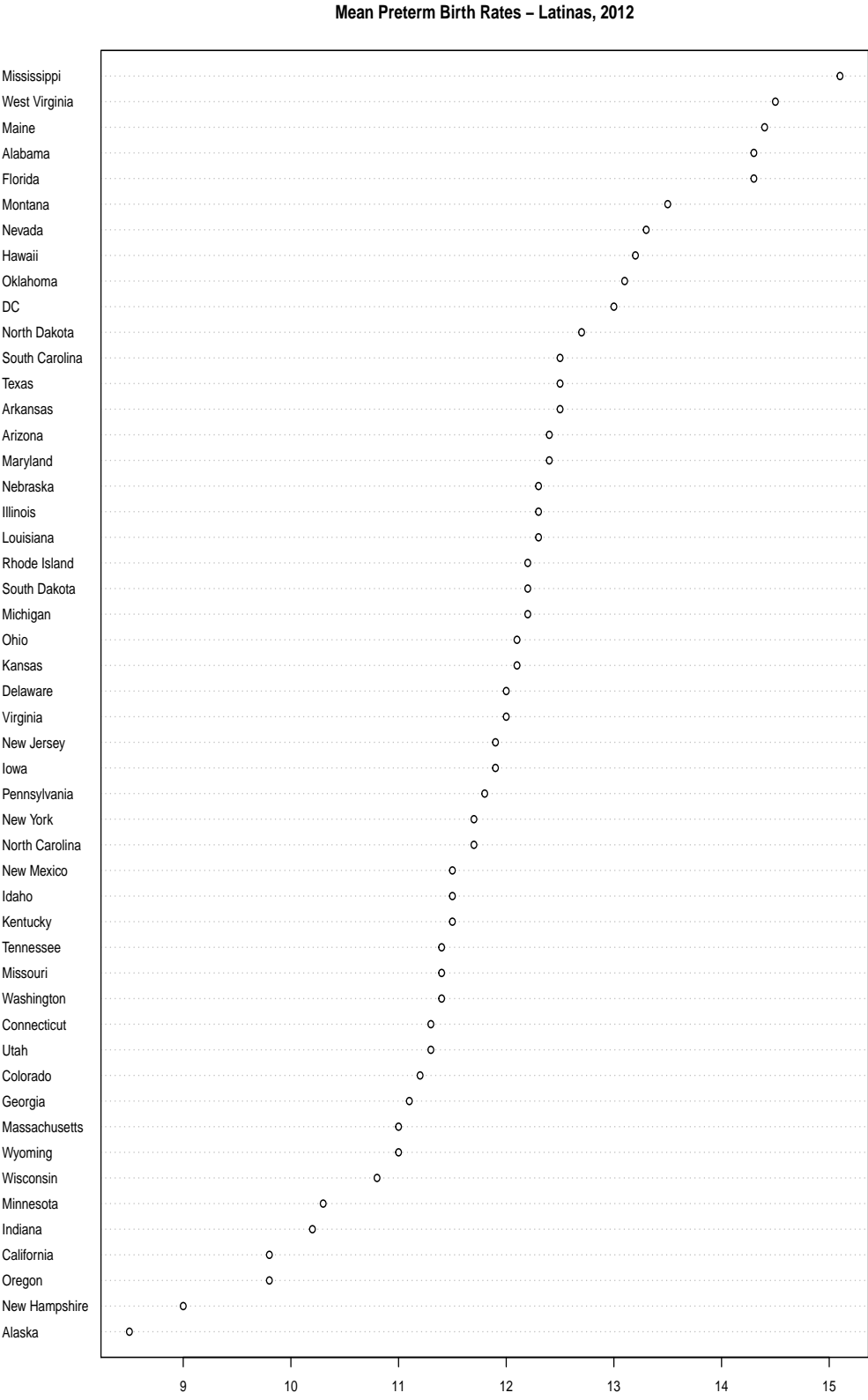


Figure 12: Average Infant Mortality Rates for White Women in 2012

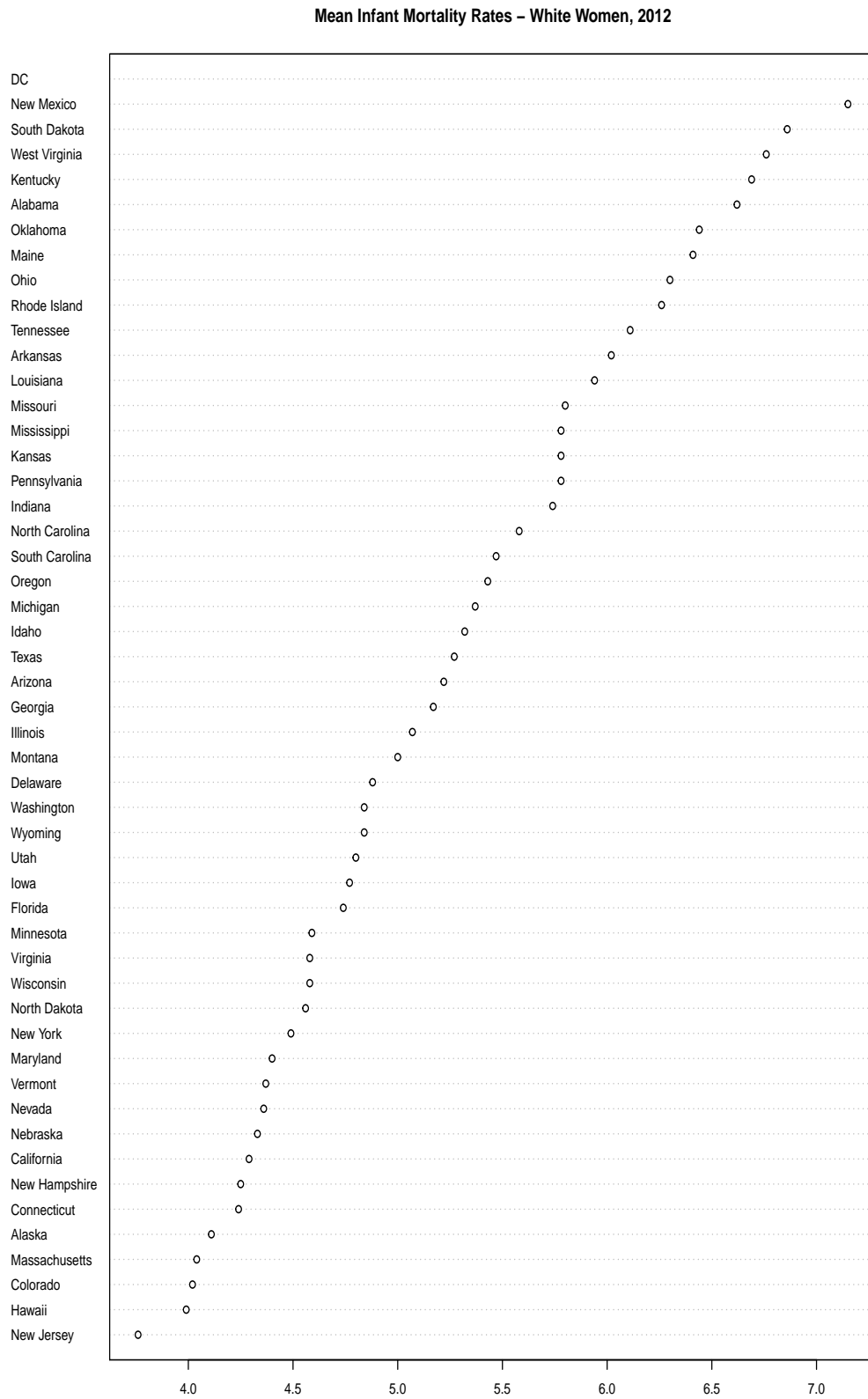


Figure 13: Average Infant Mortality Rates for Black Women in 2012

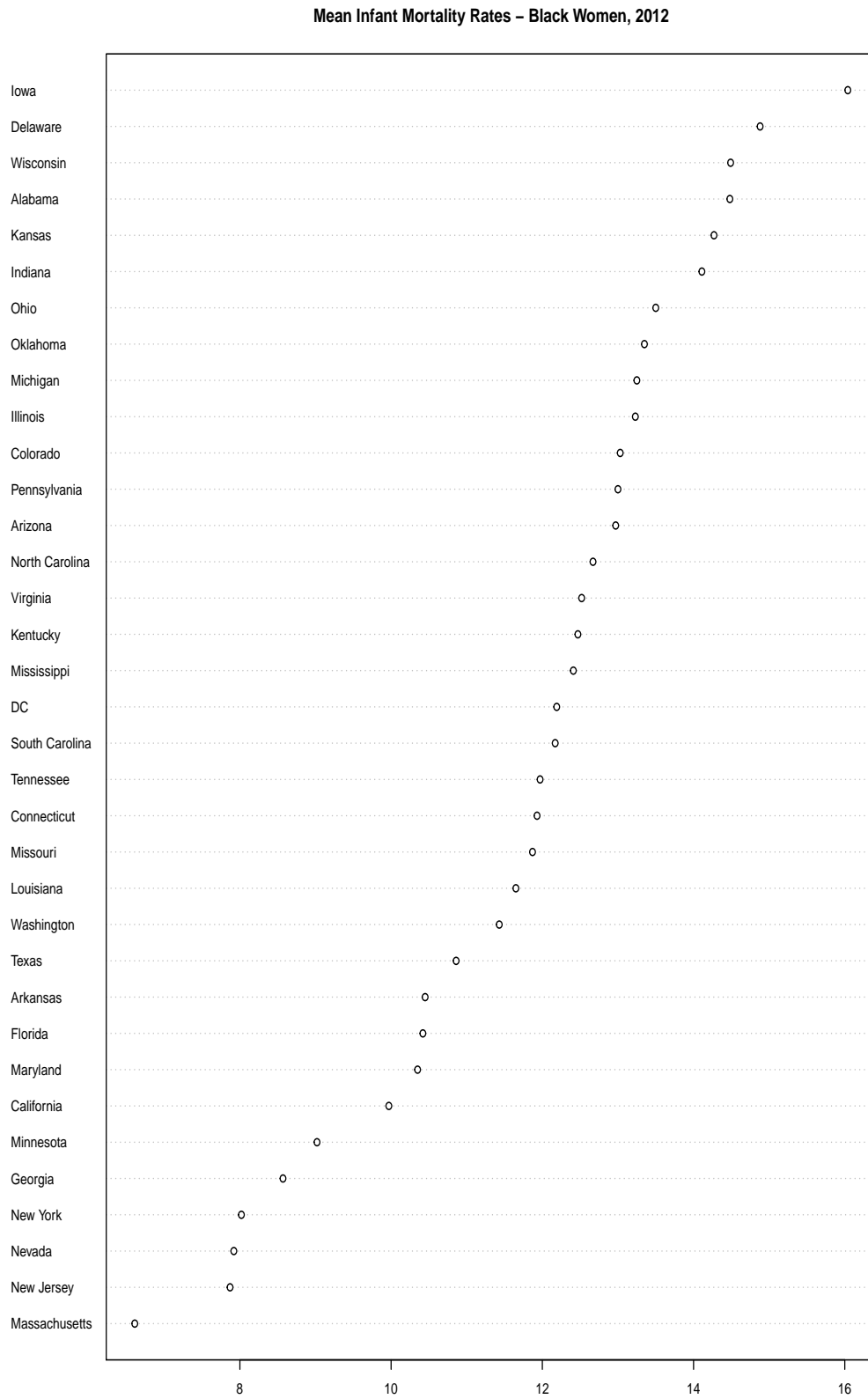


Figure 14: Average Infant Mortality Rates for Latinas in 2012

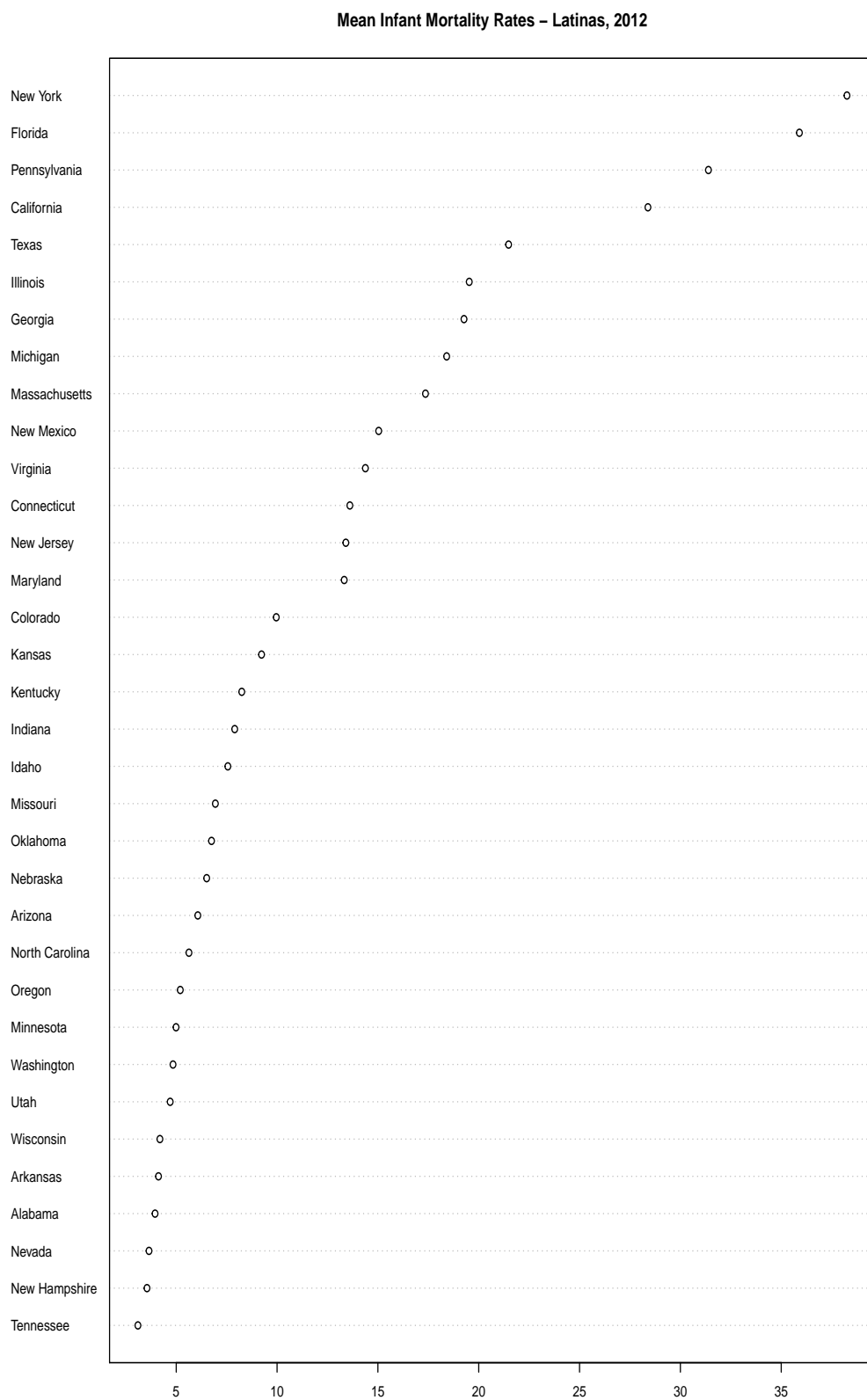


Table 20: Effects of Female Bureaucrats and Female Social Capital on Preterm Birth Rates

VARIABLES	(1)	(2)	(3)
	Preterm Birth Rates White Women	Preterm Birth Rates Black Women	Preterm Birth Rates Latinas
Female Physicians	-0.0588** (0.0251)	-0.00523 (0.0575)	-0.0185 (0.0376)
Female Social Capital	-0.395*** (0.0920)	-0.925*** (0.218)	-0.538*** (0.139)
Female Nurses	0.000883 (0.00766)	0.00161 (0.0167)	0.00421 (0.0115)
% Female Legislators	-0.0275** (0.0123)	-0.0180 (0.0282)	-0.0386** (0.0188)
Health Care Spending	2.41e-05 (6.17e-05)	4.59e-06 (0.000136)	-3.75e-05 (9.23e-05)
Poverty Rates	0.125*** (0.0337)	0.265*** (0.0773)	-0.0296 (0.0506)
WIC Participation	-8.41e-07* (4.47e-07)	-8.04e-07 (9.96e-07)	-9.72e-07 (6.67e-07)
Diversity Index	-0.193 (0.668)	2.172 (1.499)	-0.802 (1.000)
Dem. Legislative Control	0.0385 (0.167)	-0.102 (0.371)	-0.160 (0.251)
Married Household	0.0169 (0.0406)	0.215** (0.0950)	-0.0266 (0.0613)
% Female Smokers	0.0567** (0.0270)	0.109* (0.0610)	-0.0718* (0.0404)
Constant	7.933*** (2.905)	-0.471 (6.776)	16.58*** (4.378)
Observations	438	403	427

NOTE: Standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Table 21: Effects of Female Bureaucrats and Female Social Capital on Infant Mortality Rates

VARIABLES	(1)	(2)	(3)
	Infant Mortality - White Women	Infant Mortality - Black Women	Infant Mortality - Latinas
Female Physicians	-0.0529*** (0.0191)	-0.140 (0.102)	0.0249 (0.235)
Female Social Capital	-0.0555 (0.0709)	0.0505 (0.289)	-2.603** (1.071)
Female Nurses	0.0127** (0.00564)	0.0125 (0.0139)	0.0676 (0.0526)
% Female Legislators	-0.00634 (0.00935)	0.00243 (0.0318)	-0.0564 (0.117)
Health Care Spending	2.47e-05 (4.62e-05)	-0.000191 (0.000141)	0.000172 (0.000529)
Poverty Rates	0.110*** (0.0258)	-0.0595 (0.103)	-1.032*** (0.363)
WIC Participation	-9.43e-07*** (3.48e-07)	-1.58e-06 (1.22e-06)	9.71e-06** (4.34e-06)
Diversity Index	0.105 (0.526)	1.179 (2.349)	-0.910 (8.246)
Married Households	-0.0313 (0.0312)	-0.0538 (0.134)	-0.339 (0.431)
Dem. Legislative Control	-0.0313 (0.126)	-0.691* (0.397)	2.379 (1.475)
% Female Smokers	0.0264 (0.0207)	-0.00599 (0.0743)	-0.327 (0.263)
Constant	6.884*** (2.221)	21.65** (8.945)	45.94 (30.08)
Observations	434	306	309

NOTE: Standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Table 22: Interactive Effects of Female SC and Female Representation on Disparities in Preterm Birth Rates

VARIABLES	(1) Disparity - Black Women	(2) Disparity - Latinas
Female SC * Representation	0.0218*** (0.00664)	0.0286*** (0.00848)
Female Physicians	-0.0345* (0.0182)	-0.0497* (0.0254)
Female Social Capital	-0.553*** (0.182)	-0.692*** (0.221)
Female Nurses	-0.000934 (0.00243)	-0.00165 (0.00374)
% Female Legislators	0.00394 (0.00576)	0.00143 (0.00857)
Health Care Spending	6.39e-07 (2.17e-05)	-4.19e-06 (3.32e-05)
Poverty Rates	0.0324* (0.0192)	0.116*** (0.0286)
WIC Participation	-1.49e-06** (5.76e-07)	-5.22e-07 (8.83e-07)
Diversity Index	0.118 (0.553)	0.0245 (0.816)
Married Household	0.0504** (0.0242)	0.0263 (0.0335)
Dem. Legislative Control	-0.0210 (0.0725)	0.00500 (0.110)
% Female Smokers	0.0168 (0.0125)	0.0204 (0.0188)
Constant	-0.551 (1.486)	-0.438 (2.063)
Observations	403	427
R-squared	0.261	0.196

NOTE: Standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Table 23: Interactive Effects of Female SC and Female Representation on Disparities in Infant Mortality Rates

VARIABLES	(1) Disparity - Black Women	(2) Disparity - Latinas
Female SC * Representation	0.0301** (0.0134)	-0.0235 (0.0322)
Female Physicians	-0.153* (0.0886)	0.0440 (0.0861)
Female Social Capital	-0.750** (0.367)	0.616 (0.884)
Female Nurses	-0.00101 (0.00329)	0.00905 (0.0102)
% Female Legislators	-0.00724 (0.00926)	0.00215 (0.0289)
Health Care Spending	-6.29e-05* (3.45e-05)	-8.51e-05 (0.000107)
Poverty Rate	-0.0148 (0.0317)	-0.314*** (0.103)
WIC Participation	8.31e-07 (8.06e-07)	-5.80e-07 (2.48e-06)
Diversity Index	-0.528 (0.826)	1.855 (3.218)
Married Households	-0.00614 (0.0422)	0.0858 (0.132)
Legislative Control	-0.275** (0.111)	0.700** (0.342)
% Female Smokers	0.00672 (0.0206)	-0.0599 (0.0646)
Constant	7.050** (3.360)	1.424 (7.940)
Observations	306	308

NOTE: Standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Figure 15: Effects of Female Social Capital and Female Bureaucrats on Disparity in Preterm Birth Rates of Black Women and White Women

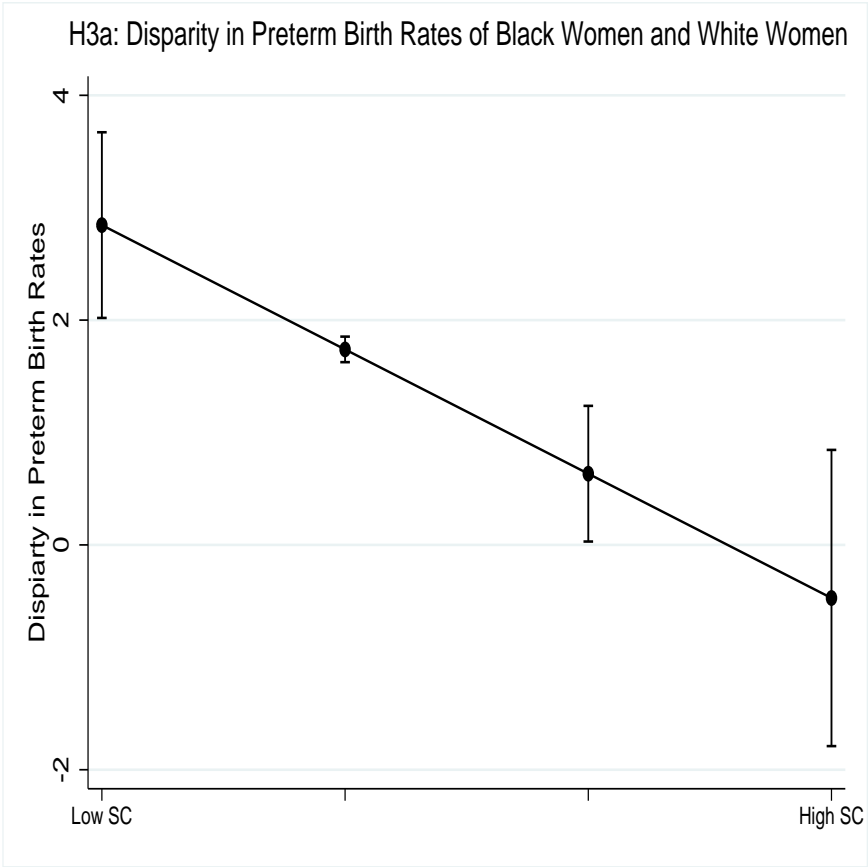


Figure 16: Effects of Female Social Capital and Female Bureaucrats on Disparity in Preterm Birth Rates of Latinas and White Women

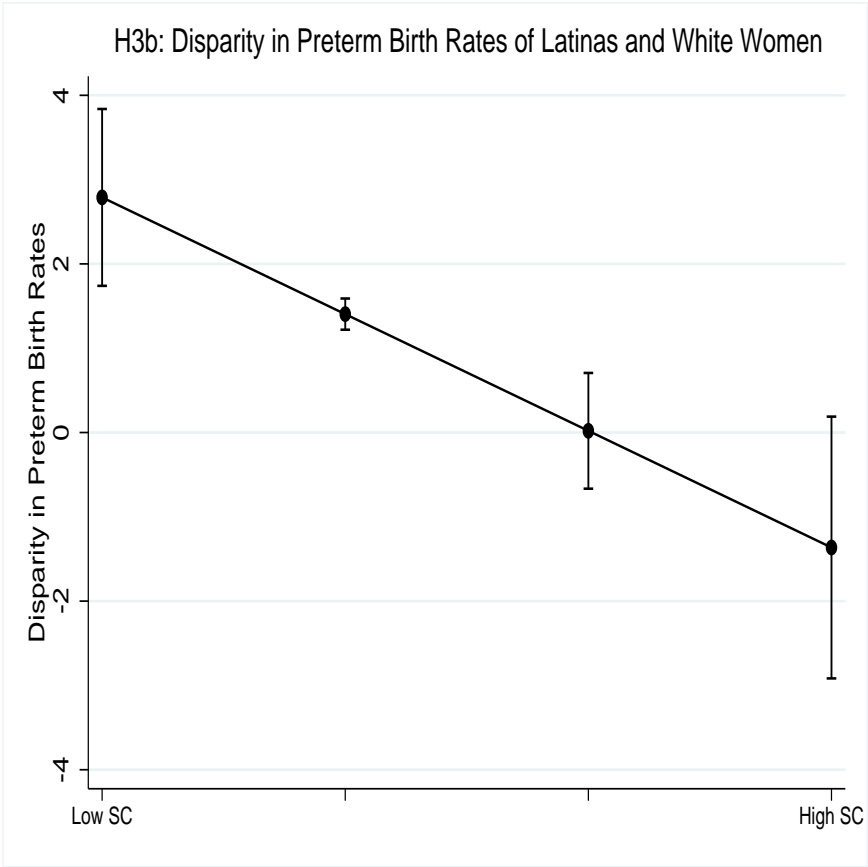


Figure 17: Effects of Female Social Capital and Female Bureaucrats on Disparity in Infant Mortality Rates of Black Women and White Women

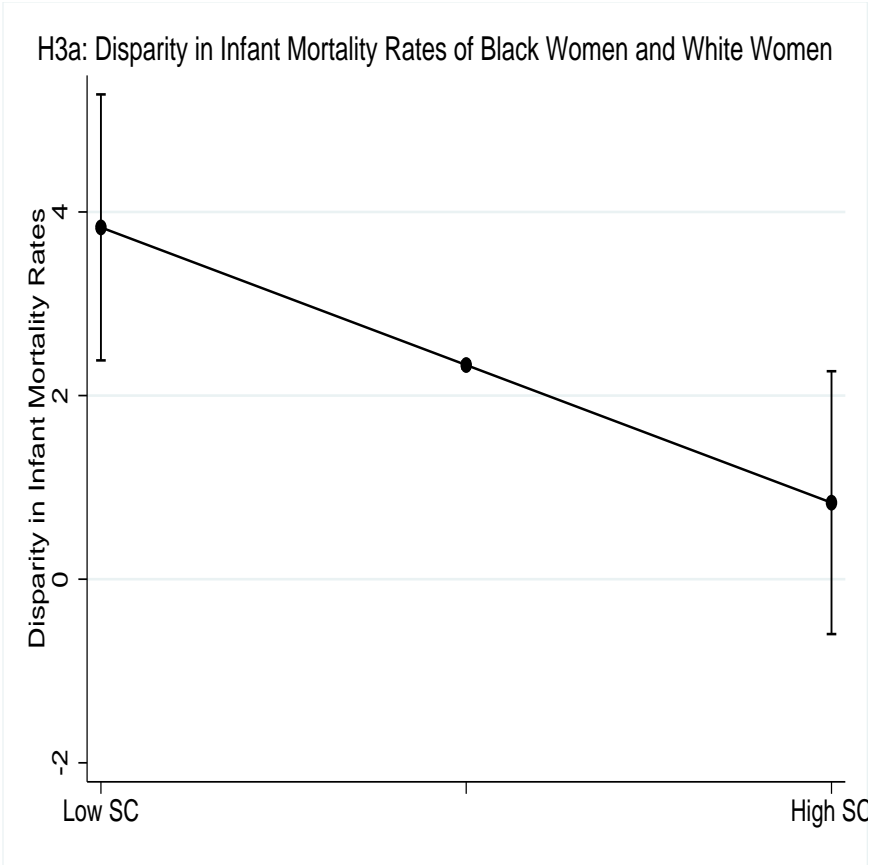


Figure 18: Effects of Female Social Capital and Female Bureaucrats on Disparity in Infant Mortality Rates of Latinas and White Women

