

Women's Representation in State Politics: Linking Descriptive and Substantive Representation to Health and Economic Policy Outcomes

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Women's Representation in State Politics: Linking Descriptive and Substantive Representation to Health and Economic Policy Outcomes

Women's representation at the national and local levels in the United States remains far from parity and this study demonstrates that women's representation effects outcomes on policies that matter to women. Although the number of women elected to state legislatures has increased fivefold since the 1970s (Center for American Women in Politics, 2015), progress on that front has slowed (RepresentWomen, 2018). However, state legislatures are more representative of their constituencies than Congress is: Women comprise about 25 percent of state legislative bodies on average and about 20 percent of Congress. In this way, state legislatures look more like their constituencies; their *descriptive* representation is higher in states than at the national level.

Policy outcomes mirroring constituents' preferences is *substantive* representation, and the two are linked: "descriptive representation by gender improves substantive outcomes for women in every polity for which we have a measure" (Mansbridge 2005, p. 622). In this paper, an ordinal measure of policy outcomes is used to test the link between women's descriptive and substantive representation. The results show that women's representation in state legislatures improves economic policy outcomes for women and families, even when controlling for state economic conditions, partisan control of state houses, state demographics, as well as policy diffusion from neighboring and politically-similar states. These claims are tested with data from the Center for American Progress (CAP) report *The State of Women in America: A 50-State Analysis of How Women are Faring* (Chu & Posner, 2013). The state-by-state grades on health policy and economic security issued by CAP, coupled with data on women's representation in

elective office, create a unique opportunity to test whether descriptive representation translates into substantive representation at the state level.

Research demonstrates that “women legislators show a higher legislative priority on issues concerning women’s rights and children and families” (Taylor-Robinson & Heath, 2003, p. 77) and women’s representation in public office is important to the electorate (Dolan & Sanbonmatsu, 2008). Much of the research on policy adoption has focused on institutional resources and political climate, but not on policymakers themselves, even though “*who* makes public policy is important in democratic politics” (Burrell, 1997, p. 565 emphasis supplied); and “we can only believe that sex of the representatives matters if we think it will change what the representatives *do*” (Phillips 1998, p. 237). State legislatures are of interest not only because “the policy aims of state or local governments are often different than the national government” (Eissler, Russell & Jones, 2014, p. S74) but also because more access points to policymaking exist via state constitutional provisions allowing direct citizen access through referenda, and the relative value of an individual vote at the local level compared to the national level. States have engaged in policy innovation when the federal government fails to pass legislation (Mastracci & Persky, 2009). Moreover, governors can play active roles in policy development via use of the line-item veto. Policy theory has greatly benefitted from the turn from aggregate national studies to state differences (Erikson, Wright & McIver, 1989), and those variations “are not merely nuance: they have the potential to alter fundamental understandings of the policy process” (Eissler, Russell & Jones, 2014, p. S75).

This study draws upon theories of representation and the link between descriptive representation and substantive representation to examine whether female legislators act on behalf of women’s interests and women’s policies are passed. Testing the link between descriptive and

substantive representation in policies for women and families demonstrates whether electing women translates into policies to improve women's wellbeing in economic security and health policy.

Review of the Literature on Policy and Women's Representation

Factors affecting women's representation are of enduring importance to researchers. Early research relied upon Rosabeth Moss Kanter's (1977) critical mass framework to predict the potential policy impact of electing women to state legislatures and Hannah Pitkin's (1972) interrogation of the idea of representation itself. For example, Thomas (1991) surveyed legislators in 12 states to determine whether male and female lawmakers championed different causes and whether any differences existed in successful passage of bills dealing with issues of women, children, and the family. Kanter's critical mass theory predicts that female legislators would avoid bills on women's-interest policy and would not have success passing such legislation until their numbers exceeded 15 percent of total seats. Thomas confirms this prediction: "Women in states with the highest percentages of female representatives introduce and pass more priority bills dealing with issues of women, children, and families than men in their states and more than their female counterparts in low representation states" (1991, p. 958). However, later research refutes the predictions of critical mass theory, finding "token" women can be very successful passing legislation while women in states with representation greater than critical mass can fail to work together as a group (Childs & Krook 2006; Crowley 2004). Surveying and interviewing male and female legislators in Arizona and California, Reingold (1992) contradicts Thomas (1991): "When women comprise 30 percent of a legislature—as they do in Arizona—they are too numerous to be considered a cohesive group with common interests or common traits" (1992, p. 532). Although Reingold finds that female legislators in both states

expressed a commitment to representing women and women's concerns, Arizona female legislators, at 30 percent—twice the proportion than in California at the time—demonstrated a diversity of attitudes *within* their ranks. Berkman and O'Connor (1993) also refute Kanter's (1977) prediction that too few women results in token status where heightened scrutiny would compel them to avoid advocating on behalf of women's issues. Examining abortion policy in several states, for example, Berkman and O'Connor find token status *facilitates* substantive representation by helping “women representatives to secure committee assignments that allow them to block [anti-choice] legislation” (1993, p. 102). Likewise, Crowley (2004) finds that “tokens make a policy difference independently and to a greater extent than when they are on the cusp of becoming non-tokens” (p. 109). In her analysis of six state legislatures, Bratton (2002) confirms this result for female legislators from the Democratic Party, however, “increasing gender diversity among Republicans is associated with a *decreased* number of women's interest measures sponsored by both male and female Republicans” (2002, p. 136, emphasis supplied). In a follow-up study of three state legislatures, Bratton (2005) further emphasizes the potential power of token status: “Women in very homogenous settings *do not* react to their token status by minimizing gender differences in agenda setting ... women serving in legislatures with little gender balance are actually *more* successful relative to men than their counterparts in more equitable settings” (p. 121, emphasis in original).

One important difference between Kanter's predictions and evidence from state legislatures is *context*: Kanter studied a private-sector corporation, where token women benefitted from conforming to corporate culture and fitting in. In contrast, female legislators interpret their difference as *essential to* and even *definitive of* representation. Standing out in politics benefits the female legislator in ways that the corporate ladder climber may not enjoy:

“Where representation is part of the job description, the treatment of women as ‘representative of their category’ may encourage them to behave distinctly from men” (Bratton, 2005, p. 103).

Childs and Krook (2008, p. 522) similarly distinguish the political context from business in their critique of critical mass: “As the number of studies grows, it is increasingly obvious that there is neither a single nor a universal relationship between the percentage of women elected to political office and the passage of legislation beneficial to women as a group.” In other words, context matters. Critical actors may matter more than critical mass (Levine, 2011). This study controls for context and demonstrates a link between the percent of women comprising state legislatures and policy outcomes of interest to women, as defined by CAP.

The results conclude that greater representation and women’s policy outcomes are linked, but the cross-sectional nature of the data preclude assigning causal status to women’s political representation. The results conclude that women’s political representation matters; the nature of that relationship must be explored using data over time. That women’s political representation matters beyond symbolism, however, is an important contribution to the ongoing debate in the literature. For instance, research building upon the structural analyses of Thomas (1991), Reingold (1992), and Berkman and O’Connor (1993) looks beyond numbers and examines institutions and norms across state legislatures that not only affect the number of women in them, but also the factors underlying the link between descriptive and substantive representation. Kathlene (1994) questions the assumption that numbers alone explain the introduction and passage of legislation specific to women’s interests. Analyzing transcripts from 12 randomly-selected state legislative committee hearings, she finds evidence of backlash: “Women legislators, despite their numerical and positional gains, may be seriously disadvantaged in committee hearings and unable to participate equally in legislative committee hearings ... *the*

more women on a committee, the more silenced women became" (1994, p. 573, emphasis supplied).

Arceneaux (2001, p. 143) incorporates state culture into his analysis of women's representation in state legislatures and finds state culture "affects the level of state legislative female representation independent of political culture and ideology". Koven and Mausloff (2002) confirm the enduring impact of state political culture on state policymaking. Poggione further establishes that the link between descriptive and substantive representation goes through *context*: "The policy impact of women legislators is mediated by legislative institutions and women's positions within them" (2004, p. 313).

Dodson (1997) investigates the gendered nature of representation itself: Serving in elective office is a barrier for women with young children but not for men with young children. This has "consequences for descriptive representation, for it means that women will have fewer years to serve, to build careers within the institution, to accumulate seniority ... and perhaps most importantly to climb the political ladder to higher office" (p. 574). Limiting women's representation reduces "substantive representation of women by limiting the number of officeholders who are both available to serve and committed to 'act for' women" (Dodson, 1997, p. 579). Bernstein (1997) also examines factors linking descriptive and substantive representation; particularly the relationships between state political culture or economic conditions and passage of family and medical leave. Unlike previous analyses, both Bernstein (1997) and Nowlin (2011) focus on the *types* of policies promoted, beyond the usual observation that women legislators advocate policies to benefit women and families.

State governments provide ideal contexts within which to examine policymaking and the link between women's descriptive and substantive representation, and the literature points to

several reasons why women's representation would be expected to affect policy outcomes. States remain important contexts within which to examine policy development and advocacy, also due in part to executive powers enjoyed by state governors but that are not shared at the national level—particularly the line item veto—and also potential longer terms of office for state-level executives compared to the national level (Eissler, Russell & Jones, 2014). For instance, only seven of 50 state governors face absolute two-term limits as the President does. Furthermore, “governors have arguably become more politically powerful over the course of the last several decades because of the ‘devolution revolution’” (Heidbreder & Scheurer, 2012, p. 4). Heidbreder and Scheurer (2012) find that women governors advocate on behalf of policies benefitting women and families: “Female governors mirror female legislators in terms of placing greater emphasis on issue[s] of concern to women ... female governors in general spend more time discussing social welfare policies in their state of the state speeches” (Heidbreder & Scheurer, 2012, p. 6). Atkeson and Carrillo (2007) find that both male and female constituents perceive female governors to be more effective at passing and implementing social welfare policies; even more effective than female legislators (p. 90):

It may be that female executives provide different cues than female legislators because of the different level of office. Governors are executives, sole proprietors of their office, which provides them with greater visibility and media coverage than legislators.

The focus in this paper is on the legislature. Tables 5 and 6 contain results from regression analysis and show that the relationship between women's policy outcomes and women's legislative representation is positive and statistically different from zero, while the effect of a female governor is no different from zero. The difference arises perhaps from differences in party and partisan state control. In 2013, five state governors were women; four of these five were Republicans (AZ, NM, OK, and SC). The Republican Party controlled both

executive and legislative branches in Arizona, Oklahoma, and South Carolina. The one Democratic female governor, New Hampshire's Maggie Hassan, governed alongside a Republican-majority state House and Senate. The attempt to link women's representation in the executive branch with policy outcomes contradicts evidence from prior research (Atkinson & Carillo 2007), but the result may be explained by a combination of partisanship and partisan control in 2013, the lone year of output. This may be why female governors, even with line-item-veto power, are not as strongly correlated with Economic and Health Policy Grades as are proportions of female legislators. The next section describes the analysis of the relationships between women's representation and policies for women and families at the state level. The CAP assessment of state policies for women and families provides an opportunity to test and expand theory on the role of women in the legislative branch in state government. While women's legislative representation explains variations in Economic Policy Grades, political party plays that role with respect to Health Policy Grades. Table 1 summarizes the literature informing the scholarly understanding of the relationships between women's representation and policy outcomes.

Table 1: Summary of Literature Informing the Relationship between Descriptive and Substantive Representation

Factors Affecting Policy Outcomes	Theoretical Basis	Direction of Effect
Percent Female Legislators, 2009-2013	Cammisa & Reingold 2004; Beckwith & Cowell- Meyers 2007; Carroll 2001; Childs & Krook 2008; Flammang 1985; Mansbridge 1998; Poggione 2004; Thomas & Welch 1991; Thomas 1991	+
Percent Democratic Party, 2009-2013	Cowell-Meyers & Langbein 2009	+
Average of Neighbors' Grades	Berry & Berry 1990	+
Average Grades in Red/Blue States	Sylvester & Haider-Markel 2016	+
State Culture/Public Opinion	Brace et al 2002; Caughey & Warshaw 2016; Elazar 1984; Mead 2004; Erickson, Wright & McIver 1993; Miller 1991	+/-
Divided Control	Berry & Berry 2009; Crowley 2004; Heidbreder & Scheurer 2012	-
Governor has Line-Item Veto	Heidbreder 2012; Heidbreder & Scheurer 2012	+
State Economic Statistics 2013	Berry & Berry 1990	
State Unemployment Rate	Bernstein 1997; Crowley 2004	+
Percent below Poverty Line	Berry & Berry 1990; Heidbreder 2012	+
Percent over Age 65	Heidbreder & Schuerer 2012	+

Data, Model, and Method

In 2013, the Center for American Progress (CAP) graded all 50 states on their policies to improve women’s wellbeing using fourteen factors gauging economic security and thirteen factors capturing health policy in a state (Chu & Posner, 2013). The Economic Policy Grade includes the overall wage gap between women and men as well as separate wage gaps by race and ethnicity, poverty rates overall and by race and ethnicity, the presence of paid family leave and sick leave laws, access to and spending on early childhood education, and the presence of a higher-than-federal minimum wage. The Health Policy Grade includes rates of insurance

coverage by race and ethnicity, the state's position on Medicaid expansion, funding for reproductive services, and restrictions on abortion including the enactment of Targeted Regulation of Abortion Provider (TRAP) laws (see Appendix A).

The dependent variables, Health Policy Grade and Economic Policy Grade, range from A to F. These letter grades are converted to numeric values based on standard academic grading, where A equals 4.0 and F equals 0.0, resulting in an ordinal measure of policy outcomes. Appendix A contains detail on the individual policies comprising the Health Policy and Economic Policy grades. Tables 2 and 3 show the distribution of grades across states and also show the range of values taken by the dependent variables in this analysis.

Table 2: Values of the Ordinal Dependent Variable: State Economic Policy Grades, 2013

Letter Grade	Numeric Value	States
A	4.0	Hawaii, California, New York, New Jersey, Maryland
A-	3.7	Florida, Virginia, Vermont, Connecticut, Delaware
B+	3.3	Alaska, Washington, Rhode Island
B	3.0	Oregon, Nevada, Colorado, Illinois
B-	2.7	Arizona, Oklahoma, Arkansas
C+	2.3	Minnesota, Kentucky, Tennessee, North Carolina
C	2.0	Texas, Michigan, Ohio, New Hampshire
C-	1.7	Wisconsin, New Mexico
D+	1.3	Kansas, Iowa, Massachusetts, Pennsylvania
D	1.0	South Dakota, Louisiana, South Carolina, West Virginia
D-	0.7	Nebraska, Georgia, Maine, Missouri
F	0.0	Idaho, Utah, Montana, Wyoming, North Dakota, Indiana, Mississippi, Alabama

Source: Chu and Posner, 2013.

Table 3: Values of the Ordinal Dependent Variable: State Health Policy Grades, 2013

Letter Grade	Numeric Value	States
A	4.0	Hawaii, Connecticut, Delaware, Minnesota, Vermont
A-	3.7	Oregon, Colorado, Iowa, New Hampshire, Massachusetts
B+	3.3	Washington, New York, Maine
B	3.0	Alaska, California, New Mexico, New Jersey, Maryland
B-	2.7	Illinois, Rhode Island
C+	2.3	Nevada, Wyoming, Kentucky
C	2.0	Idaho, Montana, Michigan, West Virginia, Pennsylvania
C-	1.7	North Dakota, Ohio
D+	1.3	Nebraska, Virginia, Wisconsin
D	1.0	Utah, South Dakota, Missouri, Georgia
D-	0.7	Arizona, Arkansas, South Carolina
F	0.0	Kansas, Oklahoma, Texas, Louisiana, Indiana, North Carolina, Tennessee, Mississippi, Alabama, Florida

Source: Chu and Posner, 2013.

Women's representation is measured as the percent of the state legislature comprised of women *on average* between 2009 and 2013. Taking an average over time follows Cowell-Meyers and Langbein (2009) in their analysis of the link between descriptive and substantive representation. Unlike their study, however, this study does not use dichotomous indicators of the presence or absence of particular policies at the state level, but rather, grades in Tables 2 and 3 converted to numeric values ranging from 0 to 4.0.

Table 4: Descriptive Statistics (n=50)

Variable	Data Source	Mean	Min.	Max.
Health Policy Grade 2013	Chu & Posner, 2013	1.99	0	4
Economic Policy Grade 2013	Chu & Posner, 2013	2.02	0	4
Avg. Neighbor States' Health Grades		1.84	0	4
Avg. Neighbor States' Econ Grades		1.82	0	4
Health Policy Red/Blue Avg. (2012)		1.91	0.95	2.80
Econ Policy Red/Blue Avg. (2012)		1.94	1.15	2.67
State Culture	Mead 2004	4.97	1	9
Public Opinion on Women's Issues	Brace et al 2002	1.43	1.01	1.79
Percent Female Legislators	NCSL 2009-2013	23.93	10.46	39.40
Percent Democratic Party	NCSL 2009-2013	49.99	20.44	88.95
Divided Control (Executive/Legislative)	NCSL 2013	0.24	0	1
Term Limits for Legislators	NCSL 2013	0.30	0	1
Female Governor	CSG 2010	0.10	0	1
Governor has Line-Item Veto	CSG 2010	0.20	0	1
State Economic Statistics 2013				
State Unemployment Rate	BLS	6.73	2.9	9.6
Percent below Poverty Line	Bureau of the Census	14.69	8.7	22.7
Percent over Age 65	Bureau of the Census	14.41	8.9	18.6

Table 4 provides means, minima, and maxima for all variables in the model. The unit of analysis is the state, resulting in 50 observations for 2013. The average of women's representation in state legislatures between 2009 and 2013 ranges from 10.46 percent (South Carolina) to 39.40 percent (Colorado). Appendix B provides detail by state and by year of this key independent variable. The average proportion of legislatures comprised of members of the

Democratic Party between 2009 and 2013 range from 20.44 percent in Wyoming to 88.95 percent in Hawaii. The Average of Neighboring States' Grades is calculated from Health Policy and Economic Policy grades, and for each state is equal to the average of all bordering states' grades. The Average of Similar States' Grades is calculated from CAP State Policy Grades and states are categorized red or blue according to 2012 presidential election results. For Health Policy, blue states earn B-minus grades (2.80) on average and red states average D-minus grades (0.95). For Economic Policy, blue states average C-plus grades (2.67) and red states average Ds (1.15). Elazar's (1984) state culture variable measures state culture from 1 to 9, with higher scores indicating a more conservative state culture and lower scores indicating a more liberal one. A dichotomous variable is used to measure partisan control in the legislative and executive branches (per the National Conference of State Legislatures, NCSL). Nineteen states had unified Democratic majorities, power was divided between the executive and legislative branches in 12 states, and 19 states had unified Republican majorities. Finally, a series of measures capture external factors. On average, about 14 percent of the population is over 65, and about 15 percent of state populations are living below the poverty level in 2013. This official rate of poverty matches national averages, with as few as 8.7 percent in New Hampshire and nearly a quarter in Mississippi in 2013.

Health and Economic Policy grades are modeled as functions of state-level institutional factors such as legislative professionalism and whether the governor has line-item veto authority, as well as demographic characteristics. The strength of this model lies in the specification of the dependent variables— Health and Economic Policy grades—for they are unlike dependent variables found in much of the innovation literature in that they are not dichotomous. The weakness of this model arises from the availability of data: Policy grades are available for only

one year. Because event-history data are not available, event history analysis cannot be used here. In the next section, results of multivariate regression analysis are discussed in light of the mean values above. Regression analysis results demonstrate that increasing women's representation in state legislatures improves Economic Policy but not Health Policy, even when controlling for external conditions, demographics, or policy diffusion from neighboring and politically-similar states.

Results: Is Representation Related to State Policy Grade?

State Economic Policy Grade

Following Berry and Berry (2014) this model includes both internal/motivation and resource factors and external/diffusion factors. Following Caiazza (2004) and Schwindt-Bayer and Mishler (2005), these relationships were initially estimated using instrumental variables in a system of simultaneous equations. However, post-estimation tests of endogeneity and of the strength of instruments do not support the use of the single equation instrumental variables model; results do not allow us to reject the null hypotheses that all variables are exogenous and that the instruments are weak. The model is run again to regress State Economic Policy Grade on Women's Representation (2009-2013), partisanship (Democratic party representation, divided control), demand for economic policies (unemployment rate, percent below poverty, percent over age 65), policy diffusion (bordering states' grades, politically-similar states' grades), state culture, and a measure of public opinion on women's roles in the public and private spheres, which is an additional measure of state culture. Results shown below are from ordinary least squares (OLS) estimation. The model was run using ordinal logit and obtain tighter results with the signs on all independent variables the same as when run using OLS. Because OLS

coefficients are directly interpretable and logistic regression results are not—yet the coefficient signs and statistical significance are the same in both—OLS results are reported below.

Table 5 shows the correlation between women's representation and State Economic Policy. Post-estimation tests support this model's specification with respect to normality and independence assumptions. The model performs very well considering the small number of observations, explaining fully 67 percent of the variation in Economic Policy Grade. Women's legislative representation in elective office increases a state's policy grade: A one-standard-deviation (0.0663) increase in Women's representation increases state grade by $(0.0663) \times (5.967) = 0.3965$ points; from the mean grade of C (2.0) to C+ (2.40). Women's legislative representation increases the state's economic policy grade, even when accounting for the effect of the Democratic Party in the legislature, political culture, and diffusion from other states. Women's representation in state legislatures improves economic policy outcomes for women, even when controlling for other factors affecting policy adoption such as economic conditions and unified party control.

Table 5: Results from Regression Analysis (Y=Economic Policy Grade)

Independent Variable (X)	Relationship to Policy Grade (Y)	Standard Error
Percent Women in Legislature, 2009-2013	5.97**	2.71
Percent Democratic Party, 2009-2013	2.01*	1.16
Female Governor	0.30	0.53
Political Culture	0.25***	0.08
Divided Control	-0.47	0.33
Unemployment Rate	0.14	0.12
Percent Below Poverty	-0.13*	0.07
Percent Over Age 65	-0.08	0.09
Line Item Veto	-0.64*	0.35
Bordering States' Average Grade	-0.12	0.18
Politically-Similar States' Avg. Grade	0.83***	0.30
Public Opinion	-0.25	1.17
Constant	-0.38	2.56
Model F (12,37)	6.33***	
Model R ²	0.6725	
Number of Observations	50	

*** Statistically different from zero at the 0.01 level

** Statistically different from zero at the 0.05 level

* Statistically different from zero at the 0.10 level

Other factors affecting state Economic Policy Grade include Political Culture, Percent Below Poverty, Line Item Veto, and diffusion from similar states. The inverse coefficient on the variable Percent Below Poverty seems counterintuitive, but this relationship has been found in prior research (Heidbreder 2012) and is interpreted as politicians' reluctance to appear to cater to particular constituencies; in this case, the poor. Coefficients of other leading factors—use of the line-item veto and policy diffusion—are in the expected directions as well (Berry & Berry 1990; Heidbreder & Scheurer 2012).

State Health Policy

Table 6 shows the results of regression analysis of the relationship between women's representation and Health Policy Grade. The model explains more than 80 percent of the variation in Health Policy Grade—and like the Economic Policy Grade model—post-estimation

tests support the use of multivariate regression and confirm that the independent variables are not endogenous. Unlike the Economic Policy Grade model, however, partisanship and public opinion eclipse Women's Representation to explain a state's Health Policy Grade. The role of the Democratic Party in the legislative and executive branches, state political culture, public opinion on women's issues and policy diffusion from politically-similar states vary along with state Health Policy Grade, while the effect of Women's Political Representation is statistically no different from zero. The leading factor affecting Health Policy Grade is Democratic Party representation in the legislature. A one-standard-deviation (0.158) increase in Democratic Party representation increases state grade by $(0.158) \times (3.60) = 0.569$ points; from the mean grade of C (2.0) to C+ (2.57). State Political Culture is the second leading factor affecting Health Policy Grade: A one-standard-deviation (2.54) increase in the State Political Culture index decreases state grade by $(2.54) \times (-0.18) = 0.457$ points, holding other factors constant: From C to D+.

Table 6: Results from Regression Analysis (Y=Health Policy Grade)

Independent Variable (X)	Relationship to Policy Grade (Y)	Standard Error
Percent Women in Legislature, 2009-2013	2.24	2.18
Percent Democratic Party, 2009-2013	3.60***	0.93
Female Governor	0.26	0.44
Political Culture	-0.18***	0.07
Divided Control	0.46*	0.27
Unemployment Rate	-0.07	0.10
Percent Below Poverty	-0.06	0.06
Percent Over Age 65	-0.01	0.08
Line Item Veto	0.37	0.29
Bordering States' Average Grade	-0.08	0.15
Politically-Similar States' Avg. Grade	0.26	0.20
Public Opinion	1.24	0.95
Constant	0.08	2.09
Model F (9,40)	12.43***	
Model R ²	0.8012	
Number of Observations	50	

- *** *Statistically different from zero at the 0.01 level*
- ** *Statistically different from zero at the 0.05 level*
- * *Statistically different from zero at the 0.10 level*

The absence of any impact of descriptive representation on state Health Policy Grade may be due to the types of policies included by CAP. Appendix A lists these policies, which include issues that are both strongly aligned with gender gaps in policy preferences as well as issues that are less-well aligned with gender gaps in policy preferences. Among the former are insurance coverage rates for women by race and ethnicity, maternal and infant mortality rates, Medicaid expansion, and per capita numbers of OB-GYN service providers in a state. Among the latter are state plans to defund Planned Parenthood, the extent to which contraceptive needs are met in the state, the presence of TRAP laws, restrictive counseling and waiting-period restrictions for abortion services, and other bans on abortion. Health Policy Grade is based on all of these policies, both controversial and relatively uncontroversial, and the fault lines do not necessarily align according to a gender split in society. For example, Bratton and Ray (2002) examine the municipal provision of child-care services in Norway. Their results indicate demand for child-care services does not necessarily align by partisan split nor by gender split—but it is important to note that theirs is a different political climate than the US. Demand for child-care services arises from trends in children in various age cohorts: Increasing with increases in numbers of younger children and falling with the growth in older age cohorts. Child-care services, then, is not a “women’s issue”, but rather a “parent’s issue”. Similarly, health policy outcomes defined by CAP cover a range of issues that do not necessarily vary by sex. Important factors affecting men’s and women’s attitudes about abortion rights and contraception include “education, age, religious attendance, and political identification being the most consistent” (Bolzendahl & Myers 2004, p. 782). Without disaggregated information on state grades by individual policy, one is left with the consolidated Health Policy Grade that covers issues

aligning according to factors other than sex. For this reason, partisanship emerges as the leading factor explaining variation in state grades on health policy, not women's legislative representation. In sum, results from regression analysis confirm the positive and statistically-significant relationship between women's representation in elective office and policy outcomes to support women's economic security but not health policy outcomes. Political party explains variations in state Health Policy Grades. This analysis confirms the link between descriptive and substantive representation and contributes to policy innovation theory in one area—Economic Policy—but not in another—Health Policy. Despite care taken to conduct this research, these results face important limitations. With one year of data, these results lack generalizability. In addition, the cross-sectional nature of the analysis prevents claims of causality between women's political representation and health and economic policy outcomes.

Conclusions and Directions for Further Research

Women's representation is linked to important policy outcomes, but how gender organizes policy outcomes is complex, and varies across policy types. Increasing women's representation in state legislatures appears to correlate to improved economic policy outcomes for women and families, even when accounting for state economic conditions, demographics, policy diffusion from neighboring states, women's caucuses, and unified or divided political control of a state. The Center for American Progress' state-by-state grades along with data on women's representation in state legislatures are combined to demonstrate how descriptive representation translates into substantive representation at the state level. The strength of the model is in the specification of the dependent variable, which is not dichotomous as is found in much of the innovation literature. Its weakness is in the duration of data available, which

precludes use of event history analysis. In addition, while the results are discussed in causal terms—women’s representation affecting state policy grades—these cross-sectional data do not support the direction of causality imposed here. While these results presume that gender structures policy outcomes, other scholars suggest more research which investigates how politics organizes gender (Sanbonmatsu, 2010), and the research questions posed here may benefit from a similar alternate causal map. Similarly, there may be a third unobserved variable across the states that explains both changes in women’s legislative representation and policy outcomes (Levine, 2011).

Further research on state-level policy adoption might also examine how policy types—whether in terms of costs and benefits (Bernstein, 1997; Nowlin, 2011) or in terms of Lowi’s typology and women’s policies (Newman, 1994)—are championed and by whom. Further research might also take a qualitative approach and interview male and female legislators about bills that were *not* introduced and inquire into the reasons why some legislation is backed and others not. The role of male legislators in women’s policy development could be examined, as well, as should the absence of any relationship to state Health Policy Grades. Finally, the results and implications of this study are limited by the availability of a single year of State Policy Grades. Future research could attempt to replicate the CAP state grade analysis for multiple years and gauge the effects of changing levels of women’s representation on policy outcomes for women and families. This study confirms the link between descriptive and substantive representation of women at the state level; examining this outcome over time would deepen the scholarly understanding of policy innovation, adoption, and diffusion.

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Appendix A: Components of State Health and Economic Policy Grades (Chu & Posner, 2013)

Economic security factors	
Overall wage gap for women	Calculations based on data from the U.S. Census Bureau, 2012 American Community Survey (U.S. Department of Commerce, 2013).
Wage gap for African American women	Calculations based on data from the U.S. Census Bureau, 2012 American Community Survey.
Wage gap for Hispanic American women	Calculations based on data from the U.S. Census Bureau, 2012 American Community Survey.
Percentage of total female population that would be impacted by raising the minimum wage to \$10.10 per hour	Economic Policy Institute, "Characteristics of workers who would be affected by increasing the federal minimum wage to \$10.10 by July 1, 2015" (2013), available at http://www.epi.org/files/2013/EPI-federal-minimum-wage-state-impact.pdf .
Overall poverty rate for women and girls	U.S. Census Bureau, 2012 American Community Survey, Table C17001.
Poverty rate for African American women and girls	U.S. Census Bureau, 2012 American Community Survey, Table C7001B.
Poverty rate for Hispanic American women and girls	U.S. Census Bureau, 2012 American Community Survey, Table C17001I.
Poverty rate for Asian American women and girls	U.S. Census Bureau, 2012 American Community Survey, Table C17001D.
Poverty rate for Native American women and girls	U.S. Census Bureau, 2012 American Community Survey, Table C17001D.
Paid family leave laws	National Partnership for Women & Families, "Advancing a Family Friendly America: How Family Friendly Is Your State?", available at http://www.nationalpartnership.org/issues/work-family/family-friendly-america/family-friendly-america-map.html (last accessed September 2013).
Temporary disability insurance	National Partnership for Women & Families, "Expecting Better: A State-by-State Analysis of Laws That Help New Parents" (2012), available at http://www.nationalpartnership.org/research-library/work-family/expecting-better.pdf .
Paid sick leave	National Partnership for Women & Families, "Advancing a Family Friendly America: How Family Friendly Is Your State?"
Access to early childhood education	W. Steven Barnett and others, "The State of Preschool 2012" (New Brunswick, New Jersey: National Institute for Early Education Research, 2012), available at http://nieer.org/sites/nieer/files/yearbook2012.pdf .
Spending on early childhood education	Barnett and others, "The State of Preschool 2012."
Health factors	
Overall percentage of women uninsured	U.S. Census Bureau, "Model-based Small Area Health Insurance Estimates (SAHIE) for Counties and States," available at http://www.census.gov/did/www/sahie/ (last accessed September 2013).
Percentage of African American women uninsured	U.S. Census Bureau, "Model-Based Small Area Health Insurance Estimates (SAHIE) for Counties and States."
Percentage of Hispanic American women uninsured	U.S. Census Bureau, "Model-Based Small Area Health Insurance Estimates (SAHIE) for Counties and States."
State position on Medicaid expansion	Kaiser Family Foundation, "Status of State Action on the Medicaid Expansion Decision, as of September 3, 2013," available at http://kff.org/medicaid/state-indicator/state-activity-around-expanding-medicaid-under-the-affordable-care-act/ (last accessed September 2013).
Defunding Planned Parenthood and other providers' preventative health services	Guttmacher Institute, "Laws Affecting Reproductive Health and Rights: State Trends at Midyear, 2013," available at http://www.guttmacher.org/statecenter/updates/2013/statetrends22013.html (last accessed September 2013).
Percentage of contraceptive needs met	Jennifer J. Frost, Mia R. Zolna, and Lori Frohwirth, "Table 6." In "Contraceptive Needs and Services, 2010" (New York: Guttmacher Institute, 2013), available at http://www.guttmacher.org/pubs/win/contraceptive-needs-2010.pdf .
States with forced ultrasound provisions	Guttmacher Institute, "Requirements for Ultrasound" (2013), available at http://www.guttmacher.org/statecenter/spibs/spib_RFU.pdf .

Unconstitutional bans on abortion	Guttmacher Institute, "State Policies on Later Abortions" (2013), available at http://www.guttmacher.org/statecenter/spibs/spib_PLTA.pdf .
Restrictive counseling and waiting-period restrictions	Guttmacher Institute, "Counseling and Waiting Periods for Abortion" (2013), available at http://www.guttmacher.org/statecenter/spibs/spib_MWPA.pdf .
Targeted regulation of abortion provider, or TRAP, laws	Guttmacher Institute, "Targeted Regulation of Abortion Providers" (2013), available at http://www.guttmacher.org/statecenter/spibs/spib_TRAP.pdf .
Maternal mortality rate	National Women's Law Center, "Maternal Mortality Rate (per 100,000)," available at http://hrc.nwlc.org/status-indicators/maternal-mortality-rate-100000 (last accessed September 2013).
Infant mortality rate	National Center for Health Statistics, "Infant Mortality Rates, By State: 2010" (2010), available at http://www.cdc.gov/nchs/pressroom/states/INFANT_MORTALITY_RATES_STATE_2010.pdf .
Rate of availability of obstetrician-gynecologists, or OB-GYNs	U.S. Bureau of Labor Statistics, "Occupational Employment and Wages, May 2012," available at http://www.bls.gov/oes/current/oes291064.htm (last accessed September 2013).

Appendix B: Detailed Data on the Key Independent Variable**Women's Legislative Representation by State, 2009-2013 (NCSL)**

	2009	2010	2011	2012	2013	Average, 2009-2013
Alabama	0.121	0.129	0.136	0.136	0.136	0.132
Alaska	0.200	0.200	0.233	0.250	0.283	0.233
Arizona	0.311	0.322	0.344	0.333	0.356	0.333
Arkansas	0.237	0.23	0.222	0.222	0.170	0.216
California	0.275	0.275	0.283	0.283	0.267	0.277
Colorado	0.370	0.380	0.410	0.400	0.410	0.394
Connecticut	0.316	0.321	0.299	0.299	0.294	0.306
Delaware	0.242	0.258	0.258	0.258	0.258	0.255
Florida	0.238	0.238	0.256	0.256	0.225	0.243
Georgia	0.186	0.191	0.237	0.237	0.225	0.215
Hawaii	0.329	0.329	0.342	0.355	0.316	0.334
Idaho	0.248	0.248	0.267	0.276	0.257	0.259
Illinois	0.277	0.282	0.311	0.305	0.311	0.297
Indiana	0.213	0.213	0.213	0.207	0.207	0.211
Iowa	0.227	0.233	0.207	0.213	0.233	0.223
Kansas	0.285	0.303	0.273	0.273	0.236	0.274
Kentucky	0.152	0.159	0.181	0.188	0.181	0.172
Louisiana	0.153	0.160	0.160	0.111	0.118	0.140
Maine	0.290	0.290	0.296	0.296	0.296	0.294
Maryland	0.309	0.314	0.309	0.309	0.303	0.309
Massachusetts	0.260	0.260	0.240	0.245	0.255	0.252
Michigan	0.250	0.250	0.209	0.209	0.189	0.221
Minnesota	0.348	0.348	0.318	0.328	0.338	0.336
Mississippi	0.144	0.144	0.149	0.167	0.172	0.155
Missouri	0.208	0.223	0.228	0.239	0.218	0.223
Montana	0.260	0.260	0.240	0.240	0.280	0.256
Nebraska	0.204	0.204	0.224	0.224	0.204	0.212
Nevada	0.317	0.317	0.286	0.254	0.270	0.289
New Hampshire	0.373	0.370	0.245	0.243	0.328	0.312
New Jersey	0.308	0.283	0.283	0.292	0.292	0.292
New Mexico	0.304	0.304	0.268	0.277	0.277	0.286
New York	0.245	0.241	0.212	0.222	0.221	0.228
North Carolina	0.259	0.259	0.224	0.235	0.218	0.239
North Dakota	0.156	0.170	0.149	0.149	0.170	0.159
Ohio	0.205	0.202	0.227	0.235	0.235	0.224
Oklahoma	0.114	0.114	0.128	0.128	0.134	0.124
Oregon	0.278	0.289	0.278	0.289	0.289	0.285
Pennsylvania	0.146	0.154	0.174	0.170	0.178	0.164
Rhode Island	0.221	0.221	0.257	0.257	0.274	0.246

South Carolina	0.100	0.100	0.094	0.100	0.129	0.105
South Dakota	0.190	0.200	0.200	0.200	0.229	0.204
Tennessee	0.182	0.189	0.182	0.182	0.167	0.180
Texas	0.238	0.232	0.210	0.204	0.210	0.219
Utah	0.221	0.212	0.173	0.163	0.163	0.186
Vermont	0.372	0.372	0.383	0.389	0.406	0.384
Virginia	0.171	0.193	0.193	0.179	0.179	0.183
Washington	0.327	0.327	0.320	0.320	0.306	0.320
West Virginia	0.164	0.164	0.179	0.171	0.164	0.168
Wisconsin	0.220	0.202	0.250	0.242	0.250	0.236
Wyoming	0.178	0.167	0.144	0.144	0.167	0.160