

Do Women State Legislators Increase Educational Attainment with Higher K-12 Per Pupil Funding?

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Abstract

Theory suggests women in office prioritize “women’s issues,” which include education as it is strongly related to the antiquated gender role for women to head the private sphere. But, do states with more women in their state legislature have higher high school and college graduation rates? I examine the relationship between legislator gender and per-pupil K-12 funding as well as the effectiveness of states’ K-12 education. Utilizing state-level data, I analyze the differences in K-12 funding to address this question. I also include properties such as: the partisanship of legislators; states’ percent of residents with Bachelor’s degrees; median household income and other such variables. I find that although states with higher percentages of women do not fund K-12 education more per-pupil than other states, those states with higher percentages of women do have higher educational attainment levels. I also find increased funding leads to increased graduation rates at the high school level but at the college level, limiting the power of early investment in education funding.

Introduction

Understanding the effect of bringing women into political office, such as following monumental elections like 2018 when women in both parties ran and won in record-breaking numbers, or, 1992's "Year of the Woman" when a surge of women ran for office following the confirmation of Clarence Thomas to the Supreme Court, is invaluable for not only voters but also for women seeking to someday run for office. (Swers and Rouse 2011). Many researchers who have been similarly drawn to this field of inquiry have focused on women legislators' efficiency in various aspects of lawmaking, mostly relating to their ability to pass bills, including but not limited to "women's issues" bills (Saint-Germain 1989; Volden, Wiseman and Wittmer 2013). I build on their theories in order to examine the effects of states having higher percentages of women in their state legislators on the per-pupil spending in K-12 education. I utilize the term "legislator gender" when describing a legislator identifying as a man or woman for the purposes of this research. This is to better identify specifically how women practice substantive representation to advocate for women's issues, primarily K-12 education.

Theory

Research of the last 30 years demonstrates women practice substantive representation by focusing on "women's issues" when elected to their state legislatures (Saint-Germain 1989; Sanbonmatsu 2003; Thomas and Welch 1991; Volden, Wiseman and Wittmer 2013). Scholars such as Saint-Germain focus primarily on women legislators' effectiveness in passing bills within the sphere of traditional women's interest (Saint-Germain 1989). Bills covering the subjects of abortions, children, education, family, sex, and more were identified as traditionally women's interests (Saint-Germain 1989). Education is deemed an area of policy related to care

of children and home, in which women's traditional gender role in the private sphere would usually control, and hence once women enter into the public sphere there is assumed crossover, which previous research has found to exist (Swers 2016; Thomas and Welch 1991).

Other researchers, such as Volden, Wiseman, and Wittmer, have chosen not to solely focus on women legislator's ability to pass women's issue bills, but their overall effectiveness at maneuvering the various steps of the political arena to push their proposals through from introduction to law enactment (Volden, Wiseman and Wittmer 2013). Volden and his co-researchers developed an LES (Legislator Effectiveness Score) for each legislator and found that women are more successful at certain levels of the legislative process on the national level, especially in their ability to reach across the aisle in support of their bills. (Volden, Wiseman and Wittmer 2013). Unlike Saint-Germain's interest-driven approach, which highlighted the content of the bills in question, Volden and his co-researchers instead look at not just how successful women are in passing their laws, but also how they advocate for those laws (Volden, Wiseman and Wittmer 2013). The value in these past works is that they demonstrate women not only legislate differently than men in what they advocate for, but how they advocate, as well as demonstrating women can be more successful than men in many aspects of legislating, not just in enacting their own legislation (Thomas 2002; Volden, Wiseman and Wittmer 2013).

These past works have established a set of policy concerns that fall under categories of "women's issues," including reproductive and health care laws, child and family laws, and education policies. Further, these works have established that women at the federal level of government have proven to be more successful at advocating for their legislation and getting it enacted into law. With this understanding that women at the national level can substantively

represent their constituents, is it also true women in state governments should be able to also have success in enacting more liberal legislation?

Women are often seen as the more liberal of the genders, as historically reflected by vote choice and public opinion on matters such as privacy and abortion rights (Swers 2016; Thomas 2002). This liberalism associated with women translates to more liberal policies that often expand the responsibility of the government to offer more welfare to its citizens in the form of healthcare, childcare, and education regulations (Swers 2016). Understanding women's liberal tendencies, although not guaranteed in the highly partisan times of today when party lines are becoming increasingly difficult cross, compounds on the theory that women are more effective at legislating by giving further insight into how they are representing their constituents (Swers 2016). The relevance of women in office having greater levels of liberalism to the research in this paper is that those who have more liberal ideologies about the government's function and responsibilities are shown to back a "larger government" that supports more aid from state and federal governments to their citizens (Swers 2016). This aid can possibly come in many forms beyond direct financial assistance to the people, including expanding affordable healthcare, reproductive rights, and the interest of this paper, higher K-12 funding. This theory is the basis for my primary hypothesis.

Primary Hypothesis: States with higher percentages of women in their state legislatures will allocate more funds per pupil to K-12 education compared to those with higher percentages of men.

In order to put these results into perspective, I also examine the impact that funding has on high school and college graduation rates. According to a 2018 study by Corbin L. Miller, there is up to a 4.4 percent increase in graduation rates for every 10 percent increase in funding

(Miller 2018). Although Miller utilizes district-level data in a select number of states, I will apply this theory to test state-level data for per-pupil funding and graduation rates (Miller 2018). Jackson (2017) performed a similar study of 28 states and found a 10 percent funding increase raises the graduation rates of students (Jackson 2017). I test this theory on the state-level for the 50 states with my secondary hypothesis.

Secondary Hypothesis: States with higher per-pupil k-12 funding will have higher high school graduation rates.

According to the 2021 American Council of Trustees and Alumni (ACTA) report (“The Cost of Excess: Why Colleges Must Control Runaway Spending”), despite funds flooding colleges nationwide there has been no correlation between increased spending on student services and graduation rates (ACTA 2021). Funding on services has grown considerably faster than funding on instruction, however, the cost of tuition continues to rise and exceed inflation (ACTA 2021) (Webber Ehrenberg 2009). Although most research on the relationship between education funding and higher education success utilizes instructional or student services spending, recent research suggests these factors do not influence funding or attainment (e.g , ACTA 2021). Accordingly, I take a different approach and evaluate the relationship between K-12 funding and student success and educational attainment. I test how effective funding at the K-12 level is at achieving the proclaimed goal of producing college-ready students. To do this I developed my tertiary hypothesis.

Tertiary Hypothesis: States with higher per-pupil k-12 funding will have higher percentages of their population with a Bachelor’s degree.

As past research has shown that women in the legislature are both more effective and more liberal, I will narrow the interest of this paper to one specific policy in which I analyze how

women in state office affect per-pupil K-12 funding. I draw my control variables from similar projects to obtain a similar level of analysis (Chatterji 2018, Swers 2016, Zdunek 2017). As for my secondary and tertiary hypotheses, I utilize many socio-economic controls that past research suggests impacts graduation rates at the high school and 4 year university level. The following section explains the variables I used in testing these hypotheses and how I utilized them.

Data and Methods

I analyze state-level data, accumulated from various sources, to determine whether states controlled by legislatures with higher levels of women in office allocate more funds to K-12 education than those who have higher levels of men in state office. The first database utilized in building this dataset was World Population Review (WPR) (World Population Review 2021). Variables drawn from WPR include states' per-pupil K-12 funding. The Center for Women in American Politics (CAWP) offer data for the states' women legislator percentages, in both houses of the states' governments (Center for Women in American Politics 2020). Another source for important data in this research was the U.S. Census Bureau's database, where I gather population demographic information which serve as controls in my models.

To assess educational funding, I utilize data on per-pupil expenditures for each state. This measure is accounted for with the variable *perpupspend* (data from WPR's 2021 report on per-pupil funding in each state). In order to accurately isolate this variable's effect, I control for the dominant party of each state's legislature with the variable *partyctrlx*. This variable is coded as a dummy variable (0 for non-republican control and 1 for republican control). The party dominating a state legislature is an important control when researching causes of economic changes such as a differing per-pupil funding allotment, especially in a highly polarized political climate when one's party is synonymous with a strict ideology (Swers 2016). Because of this

anticipated effect, it is to be expected that the dominating party in a state should be telling of the economic choices it will make; liberal democrats can be expected to give more to the social program of K-12 education while the conservatives are expected to withhold (Swers 2016). If party control does affect education funding, theory suggests the more conservative states will allocate less than their liberal counterparts and should produce a negative effect in the results..

I also control for states' education by accounting for residents 25 and over with a bachelor's degree with the variable *bapct*. This variable draws from the National Center for Education Statistics (NCES) 2019 data on states' residents over the age of twenty-five that have a bachelor's degree (National Center for Education Statistics 2019). The theory behind including this particular education measure in the model is that voters who have higher levels of education will not only be more politically active but also value education support from the government (Chatterji 2018). Although K-12 funds are not set by the voters, they are possibly influenced by the legislators voted in by them and thus the education levels of the voters is an important measure to control for in research relating to education policies such as this (Chatterji 2018, Thomas 2002, Volden, Wiseman and Wittmer 2013).

To account for financial variations in each state that can affect states' resources or demand to fund K-12 education I include resident income in each state with the variable *incpercap2020*. This variable comes from the Federal Reserve Economic Data's (FRED) 2020 study on personal income per capita (FRED 2020). The reasoning behind utilizing an economic variable based on the residents' income is that it will affect the states' income tax revenue that forms the basis of public funds, and has long been held as the strongest indicator of educational expenditures (Hadley 1985). Understanding that higher incomes mean higher income taxes and

thus more revenue to utilize for public expenditures such as K-12 education, I would expect this variable to be positively correlated with per-pupil funding (Hadley 1985).

Considering the drastic differences in politics and culture throughout the United States, I also controlled for whether a state was Southern or not with the variable labeled *south*. *South* is a dummy variable (0 = nonsouthern states and 1 = southern states). With this indicator, I should be able to tell whether or not cultural differences that exist in the south compared to the rest of the country affect K-12 funding.

Other control variables I utilized were states' percent of minorities. I utilize three variables that account for major minority groups around the country, *blackpct*, *hisppct*, and *asianpct*. This data also from WPR accounts for each states' percent of Black or African-Americans, Hispanics or Latinos, and Asians, respectively, in a state's population (World Population Review). The reasoning behind controlling for race is that it has been theorized that communities with higher percentages of minorities in their population will receive more assistance from their governments (Swers 2016).

The final variables included in my first model were controls for non-state funding, such as *localfund21* and *fedfund21*, to account for the number of funds a state utilizes for education that does not come directly from its own coffer and is out of legislator control. This control serves to better isolate the effect of the state's government on funding. K-12 education, according to the Peter G Peterson Foundation, is largely funded by local and state dollars in comparable amounts; if this is true I expect to see the local funding variable and legislature gender percentage variable to both be positively related to per-pupil funding (Peter G Peterson Foundation 2021). I gathered data on how much local, state and federal funding each state utilizes for K-12 funding from Education Data Initiative's 2021 publication by Melanie Hanson

to control for non-state funds (Hanson 2021). Moreover, there is a distinction between high school and college funding. Both funding types utilize state funds. However, high school and other K-12 schools rely more on local funds while colleges utilize more federal funds.

As for testing my secondary and tertiary hypotheses, I relied on theories of graduation success. They differed slightly for high school and college due to the different socio-economic realities of high school and college students and the varied external stressors to academic success. A 2015 issue brief entitled “Factors Influencing High School Graduation” prepared for the Washington Student Achievement Council by Barbara Ritter details the major indicators of high school success (Ritter 2015). Ritter outlines the most significant factors for high school completion include socio-economic status and family structure (Ritter 2015). For this reason, I kept income per capita as a control in the high school model and also included a single parent percent of a state’s population and a divorce rate of the states. These variables were gathered from a 2021 Stacker article using U.S. Census American Community Survey 2018 5-year estimates and WPR’s 2021 data, respectively (Stacker 2021, WPR 2021). Given the differing levels of funding from the local and federal government, I only included the former in my high school model and the latter in the college model, ensuring the models encapsulated the two major funding sources theory says they rely on (US Department of Education 2014). According to the US Department of Education, the majority of K-12 funding is sourced from state and local governments; for that reason I only found it necessary to control for local contributions in my analysis (US Department of Education 2014). Further, most of the funding for 2- and 4-year universities comes in the forms of federal grants, student aid, and contracts (DataLab 2018, Mitchell, Leachman, and Saenz 2019).

To account for the socio-economic factors that impact high school and college students, I also included the unemployment rates and cost of living in the states. Theory states that whether these factors impact the students directly or their parents, higher costs of living and unemployment rates will increase dropout rates for students at the high school and college-level alike (Jackson 2017, Ritter 2015, St. Amour 2020). According to data from the U.S. Bureau of Labor Statistics (BLS), “those with more education have higher earnings and lower rates of unemployment than those with less education,” so we should see an inverse relationship between unemployment rates and graduation rates (BLS 2016). The high cost of living is also found to be the significant economic deterrent from graduation rather than high tuition costs, according to new studies as cited by Madeline St. Amour in her 2020 article for *Inside Higher Ed* (St. Amour 2020). For that reason, I include these controls in both graduation models. To further narrow the high school model, I also control for the funding towards teacher pay as theory has shown that increases in teacher pay can lead to a decrease in dropout rates of high school students (Loeb and Page 2000).

I will test these aforementioned hypotheses with Ordinary Least Squares (OLS) Regression. The reasoning behind choosing this method of testing is due to the nature of my data. As I have aggregated interval level data this is the most appropriate analysis. I explain the regression models in the following section.

Models

The first model I test is a multiple regression with controls. My dependent variable, per-pupil k-12 funding, and independent variable, legislator gender, and I add the previously mentioned control variables mentioned to avoid spurious results.

Model 1, Legislator Gender Effect with controls:

Per Pupil K-12 Funding = Women State Legislators

- + *Party Control of Legislature*
- + *Resident Education*
- + *Resident Income*
- + *Southern States*
- + *Residents' Race (Black, Hispanic, Asian)*
- + *Federal Funding*
- + *Local Funding*

Model 2, Per-Pupil K-12 Funding effect on High School Graduation Rates with controls:

High School Graduation Rates = Per Pupil K-12 Funding

- + *Resident Income*
- + *Cost of Living*
- + *Unemployment Rate*
- + *Southern States*
- + *Residents' Race (Black, Hispanic, Asian)*
- + *Local Funding*
- + *Single Parent Households*
- + *Divorce Rate*
- + *Teacher Pay*
- + *Women State Legislators*

Model 3, Per-Pupil K-12 Funding with controls:

College Graduation Rates = Per Pupil K-12 Funding

- + *Resident Income*
- + *Cost of Living*
- + *Unemployment Rate*
- + *Southern States*
- + *Residents' Race (Black, Hispanic, Asian)*
- + *Federal Funding*
- + *Single Parent Households*
- + *Divorce Rate*
- + *Women State Legislators*

Findings

Turning to the findings, in Model 1, there is an insignificant negative effect of percentages of women in state legislatures on per-pupil funding; an unexpected result, and a rejection of the first hypothesis. The local and federal funding variables are both positive and significant at the $p < .01$ level, however they display relatively small coefficients.

In terms of demographic variables, higher Asian population in a state results in larger per-pupil funding; the inverse is true for a state's Hispanic population. A state's African-American population is not statistically significant, and neither is the South variable. However, diagnostics on South and African-American variable indicates they highly correlated and are pulling on each other in the model.

Consistent with theory, states with higher income allocate more funds per-pupil than states with lower incomes ($p < .05$). This result is expected as states with higher per capita income have more taxable revenue to utilize for K-12 education than the poorer states.

Model 1 performs well as confirmed by post-estimation diagnostics. Breusch-Pagan and White's tests confirm no evidence of heteroskedasticity. Furthermore, tests for omitted variable bias (Ramsey and Link tests) indicate an appropriate model (Ramsey test indicated no omitted variable bias; Link test suggested omitted variable bias, though the model overall appears stable).

Table 1: Per Pupil Spending

Variable	Coefficient
Women Leg.	-38.92 (34.70)
Party Control	-1,256.04† (691.88)
Per Capita Income	.14* (.07)
Bachelors	-63.32 (87.18)
South	-830.84 (773.77)
African-American	15.37 (34.22)
Hispanic	-54.28* (23.16)
Asian	129.87** (47.91)
Local Funding	.67** (.12)
Fed. Funding	2.62** (.67)
Constant	1,361.51 (2976.82)
Adj. $R^2 = .83$	
$N = 50$	
<i>Note:</i> Standard errors in parentheses.	
**= $p < .01$; *= $p < .05$; †= $p < .10$	

The second model provides evidence for the second hypothesis as there is a significant positive relationship between both per-pupil spending and high school graduation rates. Additionally, the percent of women in the state legislature is positively related to high school graduation rates. Although women are not found to significantly increase per-pupil spending there is some evidence to indicate a relationship to higher levels of education attainment in a state and that state having a higher percent of women in their state legislature.

Interestingly, teacher pay was actually found to be negatively related to high school graduation rates counter to what popular theory suggests, though the effect is small. This result suggests that higher teacher pay diverts funds away from resources and extracurriculars that directly relate to student use and add utility to the student experience. Students perhaps feel the budget restraints of paying teachers more, decreasing students' ability to achieve in and enjoy their high school experience, which is perhaps the trade-off which happens to pay teachers more. However, more research is needed to better decode this relationship.

Also unexpectedly there was a negative relationship between higher local funding and high school graduation, as we would expect this result be the opposite as higher levels of money pushed into school students should cause students to excel, not drop out. One explanation could be that local governments which spend more of their funds on schools take away from available resources for the municipal infrastructure responsible for public transit and libraries. Students who come from low-income families or from a lower socio-economic status rely on more public services than students of higher incomes. Without the ability to reliably get to school, have access to Wi-Fi and computers, and books outside of the classroom, students are extremely limited in their ability to excel. However, the coefficient suggests this feature is a relatively small negative impact on high school graduation rates.

Table 2: High School Grad. Rates

Variable	Coefficient
Per Pupil Spending	.00* (.00)
Per Capita Income	.00** (.00)
Cost of Living	-.01 (.02)
Unemployment	-.23 (.17)
South	-1.44* (.69)
African-American	-.01 (.04)
Hispanic	-.13** (.02)
Asian	-.09 (.06)
Local Funding	-.00** (.00)
Single Parent	-.80* (.32)
Divorce	-.24 (.20)
Teacher Pay	-.00** (.00)
Women Leg.	.09** (.03)
Constant	97.97** (3.87)

Adj. $R^2 = .82$

$N = 50$

Note: Standard errors in parentheses.

**= $p < .01$; *= $p < .05$; †= $p < .10$

The next most significant relationships to high school graduation rates are found to be income per capita and the percent of women in the state legislature ($p < .01$). Increases in women in the legislature are actually found to have a stronger impact on graduation rates than income

increases which suggests the answer to my initial research question is ‘yes,’ women do increase educational attainment, even if it is not directly through higher per-pupil funding.

The significance of higher-income states having higher high school graduation rates is consistent with theory; those who reap the benefits of going to school in a high-income area and/or are from high-income families are more likely to complete high school. The income per capita is predictably indicative of higher graduation rates at the high school level, as schools in high-income areas and states have more resources for students than those in low-income areas. Also, students of low-income backgrounds are less likely to complete high school than those who are from medium and high-income areas and households, which we can also gather from these results and as supported by theory.

As predicted, there are some negative relationships of interest in this model. These include the controls for southern statehood, high percentages of Hispanic populations, and high percentages of single parents in the states. The southern control has the largest coefficient of the model which shows a negative correlation between being in a southern state and graduating high school ($p < .05$). The Hispanic population control ($p < .01$) shows a clear negative relationship between high-Hispanic population states and lower high school graduation rates. Also as predicted, higher percentages of single parents in a state is indicative of lower high school graduation rates. Theory supports this result as growing up in a single-parent household comes with a multitude of family and economic stressors unique to the single-parent experience. This result is also one of the larger effects on the model as a whole, which supports this idea that having a single-parent is a significant stressor on children and their ability to succeed.

The rest of the included controls were not shown to be statistically significant, however, my model was shown to be stable and account for a large amount of variance in the relationship

between funding and graduation. Post-estimation diagnostics on this model indicate no problems of heteroskedasticity (Breusch-Pagan and White's tests) or omitted variable bias (Ramsey and Link tests). The second model is therefore stable and supports my second hypothesis.

Finally, I test my final hypothesis and evaluate the effects of higher per-pupil spending, at the K-12 level, on college graduation rates. Results are found in Table 3.

Table 3: College Grad. Rates

Variable	Coefficient
Per Pupil Spending	-.00† (.00)
Per Capita Income	.00** (.00)
Cost of Living	.04 (.03)
Unemployment	.54† (.30)
South	1.08 (1.20)
African-American	.08 (.07)
Hispanic	-.00 (.04)
Asian	-.23* (.11)
Fed. Funding	-.00 (.00)
Single Parent	-1.54* (.60)
Divorce	-1.08** (.35)
Women Leg.	.18** (.05)
Constant	26.89** (6.83)

Adj. $R^2 = .85$
 $N = 50$

Note: Standard errors in parentheses.

**= $p < .01$; *= $p < .05$; †= $p < .10$

This model does not support my hypothesis as the coefficient for per pupil spending is in the opposite direction as hypothesized. My theory as to why the coefficient is negative rather than positive is that I focus on K-12 education funding, not overall education funding. This focus means the funds I analyze do not directly apply to college students while they are in college. I seek to explore the relationship between higher K-12 funding that purports to create more “college-ready” students and college graduation rates. What the results demonstrate is these funds are not successful at this goal due to stronger socio-economic factors that apply to college students which outweigh the effects of higher investment in K-12 education. However, higher percentages of women in state legislatures are shown to have an increase in college graduation rates by about .18% for every 1% increase in women in a state legislature ($p < .01$). Notably, this impact is stronger than that of per capita income in the states. We cannot say definitively that women are the cause for higher graduation rates, however there is a significant relationship between the two and the effects may indeed operate through an indirect causal mechanism. Further research is needed to flesh out this phenomenon.

The socio-economic factors that have the strongest impact on college graduation rates are the percentage of single parents and divorce rates in the states. These variables are more significant in this model due to the fact that college students can fit into these variables themselves, unlike most high school students. As for economic factors, we see that income is also significant, however it has a relatively small impact on raising graduation rates. I postulate this minor effect is due to the fact that the cost of attending and completing college is so high that even with high income in a high-income area one is only slightly more likely to graduate. Unemployment rates and cost of living were not shown to have significance in this model at the $p < .05$ level (though unemployment is at the $p < .10$ level).

The final significant variable in this model is the percent of Asians in a state. What we find is that there is a decrease by about .23% for every percent increase in the Asian population of a state in college graduation rates. This relationship is significant at the 95% confidence level. It is congruent with popular theory; what it can tell us is that there are fewer resources being put forth for colleges in states with high levels of minorities, in particular Asian minorities. This does not say that Asians are less likely to graduate college, just that there are lower overall graduation rates in states where there are higher percentages of Asians.

Other controls utilized in this model were not found to be significant. The most surprising insignificance is the decrease in college graduation rates with higher federal funding. Although this is not completely against what we understand about the cost of college to students, it is surprising due to the bulk of federal funding to colleges is directed to student aid, including the Pell Grant. We would expect that high levels of federal funds that are mainly directed to the students will increase the college graduation rates, however the overall cost of attending college outweighs this aid which is why I believe federal funding is as statistically insignificant to graduation.

Just as in the previous models I utilized diagnostics to rule out heteroskedasticity and omitted variable bias. Utilizing the same tests I find no evidence of either in this model.

Analysis of Findings and Conclusion

First and foremost I must acknowledge and accept that I could not deny the null hypothesis with the data and models utilized regarding women state legislators' effects on K-12 spending. I am shocked to see their impact is so insignificant and what can be seen is negative. However, recent studies by Swers find there are "no gender effects on the decision to pursue

education initiatives” (Swers 2016). That finding could logically translate to a lack of funding along that same dimension, which my results suggest may very well be the case.

Additionally, polarizing partisanship has caused women, particularly in Republican controlled states, to cling to their party’s platform to stay in office and drop the lesser contested women’s issue of education. Alternatively, perhaps it is an effort of women in office to distance themselves from their prescribed gender roles as previously hypothesized by not actively adding to education funding in any significant way (Saint-Germain 1989). Since many women in the state legislature begin their political careers in local school districts and the state department of educations, this distancing could be a way to either show they do not favor certain services or to say they are more than just a single-issue politician and focus instead on the legislature that more directly relates to women (Swers 1998). Although both of these are reasonable explanations, perhaps the simpler and more plausible cause for this insignificant impact is that a majority of K-12 schools get their funding from their local school districts and municipalities, not from the state to begin with.

Despite the lack of support for my hypothesis, this is a line of inquiry into education policy and effects I believe is understudied. I believed women would be the ones giving more aid to teach our students, yet they only marginally affect funding *negatively*. Studying the conditions in which K-12 funding increases in the states, or perhaps in future studies on local or federal levels, can help further the understanding of not only effective education legislation, but the effects of effective *education*. Further research is necessary to decide if being able to provide ample resources to our schools to not only supply the education of children, but also to support the teachers, is crucial to promoting student success. Student success is what drives children to not only be more confident in their abilities, but seek higher education and be more active

participants in democracy and our government. The impact of education legislation on educating our future voters and leaders is far too under-studied to truly understand the relationship of K-12 education funding and future behavior of students.

Further, my findings regarding K-12 funding increasing educational attainment found mixed results. On one level I was correct: increased funds do provide for increased high school graduates. However, it does not appear these funds fulfill their entire duty of producing the college ready students the schools are advertising. These high investments in K-12 education do not appear to translate to success in college. Not at the fault of the high schools or teachers but at the fault of the economic demands that college students face with little assistance. The cost of college has skyrocketed in the last 25 years, alongside those rising tuition costs have been even higher living and housing costs. Not only that, but the availability of financial aid packages offered by the federal government and most universities overwhelmingly apply only to students of poverty or low-income, and up until the age of 24 most students are required to use the income of their parents rather than themselves for applicability for any financial assistance. As a result, for many students financial aid is not determined by their actual financial status, so many students do not qualify and are not able to keep up with school as they have to work to be able to afford attending college. The cost of going to college has been pushed onto the students, a cost that the data show is too high to keep up with, especially with more socio-economic stressors a person may encounter.

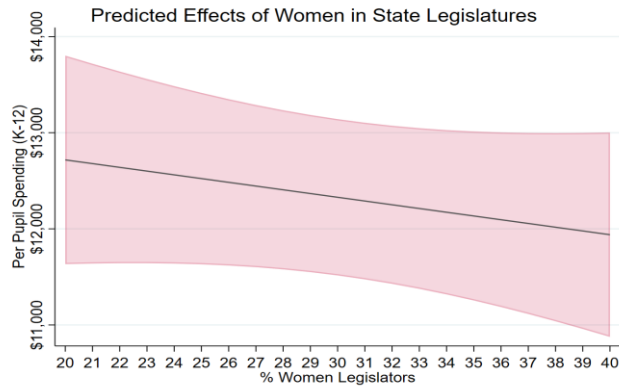
Affordable college is the most feasible way to increase college graduation rates, as we have seen that investing early is not enough to carry a student all the way to the end of their educational goal. This liberal view is perhaps the exact reason we see a correlation between higher percentages of women in state office and graduation rates at the high school and college

level. As previously stated, women have typically been the more liberal gender politically, perhaps as they push for more liberal agendas and advocate for more affordable higher education this could be the inspiring factor for college students to complete their education. Or perhaps the other social services provided by women in office provide an easier avenue for students to achieve higher educational attainment levels. However, correlation does not equate to causation and without the support for my first hypothesis, it is hard to say how higher percentages of women in the legislature affect these higher graduation rates. What this study demonstrates is states with more women in their legislature do have higher education attainment levels, but women are not the ones reaching this with an increase of funding. More research needs to be done on this exact relationship to decode how women are influencing graduation rates, however this is a significant find in what women add to their states when elected into office.

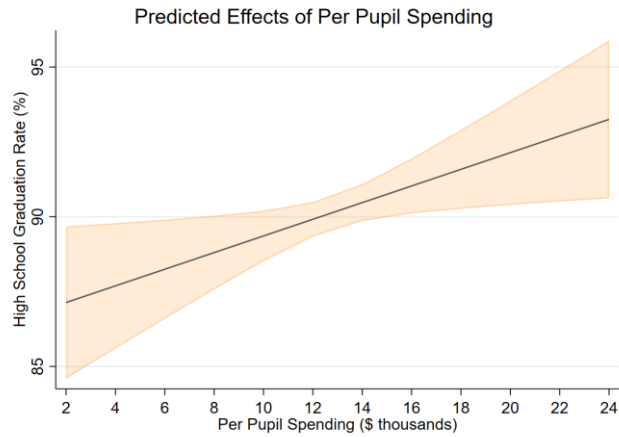
Acknowledgments:

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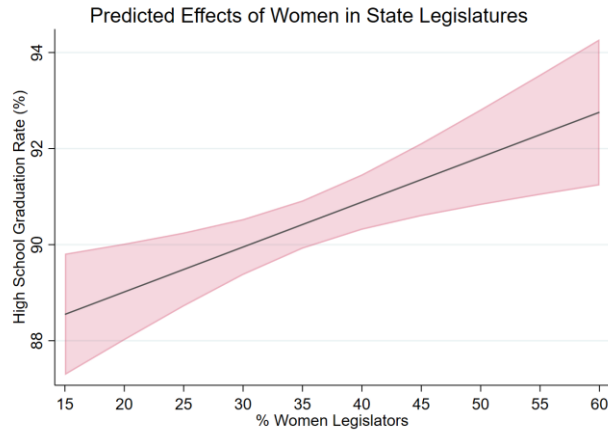
Appendix: Graphs



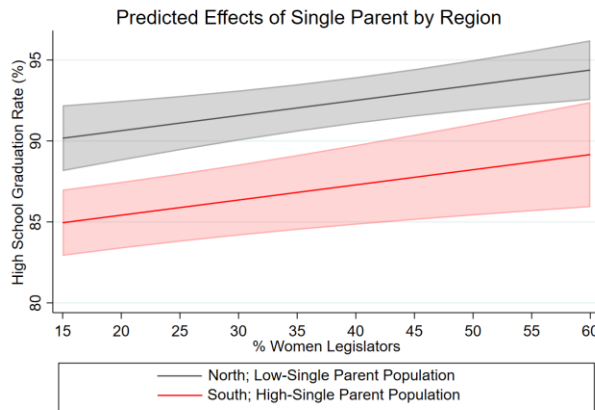
Graph 1: Predicted Effects of Women in State Legislatures on Per-Pupil Spending. We see a negative insignificant relationship in this graph.



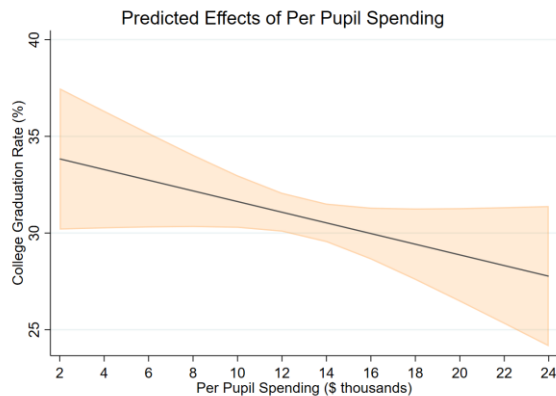
Graph 2: Predicted Effects of Per-Pupil Spending on High School Graduation Rates. We see a significant positive relationship.



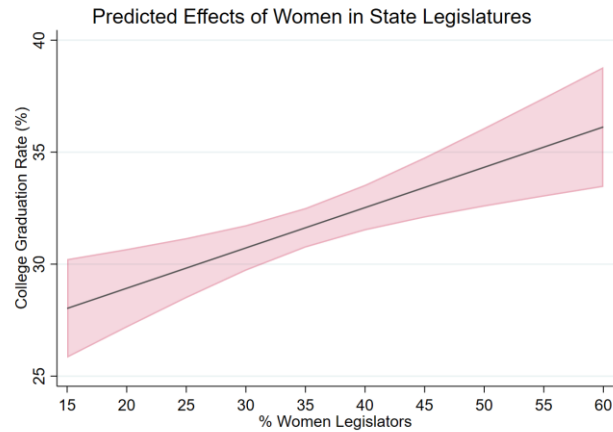
Graph 3: Predicted Effects of Women in State Legislatures on High School Graduation Rates. We see a significant positive relationship.



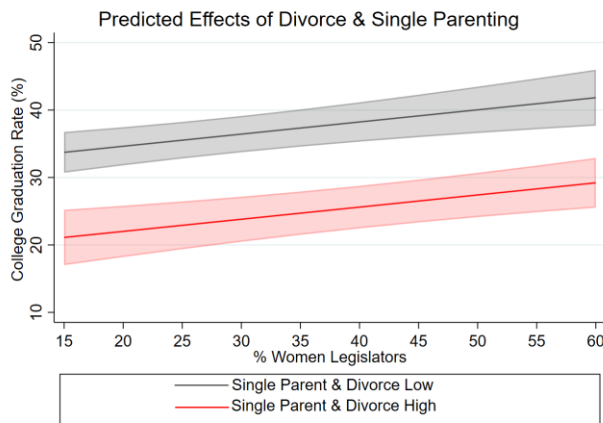
Graph 4: Predicted Effects of Single Parents by Region on High School Graduation Rates. We see a significant increase in non-southern students from single-parent homes graduating from high school compared to students from the south of the same circumstance. This shows that region plays a major role in graduation rates even when examining other effects.



Graph 5: Predicted Effects of Per-Pupil Funding on College Graduation Rates. We see a negative insignificant relationship.



Graph 6: Predicted Effects of Women in State Legislatures on College Graduation Rates. We see a positive significant relationship.



Graph 7: Predicted Effects of Single Parents and Divorce on College Graduation by Region. This graph shows an even more stratified difference in southern and non-southern society. While looking at single parents and divorce effect on college graduation is much stronger in the south, people experiencing those realities in the south are far less likely to graduate college than those in the north.

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