

Party, Wealth, and Legislative Activity since 1972

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Abstract

Much attention has been placed on the phenomena of rising inequality in the United States. It has been well established that the wealthy enjoy an ever growing share of the country's wealth. A recent body of scholarship has demonstrated the degree to which their influence extends into national political outcomes. Yet few studies have managed to lift the veil on how much influence the affluent had over policy in prior decades. I introduce a novel dataset on legislative outcomes which demonstrates that, as viewed through legislative outcomes, the influence of the affluent has been rising since 1972. I test whether this is a bipartisan trend or specific to a particular party. I find that Republicans produce more legislation when they represent wealthy districts in the modern era, while Democrats have always produced more legislation when they represent more educated yet less wealthy districts. I suggest that these changes reflect not only the increasing power of wealth, but also changing constituent preferences and the changing geographic base of each party. The kinds of representation preferred by Democrats versus Republicans is reflected in how the majority party creates policy. When Democrats were in control in the 1970s and 1980s, educated Democratic constituents preferred policy over constituent service. This was reflected in legislative productivity at the time; Democrats from educated districts produced more successful legislation. Conversely, in the modern era wealthy constituents tend to prefer policy over constituent service. Legislators, particularly Republicans, produced more successful legislation when they represented wealthy districts. Finally, Southern Representatives have always tended to produce more legislation when they represent wealthy districts, and this has been reflected in legislation as the South has gained power in the Republican party.

1 INTRODUCTION

For the past decade or more, economic privilege has translated directly to privilege in a wide variety of political outcomes, including policy, party platforms, and legislative activity. In the first chapter of this dissertation I demonstrate one mechanism for this political privilege: the socioeconomically advantaged are overrepresented in legislation because Republican representatives from socioeconomically underprivileged districts are disproportionately distracted by constituent service. Meanwhile, representatives from privileged districts disproportionately engage in legislation. These findings focused on the 113th Congress, or 2013-2014. Yet it is still unclear how long the influence of the affluent has persisted. It is clear that the economic power of the affluent has increased over the past fifty years, but few studies have systematically explored whether the political influence of the affluent has increased in a similar fashion.

There are indications that the power of the wealthy has increased in a variety of political realms. For one, we have seen that the disproportionate influence of the wealthy is a modern phenomenon in certain instances, such as ideological congruence (Canes-Wrone & Gibson, 2016; Rigby & Maks-Solomon, 2018). For two, changing campaign finance laws have increased the ideological sway of the elite (La Raja & Schaffner, 2015). Donations are increasingly coming from the economic elite and the disproportionate influence of the wealthy on policy in the modern era is due to the preferences of the elites and donors (Canes-Wrone & Gibson, 2016; Ellis, 2012). These changing donation patterns should be reflected in legislation and policy outcomes that favor the wealthy. It is also true that politicians are increasingly from elite backgrounds (Carnes, 2012, 2013). Politicians are swayed by their inner circles and backgrounds, so it could be that the increasing bias towards the wealthy is

partially due to this trend (Fallows, 2000; Fenno, 1978; Butler, 2014). While all of these trends indicate that legislation should increasingly favor the wealthy, no data has been able to reveal this pattern on a yearly basis, with the ability to disambiguate partisan and regional differences.

This chapter shows that representatives from wealthy districts produce more legislation relative to representatives from less wealthy districts than they did in the past. The influence of affluence in legislative outcomes is undoubtedly increasing.

Yet the data introduced in this chapter also reveals the role of partisanship. Republicans have historically been the party of the economic elite, so they should be more sensitive to the economic power of their base. Republicans have been the party of business interests and the wealthy for most of the last hundred years. Democrats have been the party of the ivory tower, the working man and minorities (Ansolabehere, Rodden, & Snyder, 2006; Gelman, Kenworthy, & Su, 2010; McCarty, Poole, & Rosenthal, 2006). This is consistent with evidence from other studies that show that Republicans are responsive to the interests of the wealthy, while Democrats are either more responsive to the interests of the poor or show no effect either way (Carnes, 2013; Ellis, 2016, 2013; Brunner, Ross, & Washington, 2013). The findings in the first paper of this dissertation show that the results are much more consistent for Republicans than they are for Democrats. That is, Republicans are disproportionately invested in legislation when they represent districts with many socioeconomically privileged constituents who are expected to care about legislative activity. Thus, it is likely that Republicans are primarily tied to the economic characteristics of their constituents, while Democrats are tied to non-economic characteristics of their constituents.

Additionally, Republicans are increasingly turning towards a trusteeship ver-

sion of governance (Barker & Carman, 2012). This seems to promote a bias towards conservative ideology that is not connected to the preferences of Republican constituents (Broockman, Carnes, Crowder-Meyer, & Skovron, 2017; Broockman & Skovron, 2018; Clinton, 2006; Lax, Phillips, & Zelizer, 2018). If it is true that the conservative ideology favors the interests of the economic elite, then this trend toward trusteeship should coincide with a trend towards favoring the interests of the wealthy.

Indeed, I show that the increase in legislative productivity by representatives of wealthy constituents is driven by the resurgence of Republican power. Democrats have never produced more legislation when they represent more wealthy constituents. Instead, they produce more legislation when they represent highly educated, yet often poorer, constituents.

For all that it is widely theorized that the wealthy are more influential than they used to be, there is also a general sense that the socioeconomically elite have generally held more sway over politics. When viewed from the lens of educational status as well as income, this is also reflected in legislative outcomes. While representatives of wealthy districts were not generally more legislatively successful prior to 1995, representatives of highly educated districts were. Thus, the socioeconomically elite were still favored, but the driving force came from representatives producing more legislation when they represented highly educated districts.

Evidence for the effects of time and partisanship on the influence of the affluent comes from a novel dataset covering forty years of legislative history. It that reflects the amount and success of legislative activity in Congress from 1972 through today, then connects it with socioeconomic characteristics of their constituents. This creates a historical profile of how members of Congress have represented different

constituencies. The dataset includes legislative, personal and professional information for members of Congress, and political and demographic characteristics from 1972-2014. It associates the legislative activity of members of Congress with the affluence of their districts, as well as other demographic district characteristics such as district education. While previous studies have used piecemeal evidence to look at the historical influence of the wealthy, this datasets covers forty-two years using a consistent measure and controls. The depth and breadth reveals not just the history of affluence, but also the differences between Republicans and Democrats. It also allows the results to be analyzed by region, which reveals some interesting patterns within Southern representatives.

Throughout, the magnitudes of these effects are substantial. In the modern era, Republicans from the districts in the top socioeconomic quartile sponsored an additional 0.37 successful bills compared to those representing the bottom quartile. The expected number of bills passed per Congressional session for a Republican from a district in the bottom quartile in this time period was 1.44, so this represents a 28% increase in legislative success compared to representatives from less privileged districts. Between 1973 and 1980, Democratic members of Congress did not sponsor more successful legislation when they represented socioeconomically privileged districts. However, they did sponsor more successful legislation when they represented districts with high levels of education. A Democrat representing a district at the top quartile of the education distribution sponsored an additional 0.19 more successful bills than a Democrat representing the bottom quartile. The average number of bills passed for an similar yet member of Congress per congressional session who represents a district at the bottom quartile of education in this time period was 1.55, so this represents a 13% increase. Overall, I show that legislative productivity

is increasingly associated with the wealth of the district a member of Congress represents. Yet this effect is driven by changing Republican legislative behavior and by changing national trends that have given Republicans control over Congress.

This dataset reveals the confounding influence of education prior to 1995, when Democrats were in control of the House of Representatives. It is a trope that Democrats are the party of ivy league intellectuals while Republicans are the party of the business elites. Under this ideological framework, Democratic preferences are going to be associated with high education, while Republican preferences will be associated with high income. Yet of course income and education are strongly tied to each other. The effects of the collinearity between education and income occasionally clash with the need to avoid omitted variable bias. I demonstrate one useful method to untangle the disparate effects of income and education, and apply it to replications of McCarty et al. (2006) and Burden and Wichowsky (2014). I show that the educational and economic characteristics of a district have disparate impacts on legislative outcomes and representational preferences. Additionally, Democrats and Republicans seem to be tied to educational and economic characteristics in very different ways.

While this dataset allows for a full across time comparison, it has some weaknesses. It focuses primarily on legislative behavior. The results are bolstered by data on the preferences of constituents for 1978 and after 2000. While the data on the preferences of constituents in the 1970s is far less extensive than from after 2000, the results are consistent. The socioeconomically based preferences of constituents are generally congruent with the ways in which representatives represent high versus low income, and high versus low education districts. Namely, the preferences of constituents between policy and constituent service are reflected in

how much focus members of the majority party devote to legislation. In the prior chapter I demonstrated that wealthy constituents preferred policy over constituent service. Republican representatives, who controlled the House, consistently focused more on legislation when they represented wealthy and educated districts. In 1978, Democrats controlled the House and Democratic constituents preferred policy when they were more educated instead of when they were wealthier. We see these preferences mirrored in how Democrats created legislation; Democrats representing highly educated districts produced more legislation in the 1970s and 1980s.

The Declaration of Independence holds that all men are created equal,” but does this mean that all men (and women) should be equal in political representation? One prominent theorist, Robert Dahl, encapsulated a common answer: yes, governments ought to be responsive to the interests of all citizens, considered as political equals (Dahl, 1972, p. 1). That is, citizens should be represented equally, regardless of socioeconomic status. This chapter demonstrates that social status has mattered for political representation, but in different ways for Republicans and Democrats. When in control of the House, Republicans in the modern era favor the wealthy and educated, while Democrats tend to favor the educated yet less wealthy.

2 BUILDING THEORIES of TIME and PARTY DEPENDENCE

Economic inequality has been rising in the United States. The past two decades have featured a clear and dramatic spike in the level of economic inequality. The wealthy, particularly the top 1%, are earning over 20% of the country’s income for the first time since 1930. Between the end of World War II and the beginning of Reagan’s

administration, the top 1% earned on average around 11% of the country's income (Saez, 2015). Meanwhile the poor have sunk into deeper poverty (Schlozman, Verba, & Brady, 2012, p. 73).¹ The United States started tracking individual incomes when it instituted a progressive income tax in 1913. The level of income inequality today is equal to or worse than the most unequal and precarious era in the 1900s: just prior to the Great Depression. The question then became whether this inequality was reflected in policy.

For three decades, scholars studying the politics of class focused on political engagement. A wealth of evidence showed that, by and large, the wealthy were more engaged in the political process. They knew more, were more likely to contact their representatives, were more likely to donate (McLeod & Perse, 1994; Verba & Nie, 1972; Schlozman et al., 2012). But the policy impact of this participation remained obscure.

Then, over the course of the past decade, political science gained the tools necessary to manipulate and analyze larger datasets that could reveal the political impact of the wealthy. This was timely, because skyrocketing economic inequality implied that the wealthy should also be gaining political power, as did the theory that politicians should be swayed most by their core circle, which is increasingly likely to be wealthy (Fenno, 1978; Carnes, 2013). These studies resulted in clear evidence of political bias towards the wealthy across a host of political outcomes. When the preferences of the poor and the rich diverge, policy reflects the preferences of the wealthy, particularly in safe districts with high inequality (Gilens, 2012a; Ellis, 2013). Senators are more responsive to the ideological and policy preferences

¹This depth of poverty is obscured by the poverty line. Although the percent of the population below the poverty line has not increased dramatically, the number of those below the poverty line who live in deep poverty has increased.

of the rich (Bartels, 2008). On foreign policy, most branches of government do not respond to the will of all constituents, instead focusing on the preferences of experts, business, and labor leaders (Jacobs & Page, 2005). In that study, the exception was the House, which has a history of being the most responsive branch of government to the will of the people. Without question, the rich are better represented than the poor. Looking at policy promises instead of policy outcomes, we can see the bias towards the rich in state party platforms (Rigby & Wright, 2013). From policy promises to policy outcomes, the influence of the affluent is evident.

This influence is increasingly attributed to Republicans more than Democrats. The increased power of the wealthy, for which we have both theoretical arguments and some empirical evidence, should be particularly strong for Republicans. Republicans took on the interests of the business class starting in the 1920s, and Democrats shifted towards the working class under Franklin Roosevelt (Ansolabehere et al., 2006). But the strength of these loyalties was diluted by racial issues. Democrats in the South had divided loyalties between representing more of the rich white elites than their Northern colleagues and the working class ideology of Northern Democrats. As the racial dimension subsided, Southern Democrats disappeared and left the business class interests to the Republicans. Thus, the tie between Republicans and the interests of the wealthy has become stronger over the past five decades, and Republicans should mirror this by representing the wealthy more effectively. Republicans also generally capture the votes of the wealthy when we examine votes on a district by district basis (McCarty et al., 2006). Thus, between ideology and the wealth of their base, Republicans should be more responsive than Democrats to the influence of the rich. This connection should be weaker prior to Reagan's presidency.

The evidence indicates that Republicans do represent the interests of the wealthy better than Democrats, particularly on economic issues. Republicans are more likely to match the ideologies of their constituents when their constituents are wealthy, whereas Democrats are more likely to match the overall ideological preferences of less wealthy constituents. On specific issues, Republicans matched the issues of the very wealthy better than less wealthy respondents (Rhodes & Schaffner, 2017; Rigby & Maks-Solomon, 2018). Republicans are more likely to vote in favor of bills that support the interests of the wealthy (Carnes, 2016; Brunner et al., 2013; Ellis, 2013). Republicans also tend to nominate more extreme candidates (Broockman et al., 2017), and are less open to compromises with liberals that might push policy away from the ideological right (Clinton, 2006; Glaser & Berry, 2018). Under the assumption that extreme conservative policies are more likely to favor the economic interests of the wealthy, these biases will also lead Republican legislators to favor the interests of the wealthy. Democrats also sometimes represent the preferences of the wealthy, but it is less frequent and tends to revolve around moral issues instead of economic issues (Rigby & Maks-Solomon, 2018).

This line of research generally validates the connection between preferences of constituents and the actions of their representatives. Whether the measure is policy preferences or overall ideology, the votes by legislators tend to reflect the preferences of their constituents, particularly in the House (Brunner et al., 2013; Erikson, Wright, & McIver, 1993; Highton & Rocca, 2005). The connection is not always perfect as Dahl's ideals demand. These exceptions tend to generate interest, but even the studies that show that the rich are more influential in policy show that this is a matter of degree instead of kind. The preferences of all people of all income levels are highly correlated with each other, and the preferences of the poor

are reflected in policy even though the connection is stronger for the rich (Gilens & Page, 2014). Legislators tend to be more extreme on issues than their constituents (Bafumi & Herron, 2010) but this can coexist with a correlation between the policy preferences of constituents and their representatives. On foreign policy, the House as a whole votes in a manner that is tied to the preferences of the public (Jacobs & Page, 2005). For the Senate, which tends to be less closely tied to constituents than the House, Senators reflect the preferences of registered voters, albeit worse than they reflect donor preferences (Barber, 2016). The tie between preferences of the poor or middle class and policy is the strongest for social policy (Gilens, 2012a). Overall, the predominance of evidence indicates that legislators tend to reflect the preferences of their constituents, although they are even better at reflecting they preferences of the wealthy.

Again, the differences between Democrats and Republicans is becoming evident in how politicians represent the policy preferences of their constituents. Democrats match the ideology of their constituents much more so than do Republicans (Rhodes & Schaffner, 2017; Lax et al., 2018). Both parties tend to overestimate the ideological conservatism of their constituents, but the effect is much stronger for Republicans (Broockman & Skovron, 2018). Republicans are more likely to engage in disagreement discounting with constituents they disagree with (Butler, Volden, Dynes, & Shor, 2017). This does not indicate that Republicans politicians do not generally match the preferences of their constituents, merely that Democrats are better at it.

While the representation of constituents through policy, the bias towards the wealthy, and skyrocketing inequality have been well established, the historical basis of the influence of the affluents has remained largely obscure.

There are many suggestions that the political power of the wealthy should

have increased along with their economic power. Campaigns have become increasingly expensive, increasing the value of those who donate. Since those who donate are generally wealthy, and the wealthy donate more, the relative value of the rich donors increases along with the increase in campaign costs. The composition of the legislative body has switched from being plurality farmer to plurality lawyer over the past century (Carnes, 2013). This should increase the number of politicians whose inner circle is wealthy. As Fenno (1978) argued, politicians listen to their inner circle more than other constituents, so this trend will bias them towards the interests of the wealthy. There are suggestions that the wealthy have become increasingly insular (Putnam, 2000), and as the legislative body is primarily drawn from the wealthy, they may have reduced visibility into the lives and needs of others. From the comparative perspective, more economically unequal societies tend to also be less politically equal (Rosset, Giger, & Bernauer, 2013). Although the increased economic power of the rich should track with increased political power, the empirical evidence has not yet been demonstrated systematically.

A few investigations have examined policy responsiveness from a historical perspective in the United States. They have not yet settled whether the influence of the affluent is a modern phenomena. There is some evidence that responsiveness to the poor may have been stronger in the past. Gilens (2012a) covers four years of the 1960s, then almost all years between 1981 and 2006, showing that overall policy responsiveness has increased for both the rich and the poor. There is also some indication that in the 1960s, policy responsiveness for the rich was dramatically reduced or nonexistent. This four year time period does not have statistically significant results, and there is no clear trend in policy responsiveness to the wealthy when presidential regimes are examined (Gilens, 2012a). There is no clear

However, Barker and Carman (2012) show that Republicans in general have turned towards an ideology that supports trusteeship democracy over the past forty years. Under trusteeship representation, the actions of Republican legislators do not necessarily need to reflect the interests of their constituents. Because Republicans tend to side with the interests of the wealthy anyways, poor constituents could expect to see Republican politicians support fewer and fewer of the policies they would prefer. Grossmann and Hopkins (2016) tend to agree that Republicans prefer ideology and character to specific policy interests, although they do not find evidence that this has increased over time.

Finally, McCarty et al. (2006) trace the impact of district socioeconomic characteristics on legislator ideology back over the past forty years. They find that wealthy districts are increasingly likely to have legislators who are more conservative. As part of this chapter, I replicate and expand on their findings. I find the same, but show that this is because the effect of district socioeconomics has increased for Republicans, not Democrats. The focus of my work is on determining if earlier time periods were in fact significantly and substantially less responsive to the rich.

The dataset I introduce is well suited to testing the historical bias toward the rich for Democrats and Republicans alike. The measure used in this paper, legislative activity, is drawn from studies of African-American representation (Rocca & Sanchez, 2007; Keane & Griffin, 2009; Tate, 2003). It does not tie specific issues to constituent preferences. In some ways, this can be useful. When specific issues are isolated, the influence of repeated attempts to change policy can be obscured. Additionally, the historical detail and depth of the data used here lets me uncover patterns between education, income, and political outcomes, as well as find the

power of using a combined socioeconomic measure that unites education and income.

But wealth does not occur in a vacuum, and the timeframe and detail included allows me to untangle the confounding influence of other demographic factors. It is evident that income is tied to education and race in ways that are sometimes surprising. Including them without sufficient historical context and flexibility can lead to conflicting and messy results. Analyzing each on its own has been the standard, and has produced many useful results. Yet as I show with both the data on legislative success and a replication of the results in Burden and Wichowsky (2014) and McCarty et al. (2006), new insights can be revealed when education and income are included in the models with a better theoretical grounding on the conflicting requirements of multicollinearity and omitted variable bias.

Unlike income, race, and gender, education does not have a strong line of scholarly study. It is so closely tied to income, which has been rightly viewed as the predominant driver of political outcomes in the modern era, that it seems to have been dismissed as inconsequential. Not many studies include it in their models, and when they do it is rarely analyzed in any detail. In two of the major studies that trace historical inequality and political outcomes, McCarty et al. (2006) includes education but does not analyze it, and Gilens (2012a) focuses solely on income. Including it in my models produce results that are not surprising, but had not been examined yet. As noted earlier, Republicans have lost many educated voters. This could imply that they have ceased to be responsive to the educated as well, and this is precisely what I find. Viewed from the perspective of national legislative outcomes, as the responsiveness of Republicans to the wealthy has increased, their responsiveness to the educated has decreased. That is, Republicans are more successful in legislation for richer districts, and less successful in educated districts.

There are theoretical grounds to believe that education and income will have disparate effects on policymaking. While Republicans tend to win the votes of the wealthy, Democrats are known as the party of ivy league intellectuals (Ansolabehere et al., 2006; Gilens, 2012b). Republicans are thought to be more responsive to economic interests of the rich, while Democrats are more responsive to the intellectual elite. Therefore Democrats should respond to the highly educated more than Republicans. This would imply that Republicans should prioritize the wealthy over the educated. For example, in 2006 20% of Ohio's 8th district and Tennessee's 3rd district had a college degree. Both were represented by Republicans. Because Ohio's 8th district earned an average of \$9,000 more than Tennessee's district, and had 6% more wealthy residents, we would expect Ohio's representative to be more successful than Tennessee's. We see exactly this, with seven successful bills in Ohio's district compared to Tennessee's single successful bill. Here, we see an example of a Republican from a median income district who passes more bills than a Republican from an equivalently educated but poorer district. District income was tied to better success.

It is also possible for education to correlated with less success in legislation even as wealth is tied to more. This is exemplified by comparing Ohio's 8th district to New York 25th's equivalently wealthy but better educated district in 2006 and 2007. Despite the higher education and Republican representatives, New York's 25th district saw 4 fewer bills passed than Ohio's 8th district. Comparing three districts, Tennessee 3rd versus Ohio 8th versus New York 25th, we can see a place where wealth was tied to more legislative success, and education was tied to less. Thus, it is both theoretically and practically possible for education to cause less success in legislation, while wealth causes more.

The party in control of Congress will also have an effect on legislative success. Members of Congress in the majority party be able to create successful legislation. More than that, the majority party serves as an agenda setter. Thus, the kind of legislation the members of the minority party create will often reflect the agenda preferences of the majority (Ballard, 2018; Ramey, 2015). The minority party should create less successful legislation, but also see a lot of the majority party's ideology in the content of the bills sponsored by the minority party.

Legislative activity will trace the historical trend of political bias for the wealthy. But why would district demographics legislators from wealthy districts have more success in legislation in the first place?

The obvious answer is that legislators from wealthy districts have more financial resources to support policy creation. Yet there are a number of reasons to suspect this is not true once you get into the weeds of how policy is made. Members of Congress get a set budget for expenditures on activities related to their job. In 2014 this was around \$940,000 per year to spend on staff, and around \$250,000 to spend material support. This amount does not vary by district wealth, and there are strict rules against using outside funds to support legislation (Ballard, 2018). Legislators who use outside funds to support legislation face the serious threat of lawsuits.

Outside of financial backing, district demographics can influence legislation due to constituent preferences over representation that are tied to demographic factors. For example, the previous chapter shows that legislators from rich districts devote more staffing resources to policy instead of constituent services or communication. Additionally, politicians themselves tend to be wealthy and are likely to have policy preferences that reflect that background. We have seen that politicians tend to

discount the opinions of those they disagree with (Butler et al., 2017), so politicians who represent wealthy districts may feel more comfortable creating legislation simply because their own internal preferences coincide with their constituents. Finally, the wealthy care more about policy (Schlozman et al., 2012), and politicians are more likely to seek to create policy when their constituents care about it (Sulkin, Testa, & Usry, 2015).

Both constituent preferences and the ideological biases towards the wealthy are likely to be most evident for modern Republicans. As Grossmann and Hopkins (2016) show, Republicans are becoming a party less likely to reflect the concrete policy interests of all constituents. Yet they still represent the economic policy interests of the wealthy, which indicates that they have been freed from representing the preferences of the poor. I showed that this is reflected in legislative outcomes: Republicans, but not Democrats, are more likely to create successful legislation when they represent wealthy and educated constituents in the modern era. In previous eras constituents who cared a lot about policy were less likely to be swayed by the ideological congruence of their member of Congress. Overall, there was a stronger preference for constituent service, which is more likely to increase bipartisan respect than is policy representation (Lapinski, Levendusky, Winneg, & Jamieson, 2016). Legislators from poor districts, at least in the modern era, should be less successful in legislation simply due to focusing on non-policy activities. Given that Republicans prefer trusteeship representation (Barker & Carman, 2012) and are more likely to value personal character (Jarvis & Jennings, 2017), this effect should be amplified for Republican legislators in the modern era.

3 DATA

I introduce a novel dataset that traces records of legislative activity and demographic data from 1973-2014. It uses the House of Representatives alone, which offers at least 435 observations per year of a wide variety of rich, poor, educated, and less educated districts.² This does not produce a substantial difference. Of the various branches, the House is also the most closely tied to the preferences of constituents. The connection between legislative behavior and constituent opinion tends to be the strongest in reelection years (Kuklinski, 1978; Canes-Wrone & Shotts, 2004), and the House offers the most frequent election cycles of the various branches of government. The House also has the smallest constituencies of the federal government, averaging around 750,000 people per district in the modern. The goal is to tie legislative activity to constituent characteristics, both of which are tied to constituent preferences.

I collected data from multiple sources covering legislative activity, legislator characteristics, Congressional session information, district political characteristics, and district demographics. The variables included in this novel dataset are summarized in Table 1. The dataset is available from Harvard’s dataverse, at <https://dataverse.harvard.edu/dataset.xhtml?persistentId=doi:10.7910/DVN/CI2EPI>. The unit of observation is one representative in one congressional session. This yields 9,194 observations across 42 years and 73 variables. The number of unique representatives in this dataset is 1,833.

²Nearly all years have slightly over 435 members of Congress because some members leave in the middle of a Congressional session and have to be replaced. In order to account for the members who only served a partial term, I weight the regressions by the percent of the term each representative served.

Table 1. Dataset Variables

legislative activity	legislator characteristics	Congressional session characteristics	district political characteristics	district demographics
sponsored	dwnom1	maj party	cook scores	median income
passed house	dwnom2	maj percent		mean income
enacted	partisan extremity	Dem seats		% over income \$x k
cosponsored	committees	Rep seats		gini
% successful	party ID			socioeconomic
	# of committees			% unemployed
	powerful coms			% not employed
	committee chair			% BA degrees
	ranking member			% HS degrees
	days served			% white, black
	% days served			% asian, multi
	state and district			% not hispanic white
	icpsr ID			% not hispanic white, black
	govtrack ID			% old
	name			median age
	age			% ex aliens
	gender			% foreign
	hispanic			% recent arrival
	black			% abroad
				total populations

I drew this information from a variety of sources. Census data for the 1990s, 2000s,

and 2010s comes from a government website. Census data for the 1970s comes from the ICPSR, and the data for the 1980s comes from <https://www.nhgis.org/>. In total I collected censuses for the 93rd, 98th, 99th, 106th, 109th, 110th, 111th, 112th, and 113th Congresses.³ Thus, my analysis for the 1970s draws entirely upon data from the 1970 census. The data for the 1980s is similar. The natural consequence of this is that my estimates are less precise for later part of each decade. The census data for the 2000s and 2010s are updated almost every year, and therefore all of my demographic estimates for each Congressional session should have the same level of precision for the last 13 years of my analysis.

The legislator activity and characteristics data come from govtrack.us, an open source website that scrapes the government legislation pages regularly and produces various .xml and .json files for every bill introduced and every member of Congress since the first Congress met in 1789. This also supplies committee membership for the 109th-113th Congress, which I supplement with committee information from the Legislative Effectiveness Project (Volden & Wiseman, 2014) for the 93rd-108th Congresses. I augment these data with nominate ideology scores from Keith Poole's website. I found district partisanship from Cook scores, available for the 109th to 113th Congresses, and calculated Cook scores from census district vote data for the 1970s. Legislator minority identification comes from people.house.gov, and is hand coded for each Congressional session.

I choose to focus on the number of bills a member of Congress sponsors that are approved by the entire House of Representatives. This captures a type of policy representation. Sponsoring successful bills requires effort from both the represen-

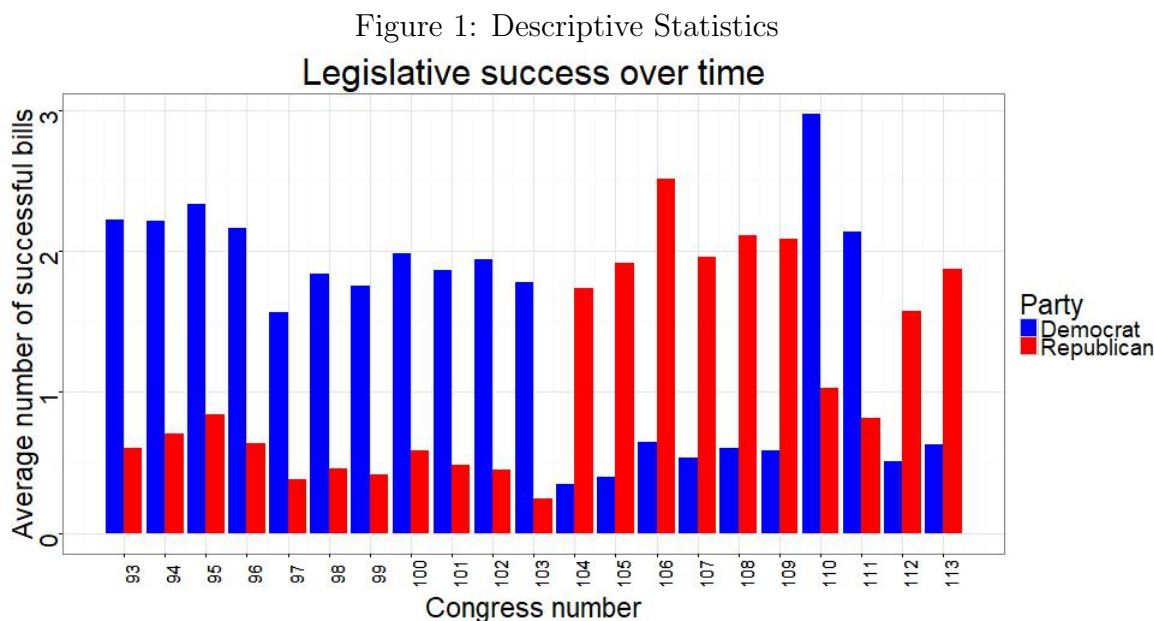
³The 99th Census data is used to update the district information for the following ten states that had court ordered redistricting between 1980 and 1984: California, Hawaii, Louisiana, Maine, Mississippi, Montana, New Jersey, New York, Texas, and Washington.

tative and their staffers. Few sponsored bills are ever reported out of committee, the first major hurdle in the legislative process. Of those, even fewer pass the first chamber. From 1973-2014 only 8.3% of all sponsored bills were approved by the House. Bill sponsorship does not necessarily capture the amount of effort a representative is putting into policy representation. All one has to do to sponsor a bill is tell the House clerk that you want to sponsor a bill. They are useful to claim credit for policy congruence without actually doing the work to deliver the policy,⁴ but the vast majority never make any progress at all through the legislative process. It is safe to say that many of these bills were never intended to make progress, but were simply cheap talk. Indeed, text analysis can clearly distinguish these cheap talk bills from their counterparts that get reported out of committee (Ballard, 2018). A bill that progresses through the House is likely to be more than cheap talk. The process of deciding the kind of bill that will likely be passed, then lobbying colleagues to ensure its passage, is much more involved than simply sponsoring a bill. There is also the danger that if a poorly thought out bill is enacted into law, an opponent will use it as leverage in a future campaign. Legislation that passes the House serves as a useful proxy for the time and effort a member of Congress devotes to policy representation.

Figure 1 shows the average number of bills each member of Congress sponsored that passed the House in a given Congressional session, from the 93rd House in 1973-74, through the 113th House from 2013-2014. The average number of bills passed ranges from a high of 2.97 bills per Democratic member of Congress in the 110th House (2007-2008) to a low of 0.24 bills per Republican member of Congress in

⁴Anecdotally, constituents contact regarding policy are often reassured by evidence of sponsored bills waiting to be voted on. They are less likely to track what happens to a bill, or to blame their representative for failure to progress. It is very easy for members of Congress to shift blame to the rest of Congress, and there are plenty of anecdotal reports of exactly this.

the 103rd House (1993-1995). Naturally, the party in the majority has much more successful legislation than does the party in the minority. On average, the members of the majority party passed 2.026 bills per Congress, although the median number of bills passed was 1. Member of the minority party passed only 0.562 bills per Congress, although the median number was 0.



Legislation that passes the House is also a way to influence policy outcomes. There is evidence that legislators from wealthy areas vote for and sponsor bills that favor the interests of the wealthy (Carnes, 2016). If legislators from privileged areas are also more productive legislatively, then we can expect more overall policies that favor the interests of the privileged. This is exactly what happens. I show that the time periods in which legislators from socioeconomically privileged districts are more active in legislation are the same as those time periods that policy reflects the preferences of the wealthy in Gilens' data (Gilens, 2012a, 2012b). While it would be ideal to only look at the number of bills a member of Congress sponsored that

became law, there are two strong reasons not to. For one, a member of Congress can be expected to influence the legislative process much more within their own chamber. Two, the Senate is often controlled by a different party than the House. As I showed in the previous chapter, Democrats and Republicans behave differently with respect to how they represent the socioeconomically privileged and those who are not. For these reasons, the impact of district privilege will be obscured once a bill gets to a Senate controlled by the opposing party. Neither of these problems hold for how many bills pass the House, so I choose to focus on this measure.⁵

The primary independent variables are district wealth, district education, and a combined measure of district socioeconomic status. The methods section will discuss the ways I deal with the multicollinearity present between these measures. District wealth is measured as the percent of a legislator's district that earned over \$75,000 per household per year in 2016 dollars. This captures the percent of the district that is wealthy. The cutoff for this is not always perfectly \$75,000, as the value changes according to inflation and the income brackets used by the census. It is always in the range of \$65,000-\$75,000 in inflation adjusted 2016 dollars, and always falls above the median income of the nation at the time. The results are consistent across a variety of wealth measures. The secondary independent variable is district education, which is measured as the percent of the district with at least a bachelor's degree. All parts of the analyses separate Republicans from Democrats because the ideologies of each party create different kinds of responses

⁵The results are consistent with a variety of other measures, including the percentage of sponsored legislation that was successful and the probability that any given bill passes based on who sponsored the bill. Results for the amount of legislation that was successfully enacted into law produces weaker results that are in the same direction as the results presented here, with larger standard errors. This is to be expected; I speculate that if the ideology of the Senate and president were included in the analysis, the results would be stronger. I also ran these models with a legislative effectiveness score (Volden & Wiseman, 2014). The results remain essentially the same.

across district economic and educational levels. The socioeconomic variable is a linear combination of education and income based on factor analysis. This helps deal with the collinearity between district wealth and education, especially when they are both positively correlated with more successful legislators. The methods section discusses the method for dealing with each variable when district wealth is negatively correlated with legislative success and district education is positively correlated, as happens throughout the 1970s and 1980s.

I examine these variables not just for an individual congressional session, but to look at the changes over time and by party control of Congress. Therefore, I control for the year the Congressional session started, and the party in control of the House of Representatives in the models that incorporate the entire dataset. For the purpose of presentation, I also use the time periods and partisan control of Congress to create graphics depicting the changes over time.

I control for the following seven variables: black population size, the party of the member of Congress, their ideology, seniority, racial identification, and two measures of committee membership. As I show, this dataset has many more measures than the ones I chose to include in this model. I chose the variables that were theoretically significant. A few proved to only add noise to the model, including the Cook scores, how far the member of Congress was from the ideological mean of their party, and the median age of the district. Because none of these three variables provided any independent explanatory power, I omitted them from the final model. Each of the controls I do include have strong effects on the legislative activity. For example, being a committee chairperson increases the number of successful bills that person sponsored by an average of 1.32. This is nearly a 100% increase over a someone who is not a committee chair, who sponsors an average of 1.36 bills.

In order to account for changing impact of being black in Congress on legislative activity, I include an interaction term between Congressional Black Caucus membership and the year⁶. Specifically, prior to 1988, black members of Congress were less legislatively successful than white members of Congress, controlling for district socioeconomics and partisanship. This magnitude of the effect was substantial. The average number of successful bills sponsored per congressional session is 1.4. Black members of Congress sponsored 0.61 fewer successful bills than other Democratic members of Congress with similar district demographics and institutional power. Their similar white counterparts sponsored 1.7 bills total per congressional session. This effect reverses after 1995. Black members of Congress sponsor an extra 0.60 successful bills than similar counterparts. Their white counterparts sponsored 1.21 total bills.⁷ This means that in the 1970s and 1980s they were 36% less legislatively successful than the average member of Congress, while after 1995 they were 50% more successful.

4 THEORY

This new dataset allows me to examine the influence of partisanship and time on legislative success.

Existing work produces conflicting expectations over whether the influence of the affluent in policy has increased over the past forty years. I tend to side with those who expect that the wealthy have become more powerful in almost all regards, and that this will be visible in how legislation is created.

Since the time of Roosevelt, crystallizing under Reagan, the Republican party

⁶All black members of Congress belong to the Congressional Black Caucus

⁷Post-1995 Democrats sponsored fewer successful bills because they were less often in the majority than Democrats prior to 1988

has been viewed as the party of the upper middle class and business interests. Democrats have come to represent the interests of the working class and ivory tower. Moreover, in modern times Republicans face a larger disparity than Democrats between the preferences of their wealthy constituents and the preferences of the less wealthy. Thus Republicans, especially in modern times, may attempt to satisfy the preferences of their less wealthy constituents through non-policy avenues, such as constituent service. The null findings of (Gilens, 2012a) could easily be due to (1) the confounding influence of education and (2) the time units focused on. From my view, Republicans are increasingly focusing on the preferences of the wealthy. It is regularly said that the economic preferences of Republicans prior to Reagan were more in line with economic preferences of modern Democrats than with modern Republicans. We should see this reflected in how active legislators are when they represent the wealthy.

THEORY 1: The effect of socioeconomic privilege has increased over time.

Over the past forty years, representatives of socioeconomically privileged districts are increasingly likely to produce more legislation than representatives from socioeconomically disadvantaged districts.

Republicans and Democrats are not merely mirror images of each other (Grossmann & Hopkins, 2016). As I showed in the prior chapter, Republicans are more likely to engage with the policy preferences of the wealthy and educated.

THEORY 2: The effect of socioeconomic privilege on legislative productivity will be larger for Republicans.

Finally, Barker and Carman (2012) make a compelling case that Republicans have turned towards an ideology that reduces the need to reflect the preferences of

all constituents. They have also faced a more rapidly changing base of supporters (Grossmann & Hopkins, 2016). Thus, there are reasons to believe that the increasing influence of the affluent is being channeled through changing behavior by Republicans.

THEORY 3: The increasing effect of district affluence on legislative productivity is primarily caused by Republicans.

I find that the legislators who represent affluent and educated districts are more likely to create successful legislation than they were prior to 1995. This effect is driven by both the changing behavior of Republicans and by the fact that Republicans have controlled the House for most of the past 20 years. Yet the effect is not as simple as Republicans favoring the elite. Democrats also favor the elite, but in a more nuanced fashion. Democrats do not produce more legislation when they represent the wealthy, but they do produce more legislation when they represent the highly educated. Because the tie between wealth and education is strong, this often means that when wealth is analyzed without accounting for education, it appears that Democrats also favor the wealthy.

The last sections of this chapter seek to explain why we have seen these changes. I examine the preferences of constituents between constituent service and policy in the 1970s. Because Republicans used to have less of a preference for trusteeship representation, I expect Republicans to be less biased against constituent service. Thus, the difference between Republicans and Democrats was lower than it is today. This is hard to explicitly test, because I do not have access to the modern studies on preferences over constituent service and policy. But there is clearly a difference between Republicans and Democrats today, so if there is no difference between Democrats and Republicans in 1978 then my expectation will be

supported if not conclusively demonstrated.

I also examine whether the changes seen are driven by the changing geographic base for Republicans and Democrats. Democrats were powerful in the South prior to the 1980s, but they have been replaced by Republicans. I look to see if this is reflected in the ways Democrats and Republicans behave in four regions of the country: the Midwest, South, Northeast, and West.

Finally, I examine the connection between the ideology of a member of Congress and their district demographics. Many of the patterns revealed in the study of legislative success are also evident in the study of representatives' ideologies.

5 METHOD

This section presents the methodology required to disentangle the conflicting demands of collinearity and omitted variable bias. Education and income are highly collinear, which sometimes obscures their independent effect. One traditional fix to a collinearity problem is to omit one of the collinear variables from the model. Yet because education and income are collinear, omitting one can and sometimes does induce omitted variable bias in my model. A second traditional fix is to create a combined variable for income and education, yet this can obscure the independent effect of each component. I show that the appropriate solution is contingent on the magnitude and direction of each variable in the model. When education and income have opposing effects in the model, it is appropriate to focus on their independent effect. When they have the same effect, it is appropriate to omit one variable or combine them into a single variable. This approach has many applications to collinearity and omitted variable bias problems across a wide range of scenarios in

social science.⁸

This section also explains the graphics that will be used throughout the paper. For those not interested in the details about multicollinearity, I recommend skipping the next subsection, labeled “Collinearity: Omitted Variable Bias and Artificially Obscured Results.” The subsequent section provides a quick methodological summary and a description of the graphics used in the rest of the paper. These graphics concisely summarize the results from the four models used to account for the collinearity present in the model.

Collinearity: Omitted Variable Bias and Artificially Obscured Results

Multicollinearity is well known to distort the effects of variables when two or more collinear variables are included in a model. The nature of that distortion is limited. Specifically, multicollinearity can obscure the true effect of a variable by artificially inflating the standard errors. It cannot create false statistically significant results. Unfortunately, the standard methods for dealing with artificially inflated standard errors is to combine the variables into one, or omit at least one variable. This can create bias due to omitted variables when each of the collinear variables have a meaningful effect on the model.

One common misconception is that the $\hat{\beta}$ estimator, ie the regression coefficients, can be biased by collinearity. This is false. The proofs demonstrating of the unbiased nature of $\hat{\beta}$ do not require that the dependent variables be uncorrelated. It will require that the error terms have a mean of 0, are identically distributed,

⁸For example, education and income have disparate effects in constituent service preferences as shown in this paper, on partisan identification (McCarty et al., 2006), and turnout based on county unemployment rates (Burden & Wichowsky, 2014). Omitting education from any of these analyses biases the predicted effect of income. In the case of Burden and Wichowsky (2014), omitting education creates a statistically significant yet artificially negative coefficient for county unemployment on turnout rates. Including education reveals a statistically significant positive coefficient.

and are uncorrelated, but it will not put any requirements on the collinearity of the matrix of independent variables, X . That is, the expected value of $\hat{\beta}$ is identical to the true value of β regardless of collinearity.

The confusion about collinearity's effect on regression estimates comes from a separate yet potentially confusing proof: the least squares distance between the true values of β and the $\hat{\beta}$ values is inflated when collinearity is present. This is often interpreted as indicating the beta coefficients are too large, but it is simply not true that the multicollinearity causes $\hat{\beta}$ estimates to be biased. What is happening is an artifact of calculating distance, which involves squaring the difference between the true value beta and the estimated beta hat coefficients.

There can be a connection between the sizes of the coefficients, because it becomes very unlikely to get a certain combination of beta hat coefficients. Thus, if the covariance between two variables is negative, an overestimation of the magnitude of one variable is likely to cause an underestimation in the magnitude of the other. However, this does not create an overall bias in the estimation of $\hat{\beta}$.

The primary influence of multicollinearity is on the confidence intervals. This affects the precision of the estimates, not the accuracy. As noted by Montgomery

In effect, severe multicollinearity inflates the variances of the regression coefficients, and this increases the probability that one or more regression coefficients will have the wrong sign. Montgomery, Peck, and Vining (2012, p. 121)

Note that the prediction about a coefficient having the wrong sign is only valid when the variances are inflated. That is, the coefficient may be both not statistically significant and have the wrong sign. Collinearity alone will not produce a statistically significant coefficient with the wrong sign. If the results are statistically significant, then it is at least as correct as any effect seen in the absence of multicollinearity. As Belsley succinctly put it:

Thus, if an investigator is only interested in whether a given coefficient is significantly positive and is able, even in the presence of collinearity, to accept that hypothesis on the basis of the relevant t-test, then collinearity has caused no problem. Of course, the resulting forecasts or estimates may have wider confidence intervals than would be needed to satisfy a more ambitious researcher, but for the limited purpose of the test of significance initially proposed, collinearity has caused no practical harm. These cases serve to exemplify the pleasantly pragmatic philosophy that collinearity doesn't hurt so long as it doesn't bite. (Belsley, 1991, p. 73)

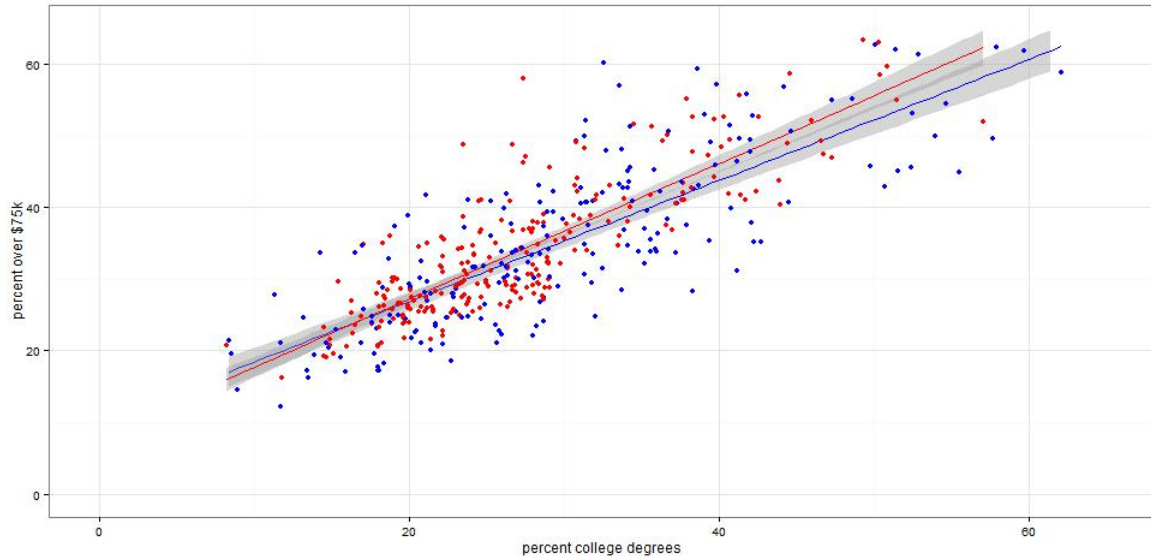
Accounting for Collinearity between Education and Income

This section examines how to capture the disparate effects of income and education when they can be disentangled, and how to capture the overall effect of income and education when the independent impact of each cannot be disentangled.

As can be seen in Figure 2, income and education are strongly correlated. The graph plots the district income and education for each representative in the 113th Congress. Other Congresses have very similar correlations. Red dots represent districts represented by a Republican, and blue represents Democrats. The regression line is also depicted, in blue for Democrats and red for Republicans. Clearly, there is a strong correlation between district education and income for both Democrats and Republicans. This collinearity affects the ways omitted variable bias appears. As discussed in the prior section, it fortunately cannot artificially create statistically significant results.

The short methodological summary is that because of this collinearity, the effects of district income and education must be treated differently based on whether they have opposing or similar effects on the dependent variable. Education and income have opposing effects on the dependent variable prior to 1995. Because of these opposing effects, the model will be less biased when both income and education are included together in the same model. Including either on their own will induce bias due to the omitted variable. However, this approach does not work when

Figure 2: Collinear relationship between education and income for the 113th Congress



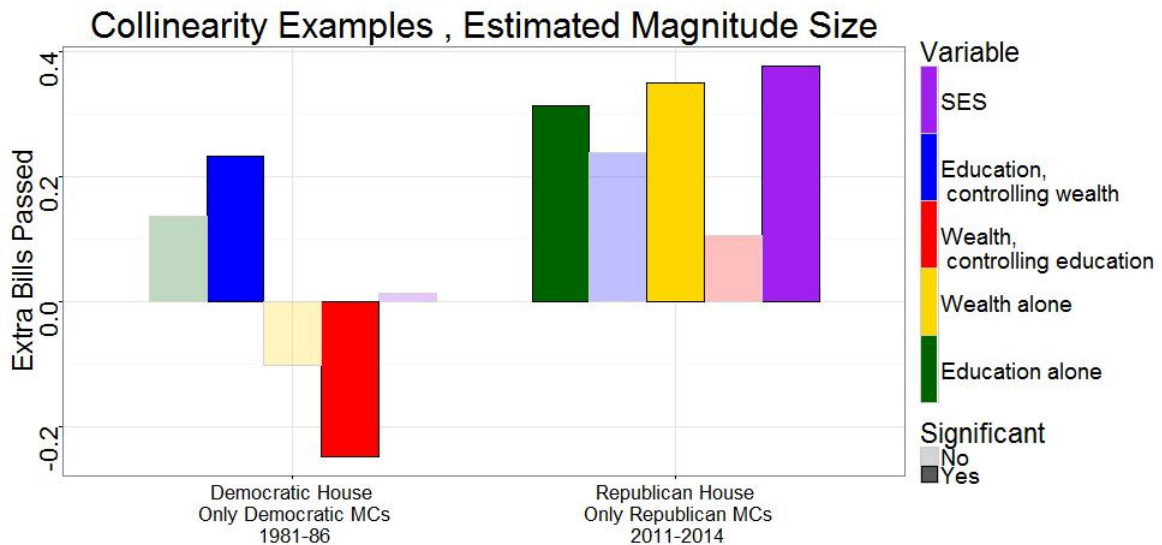
education and income have the same effect on the dependent variable, as often happens after 1995. In that case, they need to either each have their own model, or a combined socioeconomic score should be used. The combined socioeconomic score has benefits because it captures the additive effect of income and education, as well as not excluding any additional valuable information due to an omitted yet useful variable. However, I cannot simply use one set of variables prior to 1995 and another after 1995 because the effect sizes would not be comparable. Thus, the following analysis will present the results of four models and five coefficients, each with different socioeconomic variables: income and education in the same model, income alone, education alone, and a combined socioeconomic measure.

Figure 3 graphically summarizes two examples of the effects of collinearity. The y-axis shows the estimated number of extra bills passed. This magnitude is estimated by comparing the number of successful bills sponsored by a legislator who represents the top quartile of the independent variable versus the number of success-

ful bills sponsored by a legislator who is statistically identical except for representing a district at the bottom quartile. For example, the purple bar on the far right of Figure 3 shows that for Republicans in the Republican controlled House between 2011 and 2014, representatives from a district at the top quartile of the socioeconomic distribution sponsor 0.36 more successful bills than an equivalent representative from a district at the bottom quartile of the socioeconomic distribution. The effect is statistically significant, so the bar is bolded and outlined in black.

Each bar represents the magnitude for one of five coefficients: district education without controlling for income (green), education controlling for income (blue), income without controlling for education (yellow), income controlling for education (red), and a combined socioeconomic measure (purple). Note that the education variables are blue and green, the income variables are yellow and red, and the socioeconomic variable is purple (the color wheel result from combining of blue and red).

Figure 3: Effects of Collinearity



The colors are faded when they are not statistically significant, and bolded with a black outline when they are statistically significant.

Each group of five bars was chosen as a case study in the two main ways collinearity can effect the results. The left hand group of five bars shows the magnitude of the effect for each of the five coefficients for 1981-86, focusing on Democrats. The House was controlled by Democrats at this time. The right hand group of five bars shows the magnitudes of each coefficient for 2011-14, focusing on Republicans in the Republican controlled House.

The take away from Figure 3 is that, because of the opposing or enhancing influence of education and income, sometimes one set of coefficients will capture an effect, and sometimes a different set of coefficients will reveal an effect. When these effects reach the level of statistical significance, they are accurate in so far as the model is otherwise well specified.⁹

The left hand of Figure 3 illustrates the effects of district socioeconomic characteristics for Democrats in the Democratically controlled House from 1981-1986. This is an example of when collinearity does not artificially obscure the independent effect of income and education. Only the coefficients for education, controlling for income (blue), and income, controlling for education (red), are statistically significant. Notably, they have opposing effects on legislative success. These results can also be seen in the first column of Table 2, which reports the results of the full model.

⁹Collider bias or omitted variable bias are two ways in which the model could be poorly specified, but they are both unlikely based on current theoretical expectations within the field. The model a negative binomial model, which is appropriate for this kind of overdispersed count data. Thus, the model type is well specified. There results are robust to the controls I have available to me. It is possible that there is some other omitted variable that would substantially change the results, or that there is a complicated causality story inducing collider bias. However, this is unlikely based on current knowledge. The included controls are typical to those used in other studies, and to my knowledge the field has not uncovered another variable that would induce substantial omitted variable bias in this model.

Table 2. Collinearity Examples

	Democrats, Democratic House 1981-86			Republicans, Republican House 2011-14		
	Income, Education	Income	Education	Income, Education	Income	Education
income	-0.015* (0.006)	-0.006 (0.005)		0.004 (0.009)	0.016*** (0.005)	
education	0.025** (0.009)		0.014 (0.008)	0.016 (0.010)		0.020*** (0.005)
conservativeness	-0.730* (0.305)	-0.820** (0.307)	-0.601* (0.299)	-0.603* (0.280)	-0.534 (0.278)	-0.615* (0.279)
seniority	0.112*** (0.012)	0.110*** (0.012)	0.114*** (0.012)	0.026* (0.012)	0.024* (0.012)	0.027* (0.011)
percent black	-0.068* (0.031)	-0.061* (0.031)	-0.057 (0.031)	-0.212*** (0.052)	-0.207*** (0.053)	-0.213*** (0.052)
Black Caucus	-0.375 (0.216)	-0.420 (0.217)	-0.330 (0.216)			
comm. chair	0.591*** (0.163)	0.575*** (0.165)	0.600*** (0.165)	0.901*** (0.144)	0.911*** (0.145)	0.896*** (0.144)
powerful comm.	-0.673*** (0.112)	-0.687*** (0.112)	-0.678*** (0.112)	-0.231* (0.116)	-0.204 (0.115)	-0.237* (0.115)
Observations	768	768	768	480	480	480
Akaike Inf. Crit.	2,550.349	2,555.514	2,553.602	1,614.676	1,615.063	1,612.844

Note: Negative Binomial models.

*p<0.05; **p<0.01; ***p<0.001

Despite their collinearity, their independent effects are clear. This is primarily due to the fact that they pull in opposing directions; one counters the effect of the other.

The other three variables are not statistically significant, two due to obvious omitted variable bias, and the third due to the countering influences of education and income. For the income (education) variables, this is due to omitted variable bias induced by education (income). For example, when education is omitted from the model and income is included, omitted variable bias will reduce the effect size and increase the standard errors. This is because the collinearity between education and income means that income will capture part of the effect of education. Since education actually has a negative effect on legislative success, the apparent effect of income will be reduced by that negative effect of education. This negative effect will be treated as statistical noise, so the standard errors will also increase. Thus, both the green and yellow bars, education and income without controlling for the other, are statistically insignificant and have lower magnitudes than the red and blue bars. This statistical insignificance is not a necessary outcome of the opposing effects of income and education, but it is a common effect. If either or both had a large enough effect with low enough variance, all four coefficients (income controlling education, education controlling income, income alone, education alone) could be statistically significant. However, the variables without the controls will always have lower magnitudes than the variables including the controls, so long as education and income have opposing effects. The purple bar is both small in magnitude and low in statistical significance. As discussed later, this is due to the effects of income and education canceling each other out when they are combined.

The accuracy of the coefficients are clear in the diagnostics for multicollinearity shown in Table ?? and Table 4. These tables depict three different diagnostics for

collinearity. The first is the condition index, which is a measure of the degree to which the principle components of a variance-covariance matrix are unequal. Different sources provide slightly different cutoff values: Montgomery et al. (2012) sets the cutoff for high collinearity at 100, while the R package Perturb sets it at 30. The collinearity affects those variables that have a high variance decomposition proportion, set at 0.50 by Belsley (1991), or 50% of the variance inflation. These values are bolded in Table ???. While the condition index does rise above the cutoff values, it does not affect both education and income at the same time. Instead, the high condition index is influenced by the intercept and the year. Collinearity between the intercept and year has no meaningful effect on this analysis.

The variance inflation factor is calculated from the correlation matrix. Again, the threshold for high collinearity varies, but it is common to set the cutoff at values higher than five or ten. None of the variance inflation factors supercedes this cutoff.

The most useful diagnostic comes from the Perturb package in R. This package induces small changes to the variables to see if they unduly influence $\hat{\beta}$. It is considered the best test to see how much collinearity affects regression results. The results are presented in Table 4. It presents the lower bound of the 95% confidence interval for each coefficient, as well as the upper bound. If the coefficient does not change signs, it is a strong indication that collinearity does not affect the direction of the coefficients. For this group of observations, Democrats between 1981 and 1986, collinearity does not appear to influence the direction of the effects of income or education, nor meaningfully change the magnitude of the coefficient.

The opposite situation is shown in the right hand grouping of five bars, and is common in the modern era, which I define as starting after 1995. Here, district income and education both are associated with increased legislative success. This

Table 3. Collinearity Diagnostics: Condition Index and Variance Inflation Factor

Condition Index	Variance Decomposition Proportions						Weights
	intercept	income	education	year	conservativeness	seniority	percent black
1.000	0.000	0.001	0.002	0.000	0.003	0.005	0.000
3.390	0.000	0.010	0.007	0.000	0.001	0.007	0.000
4.483	0.000	0.012	0.027	0.000	0.000	0.850	0.000
6.701	0.001	0.000	0.144	0.001	0.347	0.028	0.006
7.066	0.000	0.016	0.200	0.000	0.645	0.102	0.001
10.272	0.000	0.830	0.255	0.001	0.000	0.005	0.002
43.091	0.026	0.002	0.034	0.062	0.003	0.000	0.902
123.566	0.973	0.129	0.332	0.937	0.000	0.002	0.090

Variance Inflation Factor					
income	education	year	conservativeness	seniority	percent black
1.320129	1.510961	1.288464	1.087829	1.021415	1.099920

Table 4. Collinearity Diagnostics: Perturbations

	Impact of Perturbations on Coefficients			
	mean	std deviation	minimum coefficient	maximum coefficient
Intercept	1.843	0.074	1.674	2.035
income	0.018	0.001	0.016	0.019
education	-0.016	0.001	-0.017	-0.014
year	-0.023	0.001	-0.025	-0.022
conservativeness	-0.299	0.006	-0.312	-0.284
seniority	0.103	0.000	0.102	0.103
percent black	-0.003	0.000	-0.004	-0.003

time, because the directions of the effects are the same, no omitted variable bias obscure the effects. However, this time the effect of income (education) controlling for education (income) are artificially obscured by the inherent collinearity between the two variables.

The impact of collinearity can be seen in the diagnostics for Republicans between 2011 and 2014, shown in Table 5 and Table 6. While the variance inflation factor does not signal any major issues for the coefficients on income and education, the condition index and the perturbations do. For the condition index of 24.271, both education and income have very high variance decomposition values, well over the 0.50 or 50% threshold. This is reflected in the values of the coefficients when small perturbations are introduced, as described by Table 6. Here, the sign of the coefficient on income flips between -0.005 and 0.008. Thus, collinearity affects the sign of the coefficient for income in addition to inflating the standard errors.

In this case, it is appropriate to either not include one of the two variables, or to create a socioeconomic index based on factor analysis. Any of these solutions will account for the joint impact of education and income, instead of their separate

Table 5. Republican 2011-14 Collinearity Diagnostics: Condition Index and Variance Inflation Factor

Condition Index	Variance Decomposition Proportions							Weights
	intercept	income	education	education	year	conservativeness	seniority	percent black
1.000	0.000	0.000	0.000	0.000	0.000	0.001	0.005	0.000
3.829	0.000	0.000	0.000	0.000	0.000	0.001	0.392	0.000
4.477	0.000	0.002	0.003	0.003	0.000	0.007	0.533	0.001
8.405	0.000	0.055	0.088	0.088	0.000	0.079	0.014	0.009
12.983	0.000	0.000	0.008	0.008	0.000	0.863	0.045	0.043
24.271	0.000	0.936	0.898	0.898	0.000	0.017	0.011	0.006
30.667	0.001	0.004	0.000	0.000	0.001	0.031	0.000	0.933
848.367	0.999	0.002	0.001	0.001	0.999	0.001	0.000	0.008

Variance Inflation Factor						
income	education	year	conservativeness	seniority	percent black	
1.958373	1.939159	1.003454	1.023099	1.034675	1.010547	

Table 6. Republican 2011-14 Collinearity Diagnostics: Perturbations

Impact of Perturbations on Coefficients				
	mean	std deviation	minimum coefficient	maximum coefficient
Intercept	-18.229	0.188	-18.632	-17.780
income	0.002	0.002	-0.005	0.008
education	0.013	0.003	0.006	0.021
year	0.166	0.002	0.162	0.169
conservativeness	-0.502	0.010	-0.526	-0.480
seniority	0.050	0.000	0.050	0.051
percent black	-0.025	0.000	-0.025	-0.024

effects. This is inevitable, yet still informative. The overall impact of income and education, especially when they are inducing similar effects, is a useful measure of the influence of the socioeconomically privileged.

Because each of these three coefficients supports the results of the other, provide an extra interesting dimension of interpretation, and cannot be readily understood without understanding the effect of the others, I include all three in the analysis. Namely, in earlier, Democratic Houses district socioeconomic status had no discernible impact on legislative success, while it has a strongly positive effect in modern Republican Houses. However, this obscures the independent impact of education and income.

A word of caution is in order. The only way to discover which is the right model is to run a few different specification. This lends itself to p-hacking if not used carefully. This is why I always report the results for all four models, and theoretically ground why I choose to focus on certain results but not others.

Socioeconomic privilege in a district is the combined effect of education and income, depicted in by the purple bar. Both have been clearly shown to impact

constituent preferences over representation. This is a standard solution for highly correlated variables when both lend useful information to the model yet cannot be included together due to multicollinearity. Factor analysis creates a latent variable that is a linear combination of the impact of income and education (Belsley, 1991; Montgomery et al., 2012).¹⁰ This common latent variable captures between 85.1% and 91% of the variation between district education and income, depending on the year it is calculated for. When district education and income have opposing effects, the socioeconomic factor captures whether educated and wealthy districts are overall represented by legislatively successful politicians, or if the effects cancel each other out. Prior to 1995 the effects cancel out. After 1995, in Republican Houses, the effects add on each other to create a magnitude of effect even larger than either income or education alone. A district with moderate levels of education and income tends to have less legislatively successful representatives than a district with the same level of income but slightly more education. This is an effect that cannot be captured by looking at either income or education alone.

Implications for Tradeoffs between Constituent Service and Policy

In the prior chapter I showed that Republicans were more focused on policy when they represented socioeconomically privileged districts. In this chapter I show that the choice of measure for capturing socioeconomic status matters. The direction of the effect all measures of socioeconomic status were similar for the prior chapter. I suspect this similarity is because the main effect was evident for Republicans, not Democrats. Observationally, Republicans tend to respond to education and income

¹⁰Different kinds of data lend themselves to different measures of socioeconomic status. A factor analysis approach is appropriate when the dimensionality of the data is substantially reduced in a factor analysis, one dimension captures a large fraction of the variance, and the geographic level makes sense (Krieger et al., 2002; Shavers, 2007). This is the case for my data.

in similar ways, while Democrats are more likely to find that education and income have opposite influences on political outcomes. Thus, the influence of socioeconomic status was more often obscured when both income and education were controlled for at the same time in the chapter on constituent service. Using income alone, education alone, or the factor for socioeconomic status all produced similar effects. For parsimony, I focused on one measure: the socioeconomic factor that captured the combined impact of income and education.

6 INCREASING INFLUENCE of AFFLUENCE

The first theory is that the influence of the affluent has risen over the past forty years, and that this will be reflected by whether legislators produce more legislation when they represent affluent and educated districts. Figure 4 provides initial visual evidence that this is true. The red and yellow bars represent measures of wealth, and the purple bars represent the combined impact of wealth and education.

I create six time blocks out of the period from 1972-2014. Each time block is unified by the same party in control of the House and Senate. This reflects the idea that the legislative behavior of a member of Congress is strongly influence by who controls Congress (Ramey, 2015; Ballard, 2018). I examined the data, and validated that members of one party tend to have similar connections between district demographics and legislative activity under the same legislative majority in Congress.¹¹ Grouping the data in this manner allows the reader to easily see the changes over time while minimizing the clutter in the graphic. It also highlights the

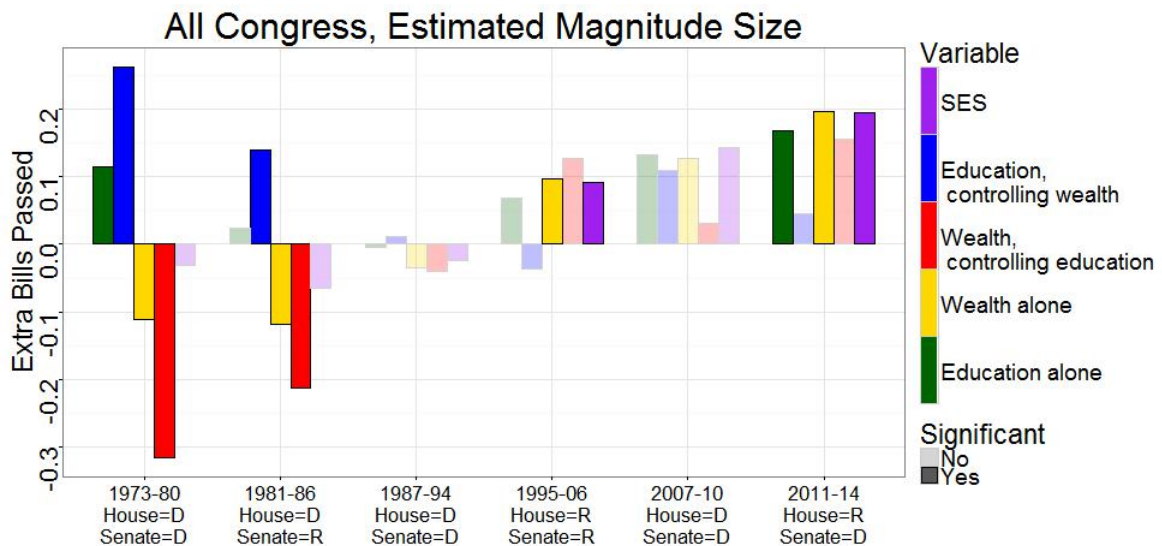
¹¹One exception is the year of 2001-2002. This was a single session of Congress that had a number of peculiarities. For one, it was the session that was meeting when 9/11 happened. This had a chaotic effect on American politics. For another, partisan control over the Senate was not consistent. Rather than include it as a time period on its own, I folded it into the time period from 1995-2006, which otherwise say unified control of Congress by Republicans.

differences in the reported effects based on the party in control of the House and the Senate.

Prior to the Republican revolution of 1994, legislators from wealthy districts produced *less* legislation. In the modern era, they produce more. This holds whether the measure is wealth or the combined impact of wealth and education.

Figure 4 also shows that prior to the Republican revolution of 1994, legislators representing highly educated districts produced more legislation (green and blue bars). Yet the combined impact of income and education, as reflected in the purple socioeconomic measure, was negative and not statistically significant. That is, socioeconomically privileged districts did not have legislators who were overall more legislatively productive.

Figure 4: Estimated magnitude of socioeconomic variables across time



These effects are confirmed by Table 7. The models feature a number of interactions, and one example is specified below. The other models modify this model mildly by including or excluding education and income variables.

Table 7. All Bills Passing House 1972-2014 (no partisan controls)

	SES	Income, Education	Income	Education
SES	-1.162*** (0.295)			
SES*year	0.011*** (0.003)			
income		-0.092** (0.032)	-0.098*** (0.022)	
income*year		0.001** (0.0003)	0.001*** (0.0002)	
education		0.006 (0.040)		-0.069* (0.028)
education*year		-0.00001 (0.0004)		0.001** (0.0003)
year	0.009** (0.003)	-0.019** (0.007)	-0.018** (0.007)	-0.006 (0.006)
conservativeness	-0.089* (0.036)	-0.094** (0.036)	-0.092** (0.036)	-0.088* (0.036)
seniority	0.069*** (0.004)	0.069*** (0.004)	0.069*** (0.004)	0.070*** (0.004)
percent black	-0.087*** (0.011)	-0.090*** (0.011)	-0.089*** (0.011)	-0.085*** (0.011)
Black Caucus	0.677 (1.088)	0.489 (1.100)	0.451 (1.094)	0.960 (1.085)
Black Caucus*year	-0.007 (0.010)	-0.006 (0.010)	-0.005 (0.010)	-0.010 (0.010)
comm. chair	1.248*** (0.057)	1.246*** (0.057)	1.246*** (0.057)	1.251*** (0.057)
powerful comm.	-0.355*** (0.034)	-0.356*** (0.034)	-0.353*** (0.034)	-0.356*** (0.034)
Observations	9,194	9,194	9,194	9,194
Akaike Inf. Crit.	27,903.930	27,902.010	27,901.190	27,909.640

Note:

*p<0.05; **p<0.01; ***p<0.001

$$\begin{aligned}
\text{successful legislation} = & \text{income} + \text{income} * \text{year} + \\
& \text{education} + \text{education} * \text{year} + \\
& \text{year} + \text{MC conservativeness} + \text{MC seniority} + \\
& \text{percent black population} + \text{Black Caucus MC} + \\
& \text{Black Caucus MC} * \text{year} + \\
& \text{committee chair} + \text{powerful committee member}
\end{aligned}$$

As described in Table 7, this equation changes mildly for Models 1, 3, and 4.

The benefit of Table 7 is the precision of the estimates and the inclusion of time and the differences between the parties. The downside to that they are difficult to interpret thanks to the multiple interaction terms included. For example, it is clear from the visuals that income had a negative correlation to legislative success in the 1970s and a positive one after 1990. In the full model this can be inferred by combining the % over \$75k results with those for % over 75k*wealth, but it is far easier to see in the graphics. The effect of party and education are similarly obscured in the full models. The visuals are based regressions run separately by year and party, which is a more efficient way to interpret interaction terms with discrete variables.

The interaction effect between year and the measures of wealth and overall socioeconomic status are positive and statistically significant. Not only did the impact of affluence increase over that time period, but as shown in Figure 4 the effect completely flipped for wealth when education is not controlled for. Prior to 1994, the effect was negative and usually statistically significant. After 1994, the effect became positive. It was also statistically significant when the House was controlled by Republicans.

Of note, the interaction term between education and year is negative when

income is controlled for. That is, the independent effect of education on legislative productivity has decreased over time. It never entirely flips direction, but it does become statistically negligible.

The effect of multicollinearity and omitted variable bias are evident in Figure 4. At no point after 1994 are the effects of education or income statistically significant when the other is controlled for. This is due to the effect of multicollinearity inflating the standard errors when both variables create a similar effect on legislative productivity. On the other hand, prior to 1986 the magnitude of both income and education without controlling for the other are artificially reduced due to omitted variable bias. For example, look at the effect of wealth without controlling for education (yellow bar). It is much smaller in magnitude than the red bar, which is wealth after education has been controlled for. This is because the wealth variable captures a lot of the effect of education, which is trying to create the opposite effect on legislative productivity.

A few other results are worth highlighting. Committee chairmen tended to produce more legislation, while members of powerful committees tended to produce less legislation. One explanation for this is that members of powerful committees get to directly influence the language of important legislation, so policy inclined members focus more on getting the language right on other bills than on producing independent legislation. That is, they gain power through means other than creating successful legislation.

I include both whether the member of Congress was black and an interaction term for year. This control terms were introduced because of a pattern that became obvious when I was examining the data. Black Democrats used to be less legislatively productive than white Democrats, but they are now more legislatively productive.

The effect was large and consistent, so for consistency I included it in each regression.

The overall goodness of fit of the model is reported with Akaike's Information Criterion (AIC). This criterion is used to evaluate nested models against each other. The magnitude of the AIC is irrelevant, but the relative size to other models helps determine how good the model is at capturing variation. A smaller AIC mean a better model. Here, the models are all have similar AICs. The best fitting model is the one that includes only income, but it fairly similar to the others. Thus, there is no reason to discard any of these four models as inappropriate based on their relative AIC.

These results indicate clear support for the theory that the influence of affluence has increased over time.

7 INFLUENCE of AFFLUENCE by PARTISANSHIP

The results from Figure 4 indicate that there is a substantial difference in the coefficients based on whether Democrats or Republicans control the House. This section explores the effects of partisanship on legislative productivity. Figure 5 shows the expected magnitude of the effect.

Figure 5 groups the data according to the party of the member of Congress and which party controlled the House. This highlights the differences between Republicans and Democrats. The biggest difference revolves around wealth. This provides similar, but more precise evidence than Figure 4. Democrats are much less likely to produce more legislation when they represent wealthy district.

The height of each bar represents how many extra successful bills an individual

member of Congress could expect to sponsor based on the socioeconomic characteristics of their district. For example, the last bar, in purple, represents how many extra bills a Republican member of Congress in a House controlled by Republicans could expect to create when they represent a socioeconomically privileged district. It is calculated by comparing the number of successful bills sponsored by a legislator whose district is in the top quartile of the socioeconomic spectrum against a legislator from a statistically identical district in all respects except for representing a district in the bottom quartile of the socioeconomic spectrum.

Here, a Republican legislator in a Republican House could expect to sponsor an extra 0.23 pieces of legislation when they represent a district at the top of the socioeconomic spectrum instead of one at the bottom. This is a substantial effect. The average number of successful bills sponsored by a Republican in a Republican House is 1.96, so 11.7% more bills are passed by legislators from socioeconomically privileged districts.

The magnitudes of the effects for all statistically significant results are similar. They represent a 10% to 15% increase in successful legislation, depending on the measure, for any member of Congress in a House controlled by their own party.

The magnitudes of the effects are largest for majority members of Congress. This is unsurprising. As demonstrated in Figure 1, the minority party passes many fewer bills than the majority party. The magnitude of the effect when the member of Congress does not have the power to effectively shepherd a bill through to passage must necessarily be low.

The results in Table 8 demonstrate the statistical significance of party membership and party control over the House.

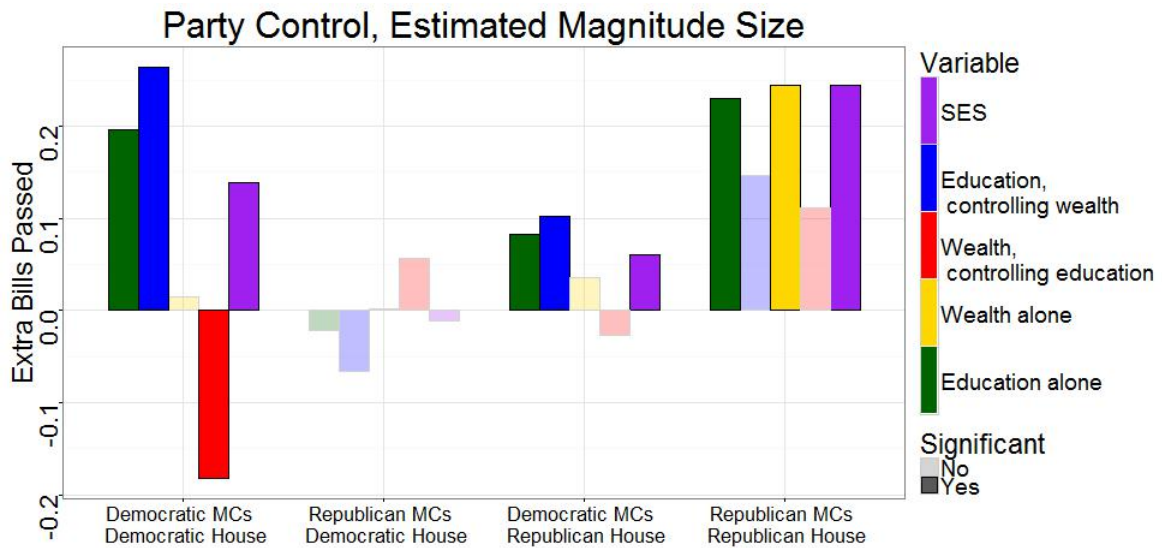
Table 8. Bills Passing House 1972-2014, Controlling for Majority Party

	SES	Income, Education	Income	Education
SES	0.003 (0.027)			
SES*majority	-0.061* (0.035)			
SES*Republican	0.133*** (0.035)			
income		-0.007*** (0.002)	-0.003 (0.002)	
income*majority		0.007 (0.004)	-0.002 (0.003)	
income*Republican		0.002 (0.004)	0.009*** (0.003)	
education		0.011*** (0.003)		0.005** (0.002)
education*majority		-0.015*** (0.005)		-0.010*** (0.003)
education*Republican		0.012*** (0.004)		0.013*** (0.003)
majority Republican	-1.318*** (0.052)	-1.144*** (0.099)	-1.304*** (0.087)	-1.083*** (0.097)
Republican	-0.783*** (0.064)	-1.043*** (0.094)	-1.046*** (0.094)	-1.024*** (0.076)
Republican*majority	2.426*** (0.067)	2.364*** (0.076)	2.475*** (0.068)	2.364*** (0.069)
year	0.016*** (0.003)	0.007* (0.004)	0.018*** (0.003)	0.010** (0.004)
conservativeness	-0.443*** (0.080)	-0.456*** (0.080)	-0.449*** (0.079)	-0.425*** (0.080)
seniority	0.073*** (0.003)	0.073*** (0.003)	0.073*** (0.003)	0.073*** (0.003)
percent black	-0.108*** (0.010)	-0.112*** (0.010)	-0.109*** (0.010)	-0.108*** (0.010)
Black Caucus	-3.590*** (0.992)	-3.718*** (0.994)	-3.532*** (0.993)	-3.639*** (0.991)
Black Caucus*year	0.035*** (0.009)	0.036*** (0.009)	0.034*** (0.009)	0.035*** (0.009)
comm. chair	0.857*** (0.050)	0.855*** (0.050)	0.853*** (0.050)	0.861*** (0.050)
powerful comm.	-0.418*** (0.032)	-0.424*** (0.032)	-0.418*** (0.032)	-0.421*** (0.032)
Observations	9,194	9,194	9,194	9,194
Akaike Inf. Crit.	26,502.920	26,485.430	26,510.460	26,489.740

Note:

*p<0.1; **p<0.05; ***p<0.01

Figure 5: Magnitude of effects based on partisanship and party control in the House



8 INFLUENCE OF AFFLUENCE by PARTISANSHIP over TIME

The last major theory was whether Republicans have seen a larger effect of affluence on legislative productivity than Democrats. Figures 6 and 7 separate Democrats from Republicans to allow the reader to examine the distinctive trends for each party.

The figures show that there is, in fact, a difference between Republicans and Democrats over time.

Akaike's Information Criterion (AIC) is included in these reported results to give an indication of how well the various models fit. This is more effective than reporting the R^2 score because it accounts for the number of variables being fitted in the model. Lower AIC scores imply better fitting models. AIC works best when comparing different models against the same data source. This time, the best fit-

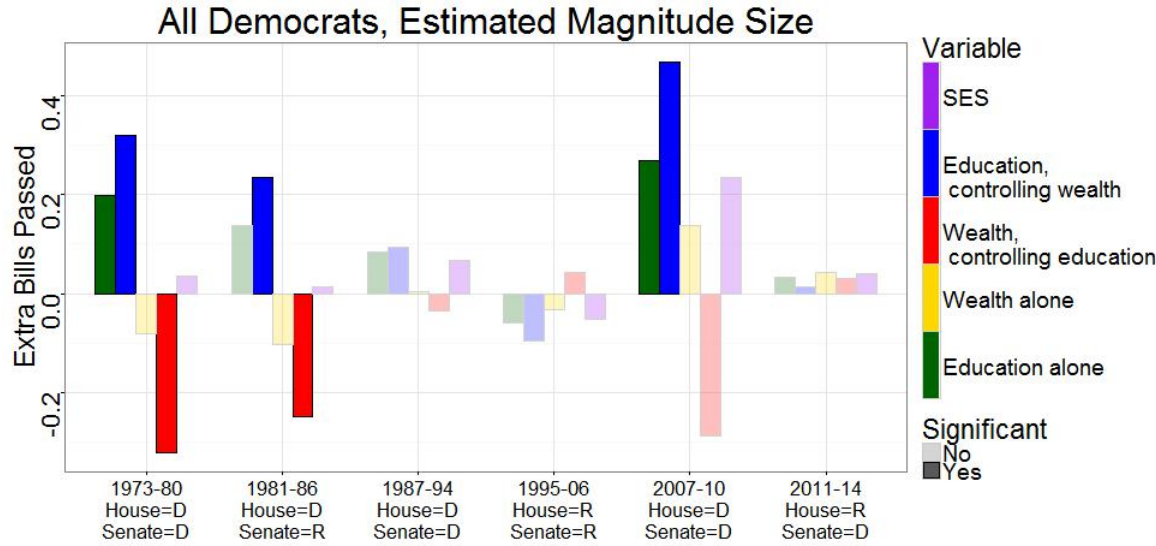
Table 9. Bills Passing House 1972-2014, Controlling for Time

	SES	Income, Education	Income	Education
SES	-0.267 (0.297)			
SES*year	0.003 (0.003)			
SES*Republican	-0.008 (0.037)			
income		-0.070* (0.032)	-0.052* (0.022)	
income*year		0.001* (0.0003)	0.001* (0.0002)	
income*Republican		-0.029*** (0.004)	-0.009** (0.003)	
education		0.060 (0.040)		0.024 (0.028)
education*year		-0.001 (0.0004)		-0.0002 (0.0003)
education*Republican		0.040*** (0.005)		0.013*** (0.003)
year	-0.028*** (0.004)	-0.032*** (0.008)	-0.042*** (0.007)	-0.023*** (0.006)
Republican	-12.001*** (0.595)	-9.266*** (0.678)	-11.872*** (0.563)	-11.198*** (0.628)
Republican*year	0.117*** (0.006)	0.091*** (0.007)	0.119*** (0.006)	0.107*** (0.007)
majority	-0.184*** (0.037)	-0.284*** (0.038)	-0.191*** (0.038)	-0.208*** (0.037)
conservativeness	-0.377*** (0.090)	-0.395*** (0.090)	-0.383*** (0.090)	-0.380*** (0.089)
seniority	0.065*** (0.004)	0.066*** (0.004)	0.066*** (0.004)	0.065*** (0.004)
percent black	-0.097*** (0.011)	-0.105*** (0.011)	-0.097*** (0.011)	-0.101*** (0.011)
Black Caucus	-3.757*** (1.078)	-4.051*** (1.082)	-3.977*** (1.081)	-3.670*** (1.075)
Black Caucus*year	0.036*** (0.010)	0.039*** (0.010)	0.038*** (0.010)	0.035*** (0.010)
comm. chair	1.153*** (0.054)	1.120*** (0.054)	1.149*** (0.054)	1.145*** (0.054)
powerful comm.	-0.361*** (0.033)	-0.379*** (0.033)	-0.365*** (0.033)	-0.362*** (0.033)
Observations	9,194	9,194	9,194	9,194
Akaike Inf. Crit.	27,430	27,317	27,420	27,401

Note:

*p<0.05; **p<0.01; ***p<0.001

Figure 6: Estimated magnitude of socioeconomic variables for Democrats across time



ting model is the one that includes both income and education. This implies that education is a strong independent predictor of legislative success when Democrats and Republicans are analyzed together.

Figure 7: Estimated magnitude of socioeconomic variables for Republicans

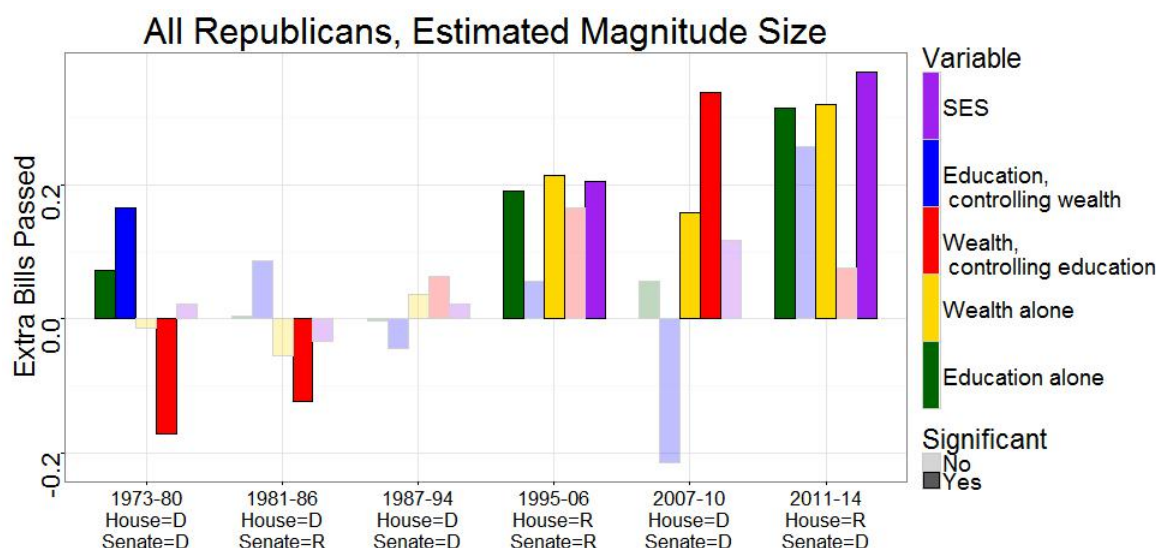


Table 10 and 11 support the results from the visual. They split the results from Table 9 by party identification, thus removing the need for interaction effect by party. This allows the effects to be more readily visible, albeit not as quick to read as Figures 6 and 7.

The regression results by party confirm what is evident in the graphics: there is no clear interaction between time and socioeconomic variables for Democrats. Their behavior is remarkably consistent over time.

Republicans, on the other hand, do change their behavior over time.

Intriguingly, the best fitting model is different for Republicans and Democrats. For Republicans, the best fitting model is the one that focuses on education and omits income. For Democrats, the best fitting model is the one that incorporates both income and education together.

Note that the effect of being a black Democrat is evident in Table 11. Black legislators have become more legislatively productive over time. In fact, the effect

Table 10. Republican Bills Passing House 1972-2014, Controlling for Time

	SES	Income, Education	Income	Education
SES	−0.920* (0.445)			
SES*year	0.010* (0.004)			
income		−0.055 (0.048)	−0.083* (0.032)	
income*year		0.001 (0.0005)	0.001** (0.0003)	
education		−0.016 (0.063)		−0.063 (0.043)
education*year		0.0003 (0.001)		0.001 (0.0004)
year	0.026*** (0.006)	0.004 (0.012)	0.003 (0.011)	0.012 (0.010)
majority	1.061*** (0.056)	1.008*** (0.060)	1.073*** (0.057)	1.024*** (0.056)
seniority	0.063*** (0.005)	0.063*** (0.006)	0.063*** (0.006)	0.063*** (0.005)
conservativeness	−0.620*** (0.117)	−0.624*** (0.117)	−0.610*** (0.117)	−0.626*** (0.117)
percent black	−0.109*** (0.017)	−0.113*** (0.017)	−0.108*** (0.017)	−0.112*** (0.017)
comm. chair	0.847*** (0.076)	0.847*** (0.076)	0.846*** (0.076)	0.849*** (0.076)
powerful comm.	−0.290*** (0.046)	−0.298*** (0.047)	−0.287*** (0.046)	−0.296*** (0.046)
Observations	4,146	4,146	4,146	4,146
Akaike Inf. Crit.	11,230.340	11,228.700	11,235.010	11,226.840

Note:

*p<0.05; **p<0.01; ***p<0.001

Table 11. Democratic Bills Passing House 1972-2014, Controlling for Time and Black MC Interaction

	SES	Income, Education	Income	Education
SES	-0.610 (0.371)			
SES*year	0.006 (0.004)			
income		-0.038 (0.041)	-0.056* (0.028)	
income*year		0.0003 (0.0004)	0.001 (0.0003)	
education		0.011 (0.048)		-0.009 (0.034)
education*year		-0.00003 (0.0005)		0.0001 (0.0003)
year	0.014** (0.004)	-0.001 (0.009)	-0.001 (0.009)	0.007 (0.007)
majority	-1.310*** (0.054)	-1.339*** (0.056)	-1.317*** (0.055)	-1.311*** (0.054)
seniority	0.077*** (0.004)	0.077*** (0.004)	0.076*** (0.004)	0.077*** (0.004)
conservativeness	-0.416*** (0.125)	-0.437*** (0.125)	-0.464*** (0.125)	-0.354** (0.122)
percent black	-0.108*** (0.013)	-0.112*** (0.013)	-0.111*** (0.013)	-0.106*** (0.013)
Black Caucus	-3.901*** (1.041)	-4.014*** (1.063)	-4.078*** (1.051)	-3.749*** (1.037)
Black Caucus*year	0.038*** (0.010)	0.039*** (0.010)	0.039*** (0.010)	0.037*** (0.010)
comm. chair	0.852*** (0.066)	0.852*** (0.066)	0.848*** (0.066)	0.860*** (0.066)
powerful comm.	-0.516*** (0.043)	-0.522*** (0.043)	-0.517*** (0.043)	-0.516*** (0.043)
Observations	5,060	5,060	5,060	5,060
Akaike Inf. Crit.	15,281.450	15,275.450	15,278.230	15,281.320

Note:

*p<0.05; **p<0.01; ***p<0.001

size of being black on legislative success is statistically significant and negative for the 1970s, but statistically significant and positive in the 1990s and 2000s. This is one result that deserves extra attention. The results for the modern era have been known for a while, but as far as I am aware no one has noticed or explored the fact that black Democrats in the 1970s and 1980s were not successful in creating legislation.

9 PARTISANSHIP and SOCIOECONOMICS

Throughout the first two chapters of this dissertation I have focused on the differences between Republicans and Democrats. In the first chapter I showed the Republicans focused more on policy than did Democrats. In this section I will statistically validate my claim that Republicans, who are thought to represent the interests of working class white men and the business elites, are more engaged in legislation when they represent the wealthy, but that this effect is at least partially driven by educational attainment.

In order to determine whether there is a significant difference between Democrats and Republicans, I use an interaction term between socioeconomic levels and party. This shows whether the magnitude of the effect of income is significantly different between Republicans and Democrats. The excluded variable is Democrats, so a positive interaction term indicates that Republicans are more responsive to socioeconomic status relative to Democrats.

The results from both Tables 8 and 9 show that the interaction effect between party and almost all socioeconomic measures is statistically significant. The coefficient for income*Republicans is positive and strongly significant. Thus, across all forty years, Republicans tend to be more successful than Democrats in creating

policy when they represent socioeconomically privileged districts.

The results show that the strength of this bias varies over time and according to which party is in control of Congress. Of course, it is difficult to fully interpret an interaction effect based on a table of regression results. To improve ease of interpretation, Figures 8 and 9 break down the interaction effect by party, party control, and time.

Figure 8: Party Control: Difference between Republicans and Democrats for the effect of socioeconomic status on bill passage

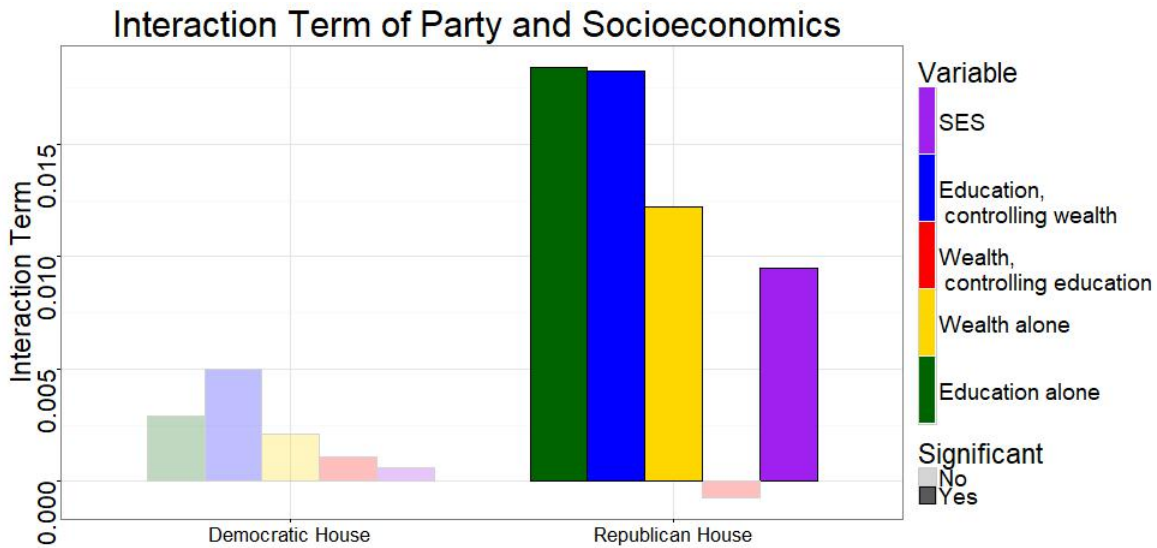


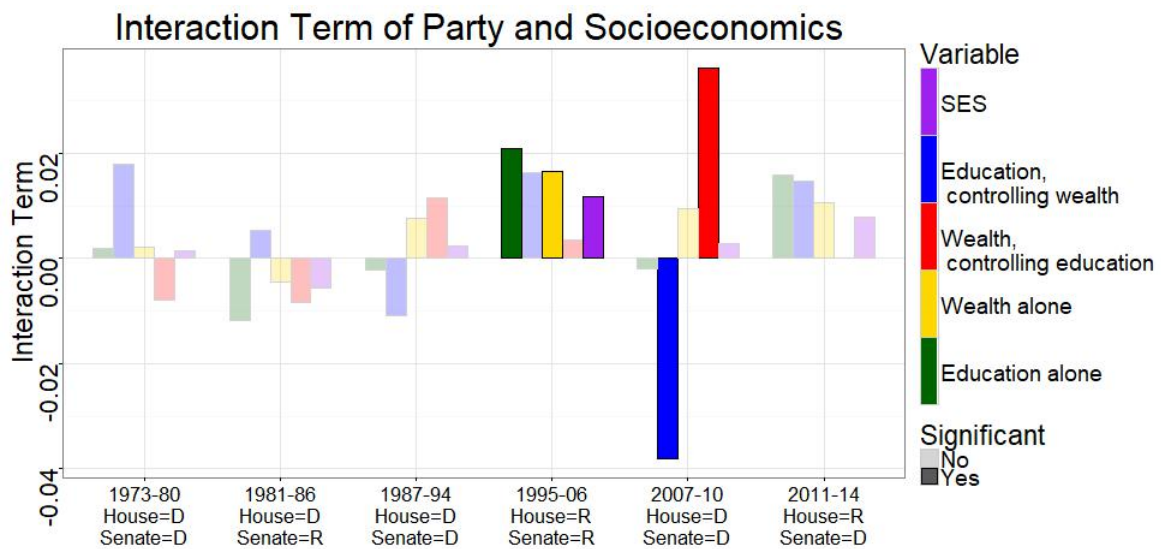
Figure 8 graphs the coefficient for this interaction term according to which party was in control of the House. Because these regressions are run for each Congress without creating separate datasets for Republicans and Democrats, the model used is a minor modification of those already presented in 8.

$$\begin{aligned}
 \text{successful legislation} = & \text{income} + \text{income} * \text{Republican MC} \\
 & \text{education} + \text{education} * \text{Republican MC} + \\
 & \text{MC conservativeness} + \text{MC seniority} +
 \end{aligned}$$

percent black population + Black Caucus MC +
 Black Caucus MC* year +
 committee chair + powerful committee member

Using the same model for both parties allows the interaction term between the district's socioeconomic status and the legislator's party affiliation to be estimated for each Congress. If the interaction is statistically significant and positive, then Republicans are more influenced by socioeconomic status than are Democrats. This is what we see happening in Figure 8.

Figure 9: Over Time: Difference between Republicans and Democrats for the effect of socioeconomic status on bill passage



Republicans are almost always more legislatively successful in districts with high levels of socioeconomic privilege. The effect is statistically significant for all Congresses combined, and is very often statistically significant for individual years. Republicans are the most disproportionately biased toward the wealthy in the 1990s, for the 102nd through 107th Congresses. That is, Republicans favor the socioeco-

nomically privileged more than do Democrats for most years, especially in Republican controlled Congresses. Thus, my second hypothesis that there is a difference between Republicans and Democrats is confirmed. Clearly, the socioeconomic privilege of a district affects the behavior of its representative, particularly for Republicans.

10 INDIVIDUAL POLICY and CONSTITUENT SERVICE PREFERENCES in 1978

Data

Evidence for preferences in the 1970s comes from the National Election Survey of 1978. It provides shows preferences regarding representational style has remained remarkable consistent over the past few decades. As is the case today, less socioeconomically privileged respondents preferred that their representative focus on constituent service instead of legislation. The NES survey asked 2,304 people rank their preferences for whether their representative should focus on constituent service, pork, communication, bureaucratic oversight, or legislation. Table 12 shows the distribution of first choice preferences over these five activities.

Table 12. Descriptive Statistics of Preferences over Legislator's Activities

	casework	pork	bureaucracy oversight	communication	legislation
% prefer	12%	17%	17%	33%	21%

Source: A.N.E.S 1978

Of course, the survey was carefully worded to extract the respondents' preferences without bias based on question wording. Thus, the questions did not simply ask "Do you prefer that your legislator engage in constituent service?" In fact, the question did not use the terms legislation, pork, bureaucratic oversight, communica-

tion, or constituent service, presumably because these words are inherently biased. After all, very few people want members of Congress to use pork (Clement 2012). Constituent service causes a problem for a different reason: it is unlikely to be a term understood by many constituents. Instead, the questions were carefully worded to avoid bias and ensure comprehension. For example, the concept of constituent service was phrased as “helping people in the district who have personal problems with the government.”

The dependent variable for this analysis is whether the respondent preferred legislative activity over constituent service. I recoded the variables to be 0 if the respondent ranked constituent service higher than legislation, 1 if the respondent preferred legislation over constituent service. The independent variables are socioeconomic characteristics: income, party identification, education. I omit race for the purposes of this analysis, as the sample size of minorities was too small to justify inclusion.

Results

The results in Table 13 below demonstrate that the richer a Republican respondent was, the more he or she preferred that legislators focus on legislation. Each line graphs the estimated probability, based on family income, that a respondent prefers their representative to engage in legislation over constituent service. The solid line represents those without a four year college degree, and the dotted line represents those with one.

The effect of income is large and significant for Republican respondents. In order to examine the magnitude of the effect, I compare Republicans at the bottom

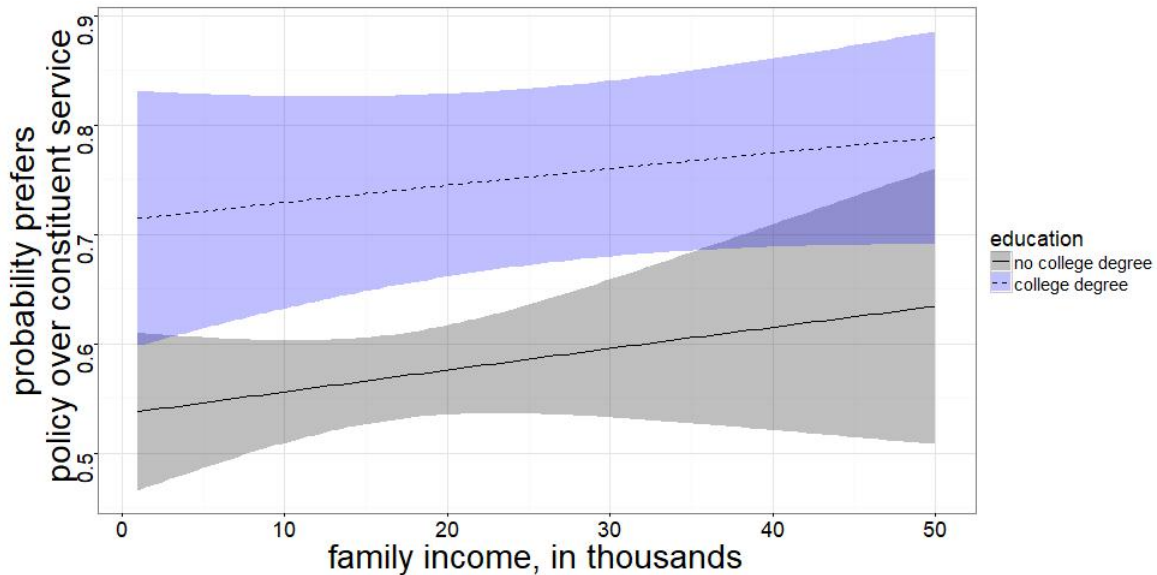
Table 13. Legislation preferred over constituent service

	Democrats	Republicans
income	0.008 (0.008)	0.035** (0.011)
college degree	0.766** (0.242)	0.738** (0.272)
Black	-0.469* (0.229)	1.078 (0.703)
Observations	801	457
<i>Note:</i>	*p<0.05; **p<0.01; ***p<0.001	

quartile of the wealth distribution to those at the top quartile. In order to estimate the effect, I control for partisanship, education, and race by comparing the estimated effect for two hypothetical people who are identical in every respect except their income. Here, the bottom quartile cutpoint is \$20,000 per year per family. The top quartile cutpoint is \$40,000. As depicted in Figure 11, a Republican with no college degree at the bottom quartile of family income legislation 65% of the time. If a similar respondent was in the top quartile of family income, their probability of preferring legislation would be 73%. This is an increase of 8%. Additionally, having a high school diploma or GED increases the respondent's chance of preferring legislation by an average of 15%.

The large positive effect of family income on preferring legislation does not match the behavior of Republicans in Congress. This could be because the connection that appeared very strong after 2000 does not exist prior to 1990. Or it could be an artifact of Democrats controlling Congress. The connection between district socioeconomics and legislative productivity for minority party legislators tends to mirror the connection for the majority party. It is plausible that Democrats only opened the door to bills that were produced by and favored by highly educated

Figure 10: Democratic respondents: Estimated probability of preferring their representative engage in legislation

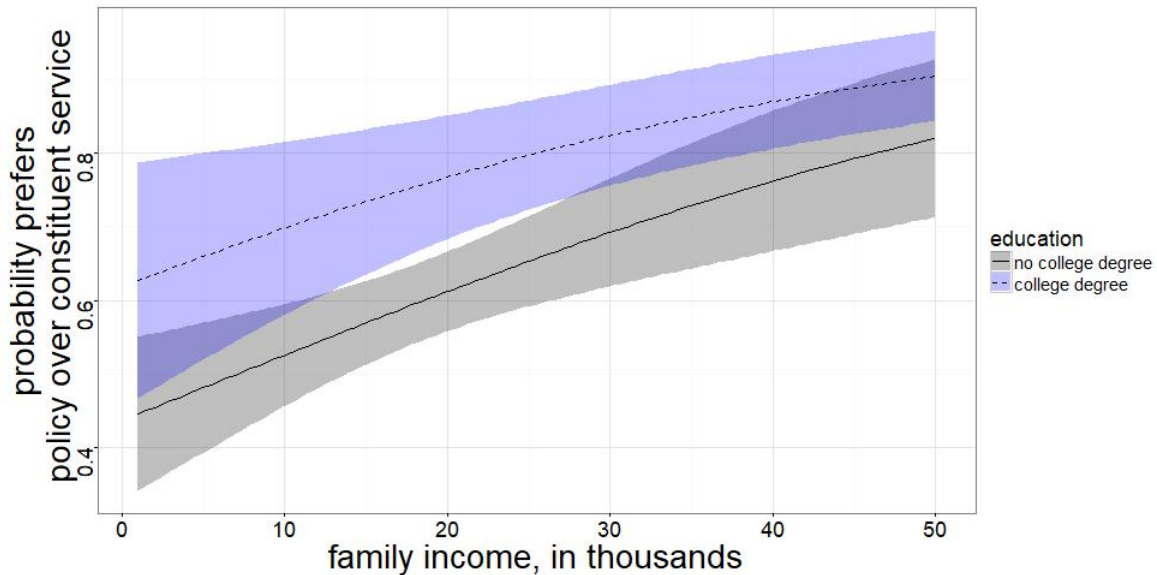


yet less wealthy constituents, regardless of whether the sponsoring legislator was Democrat or Republican.

Intriguingly, the effect of family income is negligible for Democrats. This lightly corresponds with the results from the analysis on legislative success. There the effect of district income was statistically significant and negative. The most congruent results would be to show that poor Democrats prefer policy over constituent service. However, one can hardly expect that poor constituents are likely to prefer policy over legislation. Poor constituents are much more likely to rely on constituent service to help them access the social safety net. They are also less likely to be invested in policy due to the well known association between policy activism and economic status.

The positive coefficient on education for Democrats is entirely consistent with the results for legislative success. Namely, highly educated Democrats both pre-

Figure 11: Republican respondents: Estimated probability of preferring their representative engage in legislation



fer legislation and legislators who represent highly educated districts create more legislation.

These results are similar to those reported for the 2000s and 2010s (Harden, 2015; Griffin & Flavin, 2011), but provide the benefit of being able to analyze Republicans and Democrats independently. In this study, a Republican respondent's wealth and education are positively associated with a preference for legislation over constituent service. The effect for Democrats is similarly positive and statistically significant for education. Additionally, by separating Democrats and Republicans, we can see that black Democrats tend to prefer constituent service over policy. This result would have been obscured if Democrats and Republicans were lumped together.

It is true that the differences between Democrats and Republicans are not statistically significant. Yet with a relatively small sample size it is very hard to un-

cover statistically significant interaction effects. The differences between Democrats and Republicans are consistent with other results, and provide insight into the reason that Democrats provide more legislation to the highly educated, but not to the wealthy.

11 POTENTIAL REGIONAL CAUSES of POLITICAL PRIVILEGE

The goal of this section is to examine possible reasons for the changing influence of affluence as reflected in legislative productivity. The results are exploratory in nature, but provide intriguing insights into the regional variations in politics.¹²

One potential explanation for the changing influence of the affluent is due to regional changes in party affiliation. For example, Democrats used to be strongest in the South, which is now a Republican bastion. If certain regions have constant preferences over legislation and legislative activity reflects the behavior of representatives from the more powerful areas, then the transition of the Republican party from a Midwestern party to a Southern party could explain why the tie between district socioeconomics and legislative success has changed for Republicans.

The changing power of the South is reflected in the number of legislators from the South in each party, as seen in Table 14. Prior to 1988, the regional power of Democrats was concentrated in the South. After 1994, that power transitioned to the Northeast. Instead, Southern Republicans now had the bulk of the premium committee seats. I focus on committee power here, but these results are very similar for the total number of Republican and Democratic seats held in each region as well

¹²The appendix contains the full regression results for the graphics provided. As explained there, some of these patterns are hard to pin down as statistically significant.

as the number of members from each region who chair a committee.

Table 14. Percent of Legislators in Powerful Committees

	before 1988		after 1994	
	Democrats	Republicans	Democrats	Republicans
Midwest	23.8%	38.2%	17.7%	23.9%
Northeast	22.8%	19.3%	30.3%	10.6%
South	37.5%	29.6%	29.1%	46.7%
West	15.7%	12.9%	22.9%	18.8%
Observations	1,925	1,200	1,783	1,798

Figures 12 and 13 allow some inferences for whether the changing behavior of Republican legislators is driven by their geographic base. Southern representatives consistently produce more legislation when they represent wealthy and educated districts when they are in the majority party. Yet there are also indications that the increasing influence of affluence is due to changes in behavior within regions. Specifically, Midwestern Republicans reflect the demographic-legislative connection of the all Republicans. Prior to 1995, when Republicans were in the minority party, Midwestern Republicans from wealthy districts produced slightly less legislation than their counterparts in poorer districts. After the Republicans took over the House after 1995, Midwestern Republicans produced more legislation when they represented wealthy districts. Thus, the increasing power of affluent districts is being driven by both the increased power of Republicans in the South and by the changing behavior of Midwestern Republicans.

Two other patterns are worthy of mention. The first is that Southern Democrats and Southern Republicans both have similar patterns of legislative productivity with respect to their district demographics. They both tend to produce more legislation when they represent highly educated and socioeconomically strong districts. Yet

Figure 12: Republicans, Successful legislation by region and time

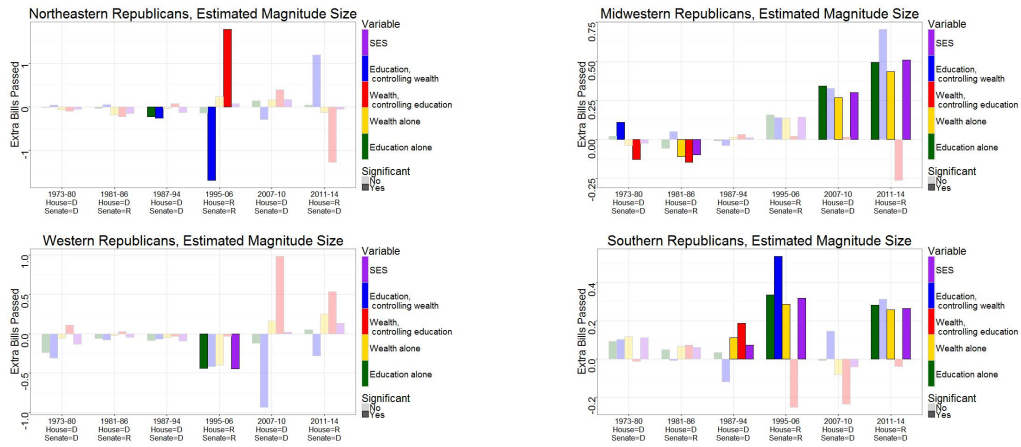
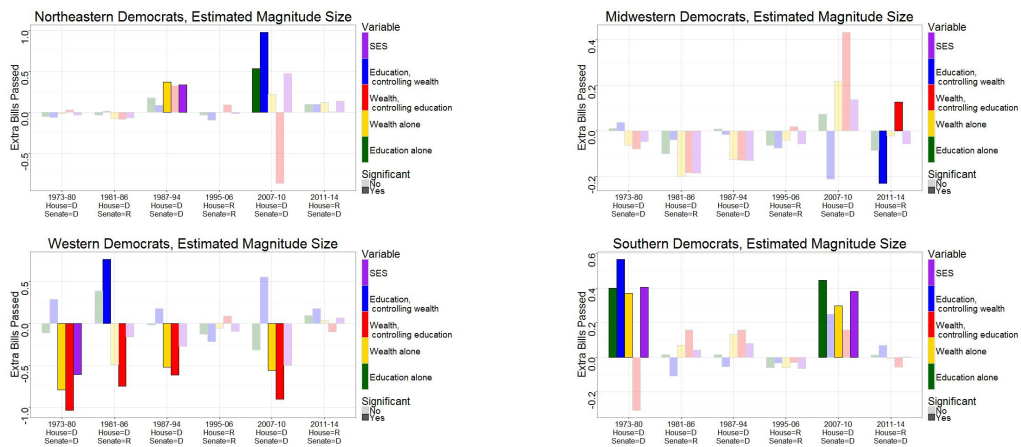


Figure 13: Democrats, Successful legislation by region and time



the effect of wealth once education is controlled for is negligible, and often negative. This indicates that there is some merit to the idea that regional ideologies influence legislative behavior.

The second pattern of note is that the positive influence of education and negative influence of income for Democratic representatives appears to be caused by a confluence of behavior by Western and Southern Democrats. Namely, Western Democrats tend to produce more legislation when they represent poor districts, while Southern Democrats tend to produce more legislation when they represent educated districts. Combined, Democrats overall produce more legislation in wealthy districts with relatively low educational attainment. As shown in the appendix, these results are not consistently statistically significant. The appropriate model to account for regional variation needs better theoretical grounding in order to fully account for the impact of regional partisan affiliations, and provides an interesting avenue of additional study.

12 INFLUENCE of AFFLUENCE on IDEOLOGY

The last section of this chapter explores a different view of the changing impact of affluence on legislative behavior. This time, I examine how members of Congress vote on all bills by examining their DW-Nominate scores. This replicates and expands on results from McCarty et al. (2006). As they show, the influence of income on voting behavior has increased over the past 40 years. I show that this effect is due to Republicans taking control of Congress and because Republicans now have lean more conservative when they represent a highly educated district. Additionally, once again income and education have clearly distinguishable effects on voting behavior.

The dependent variable is the ideology of legislators, as measured by DW-Nominate scores. The more conservative a legislator, the closer his or her ideological score is to 1. The more liberal legislators have ideological scores close to -1. The economic and educational independent variables all range between 0 and 1, so their coefficients can be compared relatively directly.¹³

McCarty et al. (2006) show that connection between district income and legislator conservativeness has increased over the past 40 years. They argue that this is partially due to an increase in magnitude of the coefficient, but also because districts themselves are facing larger inequality.

Tables 15 and 16 show this is also due to the fact that Republicans are now more conservative when they represent districts with high socioeconomic status, not because all legislators have become more conservative when representing districts with high socioeconomic status. Democrats are still more liberal when they represent high socioeconomic status districts, just as they were in the 1970s and 1980s.¹⁴

Figure 14 highlights the changing effects of income, socioeconomic status, and education. As in the prior graphics, the coefficient for each bar in the graphics represents the coefficient from a regression that looked at that group of legislators. For example, the green bar for Democrats between 1973 and 1980 shows the coefficient for education on Democrats ideology in that time period, controlling for the all non-economic or educational variable in Table 16.¹⁵ So between 1973 and 1980, Democrats who represented highly educated districts were more liberal.

¹³The combined factor for socioeconomic status, SES, was normalized to range between 0 and 1. Education and income are both percentages that inherently are bounded between 0 and 1. Education reflects the percent of the district that has a college degree, and income reflects the percent of the district that earns over ~\$75,000 in 2009 inflation adjusted dollars.

¹⁴The effect has declined somewhat for Democrats, but it is still strongly negative.

¹⁵Majority party is also not controlled for, as this time period was always controlled by Democrats.

Table 15. Republican Ideology by District Demographics 1972-2014

	SES	Income, Education	Income	Education
SES	−0.015*** (0.003)			
SES*year	0.0001*** (0.00003)			
income		0.015* (0.006)	−0.015*** (0.004)	
income*year		−0.0001* (0.0001)	0.0001*** (0.00004)	
education		−0.051*** (0.008)		−0.036*** (0.005)
education*year		0.0005*** (0.0001)		0.0003*** (0.0001)
year	0.029*** (0.001)	0.024*** (0.001)	0.025*** (0.001)	0.022*** (0.001)
Republican majority	0.021** (0.007)	0.015* (0.007)	0.022** (0.007)	0.020** (0.007)
seniority	−0.008*** (0.001)	−0.008*** (0.001)	−0.008*** (0.001)	−0.008*** (0.001)
percent black	−0.010*** (0.002)	−0.010*** (0.002)	−0.010*** (0.002)	−0.010*** (0.002)
comm. chair	−0.003 (0.014)	−0.001 (0.014)	−0.003 (0.014)	−0.002 (0.014)
powerful comm.	−0.021*** (0.006)	−0.023*** (0.006)	−0.021*** (0.006)	−0.022*** (0.006)
Observations	4,146	4,146	4,146	4,146

Note:

*p<0.05; **p<0.01; ***p<0.001

Table 16. Democratic Ideology by District Demographics 1972-2014

	SES	Income, Education	Income	Education
SES	−0.016*** (0.002)			
SES*year	0.0001*** (0.00002)			
income		−0.037*** (0.004)	−0.022*** (0.003)	
income*year		0.0003*** (0.00004)	0.0002*** (0.00003)	
education		0.015** (0.005)		−0.010* (0.004)
education*year		−0.0002** (0.0001)		0.0001 (0.00004)
year	0.0003 (0.0005)	−0.007*** (0.001)	−0.007*** (0.001)	−0.001 (0.001)
Republican majority	−0.033*** (0.005)	−0.031*** (0.006)	−0.043*** (0.006)	−0.022*** (0.006)
seniority	−0.005*** (0.0005)	−0.005*** (0.0005)	−0.005*** (0.0005)	−0.005*** (0.001)
percent black	0.019*** (0.002)	0.017*** (0.002)	0.017*** (0.002)	0.022*** (0.002)
Black Caucus	−1.530*** (0.111)	−1.653*** (0.113)	−1.611*** (0.112)	−1.447*** (0.113)
Black Caucus*year	0.012*** (0.001)	0.014*** (0.001)	0.013*** (0.001)	0.012*** (0.001)
comm. chair	−0.024** (0.009)	−0.024** (0.009)	−0.024** (0.009)	−0.023* (0.009)
powerful comm.	−0.032*** (0.005)	−0.032*** (0.005)	−0.034*** (0.005)	−0.032*** (0.005)
Observations	5,060	5,060	5,060	5,060

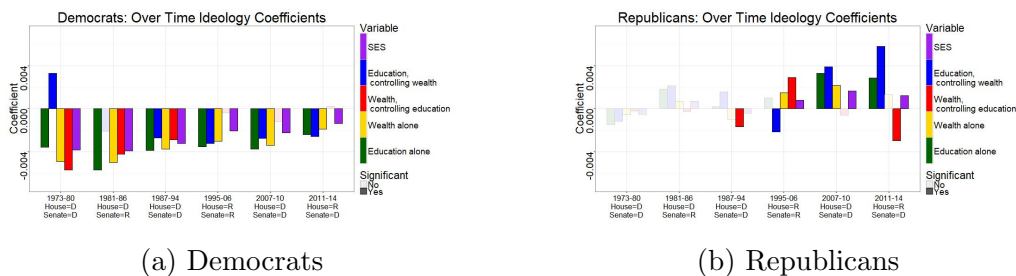
Note:

*p<0.05; **p<0.01; ***p<0.001

Just like with legislative success, the impact of district demographics on Democratic ideology is highly consistent across time. Democrats who represent districts with many constituents who are of high socioeconomic status are consistently more liberal, whether socioeconomic status is measured by wealth, education, or both. The one exception is the effect of education when controlling for wealth in 1973-1980. For that time period and that measure, Democrats were more conservative when they represented districts with high education levels relative to their income level. The effects are almost always statistically significant. The increasing impact of income on conservative ideology is not due to Democratic behavior.

Once again reflecting the trends in legislative success, the impact of district demographics on Republican ideology is less consistent over time. In fact, prior to the 1994 Republican take over of the House, district socioeconomics had almost no impact on Republican ideology. The fact that high income districts overall create more conservative legislators is entirely driven by the changes over time for Republicans, as well as their newfound control over the House of Representatives. Note, however, that while wealth (yellow bar), education (green bar), and the combined socioeconomic status variable (purple bar) are always positive and usually statistically significant, the effect sometimes becomes negative when education or wealth are controlled for. Between 1995 and 2006, the independent effect of education (blue bar) for Republican ideology was negative. That is, for two districts with similar numbers of wealthy inhabitants, the district with more educated inhabitants would be expected to have a legislator who was more liberal. Similarly, between 1987 and 1994, and between 2011 and 2014, the independent effect of wealth (red bar) was associated with more liberal Republican legislators. This discrepancy is currently unexplained, and merits future investigation.

Figure 14: Over Time, Impact of socioeconomic characteristics on ideology



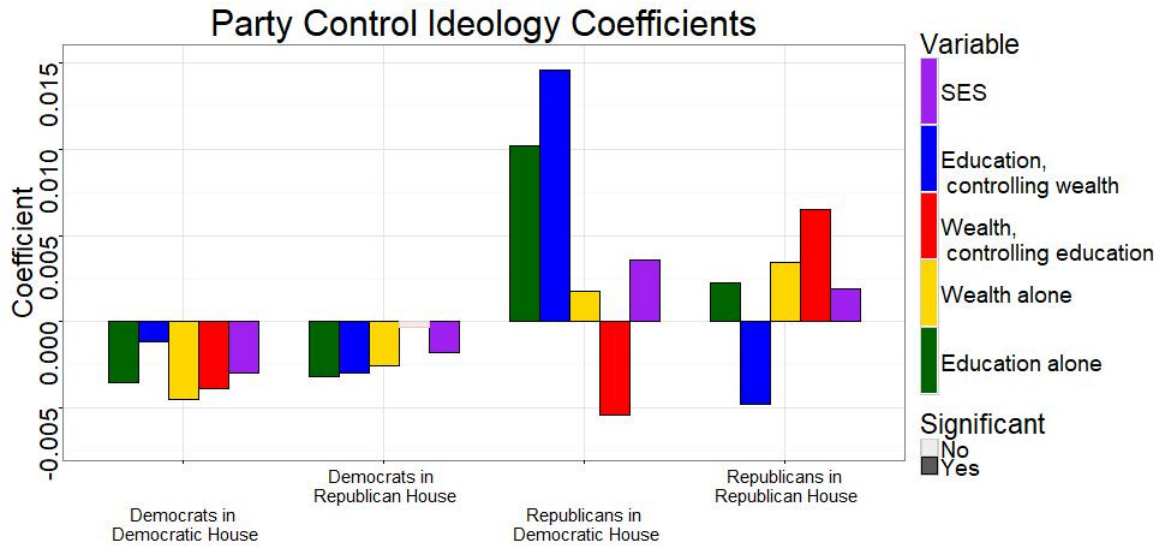
Overall, the increasing association between district socioeconomic characteristics and legislator ideology is driven by Republicans, not Democrats. We can see this in Figure 14. This graphic highlights the differences between Democrats and Republicans. This is a very similar pattern to the one revealed in the analysis of legislative success, and is consistent with the theory presented by (Barker & Carman, 2012). Republicans have changed their ideological grounding, and that appears to be reflected in the demographic ties to how they vote and how they create legislation.

Finally, Figure 15 highlights the differences between Republicans and Democrats when it comes to how district socioeconomic characteristics are correlated with legislator ideology. Democrats are more liberal when they represent wealthy and educated constituents, while Republicans are generally more conservative. As shown in the appendix, the interaction terms for Republicans are statistically significant, so there is a statistically significant difference between Republicans and Democrats.¹⁶

Note that yet again the disparate effects of income and education for Republican ideology are highly relevant. Generally, Republicans are more conservative when they represent socioeconomically elite districts. Yet the opposite effect can be obscured if they are not examined both together and separately. For example, look at Democrats in a Republican House, as seen in Figure 15. It is impossible

¹⁶Except for the socioeconomic status variable, likely because the effect of partisanship is captured by the effect of time.

Figure 15: By Partisanship and Party Control: Impact of socioeconomic characteristics on ideology



to tell whether the effect of wealth when education is controlled for is obscured by collinearity or if the apparent effect of wealth is entirely due to the collinearity with education. Yet we can see that overall socioeconomic status, as well the stand-alone impact of wealth, are both tied to more liberal Democrats. As another example, focus on the impact of wealth for Republicans in a Democratic House. Here, the independent effect of wealth once education is controlled for shows a correlation with more liberal members of Congress. Yet if wealth is looked at alone, without controlling for education, it would appear that the district wealth is correlated with more conservative Republicans. The problem is lower for this data than it was for the data on legislative success, as the primary point about that Republicans from socioeconomically privileged districts are more ideologically extreme, while Democrats are more moderate still stands. With the legislative analysis, the point that Republicans produce more legislation when they represent socioeconomically privi-

leged districts could be entirely obscured without the correct model specification.¹⁷

A few other results from these tables stand out. The first is that Republicans with large numbers of black constituents tend to be more liberal, while Democrats with large numbers of black constituents tend to be more conservative. This is an unexpected finding. Future work could examine whether this effect is due to Southern Democrats prior to the Republican revolution of 1994. However, a black Democratic member of Congress is, as expected, more liberal than a white Democrat.¹⁸

In general, Republicans have become more conservative over time. The trend for Democrats is less clear, as it depends highly on which demographic variables are controlled for. Intriguingly, when facing a Republican majority Democrats become more liberal while Republicans become more conservative.

A potential cause of the increasing importance of wealth in legislation may be through how sympathetic the ideological platform of each party is to the wealthy. Republicans have lost votes from the highly educated over the past forty years as they gain votes from the wealthy. This change has happened along with a shift in the ideology of the Republican party against increased funding for public schools and increased rhetoric against the ivory tower. As the demographic characteristics of the base have changed, so too has their legislative behavior.

13 CONCLUSION

Just as the influence of the affluent has increased in the economic sphere, I show that legislators who represent wealthy districts are more likely to produce legisla-

¹⁷The effect of district economics on Democratic legislative success could also be obscured using the wrong model.

¹⁸This result may be strongly influenced by whether the number of black constituents in the district is controlled for.

tion that favors the wealthy and to produce higher amounts of successful legislation. Asymmetric politics are clearly evident in these findings. Republicans are the politicians who are more responsive to the economic characteristics of their districts. The increasing influence of the affluent in legislation seems to be tied to the increasing power of Republicans.

Yet Democrats also respond to the elite. Instead of being responsive to wealthy constituents, they are more likely to be legislatively productive when they represent highly educated districts.

This chapter untangles the disparate effects of wealth and education on policy.

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14 APPENDIX

14.1 Collinearity in Voter Turnout

The confounding effect of education is not just apparent in the results presented in this dissertation. This section replicates the results of Burden and Wichowsky (2014) to reveal the confounding influence of education and income on voter turnout. These results point to the importance of adequately accounting for both collinearity and omitted variable bias when trying to understand how education and income affect politics.

The following two tables demonstrate the effect of collinearity between income and education in voter turnout rates. The analysis in the original paper refutes conventional wisdom that county unemployment rates have a negative relationship to voter turnout, and provides a theoretical grounding for the opposite effect. I replicated these results and focused on the impact of education, unemployment, and income.

Table 17 reveals one potential origin of conventional wisdom. Namely, when education is not controlled for as in Model 4, it appears that there is a statistically significant negative correlation between unemployment rates and voter turnout. However, controlling for education reveals that this effect was driven by education rates, and once education is controlled for, as in Models 1-3, the effect of unemployment reverses while remaining statistically significant. That is, counties with high unemployment rates do have lower turnout for voting, but this effect is driven by the fact that counties with low high school graduation rates have both high unemployment rates and low turnout rates. Low educational attainment drives low voter turnout, while high rates of unemployment help increase turnout once educational

attainment has been controlled for.

Of note, the effect of the collinearity between education and unemployment is not explicitly addressed in Burden and Wichowsky (2014). They acknowledge that their findings oppose tradition wisdom, but do not explain that traditional wisdom was confounded by omitting the influence of education. No other variable reversed the effect of county unemployment when omitted from the model; for this analysis, the most important collinear variable is education.

Table 17. Voter Turnout by Unemployment, Education, Gubernatorial Election (1980-2008)

	<i>Voter Turnout</i>			
	(1)	(2)	(3)	(4)
County unemployment	0.146*** (0.019)	0.187*** (0.018)	0.191*** (0.019)	−0.290*** (0.019)
High school graduation score	1.506*** (0.107)	4.475*** (0.060)	4.510*** (0.060)	
Concurrent gubernatorial race	5.328*** (0.299)	1.747*** (0.141)		
State unemployment	0.510*** (0.035)			
Percent black	0.031 (0.017)			
Median income	−0.389 (0.215)			
Competitive presidential race	0.010*** (0.002)			
Concurrent senatorial race	0.634*** (0.060)			
Year fixed effects	Yes	No	No	No
County fixed effects	Yes	No	No	No
AIC	167704.3	203835.5	203986.1	209162.5
Observations	27,899	27,901	27,901	27,901

Note:

*p<0.05; **p<0.01; ***p<0.001

Additional analyses show that this effect is primarily created by counties with the lowest rates of educational attainment, as shown in Table 18. The interaction effect between unemployment and educational attainment is statistically significant.¹⁹ Counties with the lowest education levels produce higher turnout when they face high unemployment rates. The effect of unemployment disappears for counties in the top half of educational attainment.²⁰

Yet their primary independent variable is unemployment, not income. To demonstrate that the effects are similar to the results in this dissertation, these results must be very similar when the analysis focuses on income instead of unemployment. In this case, because median income and county unemployment should produce similar effects on turnout rates, median income and unemployment rates should produce interchangeable statistical results. Table 19 shows that this effect holds when unemployment rates are omitted, instead focusing primarily on income. Namely, low income counties have overall lower turnout rates, but only when education is not accounted for. Low income counties of similar education levels have higher than expected turnout rates.

As the results from Table 17 show, when both income and unemployment are included in the model, only unemployment shows up as statistically significant.

¹⁹Model with the interaction effect is not shown.

²⁰Note that multiple variables change magnitude substantially based on educational attainment. County unemployment and median income both become smaller as educational attainment goes up. Larger black populations are associated with reduced turnout in low education counties, and with increased turnout in high education counties. Competitive presidential races are associated with lower voter turnout in low education counties, but are associated with higher voter turnout in high education counties. One possible theory that explains this rests on the educational attainment of Democrats versus Republicans. Highly educated counties will tend to be more Democratic. Democrats tend to promote the participation of the less wealthy and minorities, so highly educated Democratic districts should see an increase in voter turnout when they have more poor and minority members. Yet Republicans tend to fan the anger of unemployed white males, so counties with high unemployment, particularly white male unemployment, should see higher levels of turnout relative to other similar counties.

Table 18. Voter Turnout by Educational Attainment

	<i>Turnout based on county educational attainment quartiles</i>			
	Lowest quartile	2nd lowest quartile	2nd highest quartile	Highest quartile
County unemployment	0.173*** (0.032)	0.109** (0.042)	0.052 (0.041)	0.085 (0.045)
High school graduation score	2.169*** (0.270)	1.322*** (0.384)	1.811*** (0.438)	0.983** (0.302)
Concurrent gubernatorial race	4.755*** (0.569)	5.197*** (0.553)	4.387*** (0.593)	3.516*** (0.794)
State unemployment	0.646*** (0.075)	0.708*** (0.076)	0.379*** (0.064)	0.331*** (0.067)
Percent black	-0.037 (0.033)	-0.181*** (0.042)	0.281*** (0.037)	0.420*** (0.040)
Median income	-2.283*** (0.688)	-2.610*** (0.611)	-1.501** (0.457)	0.421 (0.348)
Competitive presidential race	-0.010* (0.005)	-0.0002 (0.005)	0.018*** (0.004)	0.027*** (0.004)
Concurrent senatorial race	0.651*** (0.138)	0.672*** (0.125)	0.540*** (0.098)	0.414*** (0.105)
Year fixed effects	Yes	Yes	Yes	Yes
County fixed effects	Yes	Yes	Yes	Yes
AIC	43092.7	42571.7	39231	40248.8
Observations	6,979	6,975	6,978	6,979

Note:

*p<0.05; **p<0.01; ***p<0.001

Table 19. Voter Turnout by Income, Education, Gubernatorial Election (1980-2008)

	<i>Voter Turnout</i>			
	(1)	(2)	(3)	(4)
Median income	-0.599** (0.213)	-4.433*** (0.127)	-4.513*** (0.127)	1.894*** (0.113)
High school graduation score	1.493*** (0.106)	5.723*** (0.069)	5.774*** (0.069)	
Concurrent gubernatorial race	5.335*** (0.300)	1.504*** (0.139)		
State unemployment	0.657*** (0.029)			
Percent black	0.037* (0.017)			
Competitive presidential race	0.010*** (0.002)			
Concurrent senatorial race	0.641*** (0.060)			
Year fixed effects	Yes	No	No	No
County fixed effects	Yes	No	No	No
AIC	167876.9	202901.6	203017	209276.8
Observations	27,919	27,921	27,921	27,921

Note:

*p<0.05; **p<0.01; ***p<0.001

That is, unemployment does a better job of explaining turnout than does median income. In more precise terms, unemployment captures almost all of the variance in voter turnout that would otherwise be attributed to median income. Thus, for Burden and Wichowsky, unemployment is a more important explanatory variable than is median income.

The results in Burden and Wichowsky point to yet another example of income related variables creating opposing political effects to education. I suggest that income and education frequently create opposing effects in politics. Any time that the impacts of education and income oppose each other, omitting one will dramatically obscure the true effect of the other.

14.2 Regression Results for Bill Success with Regional Controls

This section provides the regression results for bill success based on party, time, and region, Tables 20, 21, 22, 23. Note that the influence of the South for Republican bills depends on how it is included. When it is included as one of four regions—South, Midwest, Northeast, and West—it shows significantly different results from the omitted region of the Midwest. However, when it is included just a dummy variable on its own, it does not demonstrate any statistical significance. This is an intriguing distinction, and one that reverses itself for Democrats. Further study should examine why this is happening. Until then, it is impossible to say how influential the South is on legislative behavior.

Table 20. Republican Bills Passing House, Controlling for Time and Region

	SES	Income, Education	Income	Education
SES	-3.334*** (0.923)			
SES*year	0.033*** (0.009)			
SES*NE	-0.063 (1.328)			
SES*south	4.630*** (1.182)			
SES*west	1.856 (1.364)			
SES*year*NE	-0.001 (0.013)			
SES*year*south	-0.043*** (0.011)			
SES*year*west	-0.020 (0.013)			
income		-0.011 (0.104)	-0.245*** (0.069)	
income*year		0.00000 (0.001)	0.002*** (0.001)	
income*NE		-0.060 (0.149)	0.040 (0.099)	
income*south		0.304* (0.152)	0.362*** (0.091)	
income*west		0.098 (0.145)	0.205* (0.102)	
income*year*NE		0.001 (0.001)	-0.0004 (0.001)	
income*year*south		-0.003 (0.001)	-0.003*** (0.001)	
income*year*west		-0.001 (0.001)	-0.002* (0.001)	
education		-0.311* (0.129)		-0.279*** (0.084)
education*year		0.003* (0.001)		0.003*** (0.001)
education*NE		0.039 (0.201)		-0.055 (0.126)
education*south		0.083 (0.182)		0.347** (0.109)
education*west		0.049 (0.184)		0.109 (0.124)
education*year*NE		-0.001 (0.002)		0.0003 (0.001)
education*year*south		-0.001 (0.002)		-0.003** (0.001)
education*year*west		-0.001 (0.002)		-0.001 (0.001)
year	0.049*** (0.009)	-0.021 (0.022)	-0.019 (0.022)	-0.007 (0.017)
NE	2.000 (1.239)	1.163 (3.382)	1.554 (3.370)	1.424 (2.591)
South	5.008*** (1.058)	-5.675* (2.879)	-5.712* (2.876)	-1.576 (2.213)
West	2.432* (1.120)	-3.198 (3.332)	-2.992 (3.351)	-0.754 (2.525)
year*NE	-0.017 (0.012)	-0.006 (0.033)	-0.012 (0.032)	-0.008 (0.025)
year*south	-0.045*** (0.010)	0.055* (0.027)	0.055* (0.027)	0.017 (0.021)
year*west	-0.016 (0.011)	0.043 (0.032)	0.038 (0.032)	0.020 (0.024)
majority	1.044*** (0.055)	1.021*** (0.060)	1.053*** (0.056)	1.040*** (0.055)
seniority	0.066*** (0.005)	0.067*** (0.005)	0.067*** (0.005)	0.065*** (0.005)
conservativeness	-0.796*** (0.124)	-0.790*** (0.125)	-0.785*** (0.124)	-0.809*** (0.125)
percent black	-0.059** (0.022)	-0.054* (0.022)	-0.065** (0.022)	-0.064** (0.022)
comm. chair	0.823*** (0.073)	0.822*** (0.073)	0.823*** (0.074)	0.824*** (0.073)
powerful comm.	-0.311*** (0.046)	-0.312*** (0.046)	-0.305*** (0.046)	-0.311*** (0.046)
Observations	4,146	4,146	4,146	4,146
Akaike Inf. Crit.	11,061.200	11,057.210	11,079.920	11,053.760

Note:

*p<0.05; **p<0.01; ***p<0.001

Table 21. Republican Bills Passing House 1972-2014, Controlling for Time and Southern States

	SES	Income, Education	Income	Education
SES	-1.577* (0.683)			
SES*year	0.016* (0.007)			
SES*south	0.694 (1.323)			
SES*year*south	-0.006 (0.013)			
income		-0.067 (0.067)	-0.106* (0.047)	
income*year		0.001 (0.001)	0.001* (0.0005)	
income*south		0.070 (0.184)	0.033 (0.102)	
education		-0.082 (0.096)		-0.153* (0.070)
education*year		0.001 (0.001)		0.001* (0.001)
education*south		-0.012 (0.226)		0.058 (0.128)
education*year*south		0.0002 (0.002)		-0.0004 (0.001)
year	0.035*** (0.009)	0.003 (0.017)	0.003 (0.017)	0.011 (0.014)
South	1.647 (1.208)	0.387 (3.020)	0.061 (2.946)	1.293 (2.449)
year*south	-0.015 (0.012)	-0.006 (0.029)	-0.002 (0.028)	-0.014 (0.024)
majority	1.114*** (0.066)	1.120*** (0.074)	1.144*** (0.068)	1.077*** (0.066)
seniority	0.074*** (0.007)	0.074*** (0.007)	0.074*** (0.007)	0.074*** (0.007)
conservativeness	-0.625*** (0.135)	-0.627*** (0.136)	-0.617*** (0.135)	-0.627*** (0.136)
percent black	-0.117*** (0.023)	-0.117*** (0.023)	-0.120*** (0.023)	-0.115*** (0.022)
comm. chair	0.803*** (0.089)	0.804*** (0.089)	0.800*** (0.089)	0.809*** (0.089)
powerful comm.	-0.318*** (0.052)	-0.317*** (0.052)	-0.315*** (0.052)	-0.322*** (0.052)
Observations	3,481	3,481	3,481	3,481
Akaike Inf. Crit.	9,150.283	9,157.820	9,152.026	9,151.639

Note:

*p<0.05; **p<0.01; ***p<0.001

Table 22. Democratic Bills Passing House, Controlling for Time and Region

	SES	Income, Education	Income	Education
SES	-0.678 (1.039)			
income		-0.033 (0.096)	-0.049 (0.081)	
year	0.017* (0.008)	0.004 (0.023)	0.001 (0.023)	0.012 (0.016)
NE	0.227 (1.028)	-0.247 (3.015)	-0.316 (2.962)	0.892 (2.118)
South	1.538 (1.028)	-1.188 (2.684)	-1.472 (2.653)	1.385 (1.951)
West	1.851 (0.998)	4.003 (3.056)	3.908 (3.036)	3.747 (2.083)
education		0.013 (0.100)		0.007 (0.087)
majority	-1.315*** (0.054)	-1.348*** (0.056)	-1.320*** (0.055)	-1.315*** (0.054)
seniority	0.082*** (0.004)	0.082*** (0.004)	0.082*** (0.004)	0.082*** (0.004)
conservativeness	-0.277* (0.135)	-0.283* (0.135)	-0.303* (0.135)	-0.229 (0.135)
percent black	-0.068*** (0.015)	-0.067*** (0.015)	-0.071*** (0.015)	-0.067*** (0.015)
black caucus	-4.070*** (1.049)	-3.772*** (1.074)	-4.094*** (1.059)	-3.923*** (1.046)
comm. chair	0.828*** (0.065)	0.834*** (0.065)	0.829*** (0.065)	0.841*** (0.065)
powerful comm.	-0.534*** (0.043)	-0.544*** (0.043)	-0.531*** (0.043)	-0.536*** (0.043)
SES*year	0.006 (0.010)			
SES*NE	-0.021 (1.274)			
SES*south	0.916 (1.262)			
SES*west	-1.218 (1.301)			
income*year		0.0003 (0.001)	0.0004 (0.001)	
income*NE		0.034 (0.120)	0.008 (0.098)	
income*south		0.243 (0.133)	0.084 (0.098)	
income*west		0.0003 (0.126)	-0.068 (0.101)	
education*year				-0.00005 (0.001)
education*NE				-0.070 (0.109)
education*south				-0.009 (0.112)
education*west				-0.123 (0.109)
year*NE	-0.002 (0.010)	0.002 (0.030)	0.003 (0.029)	-0.008 (0.021)
year*south	-0.013 (0.010)	0.010 (0.027)	0.013 (0.026)	-0.014 (0.020)
year*west	-0.014 (0.010)	-0.032 (0.030)	-0.031 (0.030)	-0.031 (0.021)
SES*year*NE		-0.0001 (0.001)		
SES*year*south		-0.079 (0.132)		
SES*year*west		-0.227 (0.152)		
education*year1		-0.134 (0.132)		
education*NE1	0.039*** (0.010)	0.036*** (0.010)	0.039*** (0.010)	0.038*** (0.010)
education*south1	0.001 (0.012)			
education*west1	-0.007 (0.012)			
black caucus*year	0.011 (0.013)			
income*year*NE		-0.0003 (0.001)	-0.00004 (0.001)	
income*year*south		-0.002 (0.001)	-0.001 (0.001)	
income*year*west		-0.0001 (0.001)	0.001 (0.001)	
education*year*NE		0.001 (0.001)		
education*year*south		0.002 (0.001)		
education*year*west		0.001 (0.001)		
education*year*NE1				0.001 (0.001)
education*year*south1				0.0002 (0.001)
education*year*west1				0.001 (0.001)
Observations	5,060	5,060	5,060	5,060
Akaike Inf. Crit.	15,208.590	15,213.140	15,206.900	15,216.240

Note: *p<0.05; **p<0.01; ***p<0.001

Table 23. Democratic Bills Passing House 1972-2014, Controlling for Time and Southern States

	SES	Income, Education	Income	Education
SES	-1.124*			
	(0.560)			
SES*year	0.011			
	(0.005)			
SES*south	1.067			
	(1.266)			
SES*year*south	-0.009			
	(0.012)			
income		-0.087	-0.100*	
		(0.057)	(0.042)	
income*year		0.001	0.001*	
		(0.001)	(0.0004)	
income*south		0.392*	0.136	
		(0.159)	(0.103)	
income*year*south		-0.004*	-0.001	
		(0.002)	(0.001)	
education		0.026		-0.021
		(0.065)		(0.050)
education*year		-0.0002		0.0002
		(0.001)		(0.0005)
education*south		-0.386*		-0.048
		(0.176)		(0.118)
education*year*south		0.004*		0.001
		(0.002)		(0.001)
year	0.020***	-0.008	-0.010	0.011
	(0.006)	(0.014)	(0.014)	(0.010)
South	1.630	-2.964	-2.631	1.802
	(1.204)	(2.415)	(2.430)	(1.854)
year*south	-0.015	0.027	0.023	-0.019
	(0.012)	(0.024)	(0.024)	(0.019)
majority	-1.325***	-1.372***	-1.326***	-1.333***
	(0.063)	(0.070)	(0.065)	(0.063)
seniority	0.088***	0.088***	0.088***	0.088***
	(0.005)	(0.005)	(0.005)	(0.005)
conservativeness	-0.494***	-0.479***	-0.510***	-0.451**
	(0.144)	(0.143)	(0.143)	(0.144)
percent black	-0.104***	-0.101***	-0.104***	-0.103***
	(0.015)	(0.015)	(0.015)	(0.015)
black caucus	-6.050***	-5.894***	-6.305***	-5.658***
	(1.333)	(1.359)	(1.342)	(1.331)
black caucus*year	0.059***	0.057***	0.061***	0.055***
	(0.013)	(0.013)	(0.013)	(0.013)
comm. chair	0.784***	0.787***	0.781***	0.798***
	(0.071)	(0.070)	(0.070)	(0.071)
powerful comm.	-0.552***	-0.549***	-0.548***	-0.553***
	(0.047)	(0.047)	(0.047)	(0.047)
Observations	4,399	4,399	4,399	4,399
Akaike Inf. Crit.	13,519.870	13,514.420	13,514.160	13,524.830

Note:

*p<0.05; **p<0.01; ***p<0.001

14.3 Regression Results for Ideology with Party Interactions

Table 24 shows that the difference between Republicans and Democrats is statistically significant for education and income dependent variables. That is, Republicans and Democrats face different ideological consequences when they represent highly educated or high income districts. The interaction is not statistically significant for the combined socioeconomic variable. This is likely because the effect of partisanship is captured by the effect of time.

Table 24. Democratic Ideology by District Demographics 1972-2014 (with party interaction terms)

	SES	Income, Education	Income	Education
SES	-0.018*** (0.002)			
SES*year	0.0001*** (0.00002)			
SES*Republican	0.004 (0.004)			
SES*year*Republican	-0.00001 (0.00003)			
income		-0.044*** (0.005)	-0.026*** (0.003)	
income*year		0.0004*** (0.00005)	0.0002*** (0.00003)	
income*Republican		0.064*** (0.007)	0.013** (0.005)	
income*year*Republican		-0.001*** (0.0001)	-0.0001 (0.00005)	
education		0.020*** (0.006)		-0.010* (0.004)
education*year		-0.0002*** (0.00001)		0.0001 (0.00004)
education*Republican		-0.076*** (0.009)		-0.026*** (0.007)
education*year*Republican		0.001*** (0.0001)		0.0003*** (0.0001)
year	-0.005*** (0.001)	-0.008*** (0.001)	-0.009*** (0.001)	-0.001 (0.001)
year*Republican	0.029*** (0.001)	0.032*** (0.002)	0.035*** (0.002)	0.023*** (0.001)
Republican	-2.364*** (0.127)	-2.694*** (0.161)	-2.936*** (0.161)	-1.684*** (0.130)
majority	-0.007 (0.004)	-0.009* (0.005)	-0.013** (0.004)	-0.001 (0.004)
seniority	-0.007*** (0.0004)	-0.007*** (0.0004)	-0.007*** (0.0004)	-0.007*** (0.0004)
percent black	0.007*** (0.001)	0.006*** (0.001)	0.006*** (0.001)	0.009*** (0.001)
Black Caucus	-1.526*** (0.122)	-1.677*** (0.124)	-1.625*** (0.124)	-1.429*** (0.123)
Black Caucus*year	0.012*** (0.001)	0.014*** (0.001)	0.013*** (0.001)	0.012*** (0.001)
comm. chair	-0.005 (0.008)	-0.006 (0.008)	-0.004 (0.008)	-0.006 (0.008)
powerful comm.	-0.025*** (0.004)	-0.026*** (0.004)	-0.026*** (0.004)	-0.025*** (0.004)
Observations	9,194	9,194	9,194	9,194

Note:

*p<0.05; **p<0.01; ***p<0.001