Institutional Design and Policy Responsiveness

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1 Introduction

How does institutional design alter the relationship between public opinion and policy? Questions of policy responsiveness are central to how political scientists evaluate democratic governance, as few would call a system democratic if public opinion is completely unrelated to policy. In the American context, researchers have largely found a positive relationship between public opinion and policy using a variety of research designs. This relationship has been found for both aggregate measures of citizen and government ideology (Erikson, Wright and McIver 1993; Caughey and Warshaw 2018), citizen preferences on spending levels (Soroka, Wlezien et al. 2010; Pacheco 2013), and policy specific public opinion (Lax and Phillips 2012). While there is considerable debate about the strength of the connection between opinion and policy (and who politicians are responding to), there is consensus that the public has some influence in policy making in the US.

One area of research among responsiveness scholars is evaluating the role of political institutions that structure democratic processes. Within the state politics literature, there has been extensive research on whether institutions such as the ballot initiative (Gerber 1996; Matsusaka 2010), legislative professionalism (Maestas 2000; Pacheco 2013), term limits (Lax and Phillips 2012), and campaign finance laws (Flavin 2015) can affect the ways in which governments respond to public opinion. The findings overall are mixed with some research finding certain institutions can mediate the opinion policy link (Matsusaka 2018), and others finding no relationship (Caughey and Warshaw 2018). While understanding the effect of specific institutions is important for understanding how potential reforms will or will not affect a state's politics, this approach also raises potential issues to fully understand the role of institutions in state politics. First, there is research that suggests that the effects of an institution are contingent on institutional context, such as the relative distribution of expertise between the legislative and executive branches (Boushey and McGrath 2017) leading to differing levels of delegation. An indicator for a single institution is unable to operationalize the institutional context that may effect the influence of an institution.

Secondly, institutions may have small individual effects that reinforce one another to produce a significant aggregate effect. The effect of the ballot initiative may be small, but when combined

with several other institutions theorized to produce more responsive policy, the collective effects become more substantively interesting. However, scholars have spent considerably less time understanding the role of aggregate institutional design in policy responsiveness. Most analyses include specific institutional indicators to evaluate variables of interest, and use some combination of fixed or random effects to absorb the remaining institutional variation. This approach is required to understand institutional specific effects, but scholars can also benefit from evaluating the influence of aggregate institutional configuration in the states.

I argue that each state has made a series of institutional decisions that collectively structure the influence of public opinion on policy. Rather than evaluating the role of individual institutions, I borrow from comparative politics research to evaluate system level differences in US states. Just as comparativists have used aggregate institutional measures such as democracy to understand the influence of institutional design (Lijphart 1999; Treier and Jackman 2008), I use a state-level measures that of two primary dimensions of institutions in US states, called accountability pressure and checks and balances (LaCombe 2020). The first dimension represents measures the extent to which states have adopted institutions that have documented to increase accountability to the voters, including an easy to use initiative process, high levels of legislative professionalism, and relatively strict campaign finance rules. The second dimension, checks and balances, measures the extent to which a state has power separated into different branches of government versus concentrated in a single, powerful branch. High levels of accountability pressure is expected to strengthen the influence of public opinion on policy, whereas the checks and balance system may have a small negative effect as it delays the speed in which officials respond to the public, although expectations are less clear.

I use time-series cross sectional data to show that accountability pressure increases the strength of public opinion's effect on policy while checks and balances has no moderating effect. I replicate the models from Caughey and Warshaw (2018) and find these relationships hold for models of responsiveness and dynamic responsiveness. While previous research has produces mixed findings on the role of individual institutions, I demonstrate that there are important institutional moderating

effects. When states have chosen a series of institutions designed to increase accountability, public opinion has more than twice the influence on policy compared to states that lack this institutional context. This effect is particularly strong for social policy, but institutional context is vital for economic policy responsiveness. Regardless of institutional context, states are at least somewhat responsive to social liberalism, whereas only states with relatively high levels of accountability pressure respond to public preferences on economic policy. These results highlight the importance of incorporating institutional configuration as part of the research agenda that evaluates the role of institutions in responsiveness.

2   Policy Responsiveness

There is a long tradition in measuring how public opinion is translated into policy at the state, national, and cross-national level (Miller and Stokes 1963; Burstein 2003; Lupia et al. 2010; Bartels 1991; Wlezien 1996; Soroka, Wlezien et al. 2010; Warshaw 2019). Research on policy responsiveness in US states has found that states do respond to public opinion, although there are notable disagreements in the field. Some argue that political elites are merely responding to wealthy and organized interests (Gilens 2012; Page and Gilens 2017; Bartels 2018), and that any relationship between public opinion and policy is coincidental. Others contend that the public largely lacks defined opinions, and the direction between public opinion and policy should be reversed. Rather than the public pushing for preferred policies, policy drives attitudes (Hill and Hurley 1999; Manza and Cook 2002). Nevertheless, research has overall found that states generally respond to changes in public opinion (Erikson, Wright and McIver 1993; Lax and Phillips 2012; Caughey and Warshaw 2018).

Scholars have identified two primary mechanisms in which public opinion is translated into policy- selection and adaptation (Stimson, MacKuen and Erikson 1995; Caughey and Warshaw 2018). Selection occurs when voters decide who they want to represent them in a governing body. Parties compete on a platform, and voters select their preferred candidate. Those candidates then implement the policies that they ran on, thus translating voter preferences into policies. Unresponsive politicians are voted out of office and replaced with ones that are more in line with public

opinion in either the primary or general election. Elections in theory keep legislators in line with public opinion, because they will lose election if they deviate too far. Elections play an important keeping politicians in line with public preferences.

Yet elections for governors, state senators, and state representatives only occur every two to four years depending on the office. If elections were the only way in which public opinion can be translated into policy then public opinion's influence on policy would be inconsistent at best. Particularly in a two party system it can be difficult for politicians to misinterpret electoral results as a broad endorsement of their platform (Kogan 2016*a*) when in actuality it reflects the vote preference of large coalitions of voters, often with conflicting policy preferences. The recent nationalization of American politics (Hopkins 2018) has made it even more difficult for state and local politicians to interpret their election as a sign of ideological support versus a function of economic or national political forces (Lowry, Alt and Ferree 1998). Elections alone provide very little information to politicians about public preferences (Grossback, Peterson and Stimson 2007; Peterson et al. 2003), particularly in a polarized and nationalized political environment (Kogan 2016*a*).

The second mechanism, adaptation, focuses on how public opinion influences policies between elections. Politicians are strategic actors, and may change their views to become in line with public opinion in order to maximize their chances at re-election the next election. The same politician may change their official stance on a policy when it becomes clear their constituents oppose that policy. While elections drive the selection mechanism, adaptation occurs through changes in public opinion. However, this mechanism can only function if elites are aware of public opinion (Geer 1996). Particularly in a two party system it can be difficult for politicians to misinterpret electoral results as a broad endorsement of their platform when in actuality it reflects the vote preference of large coalitions of voters, often with conflict policy preferences. There is considerable debate on the extent to which mechanism most strongly influences policy responsiveness, with some arguing that selection dominates (Fowler and Hall 2017; Bafumi and Herron 2010) and others adaptation (Soroka, Wlezien et al. 2010; Caughey and Warshaw 2018).

Responsiveness occurs through a combination of selection and adaptation. On average the

candidate with policy preferences closer to their district's preferences are more likely to win election (Burden 2004), and strategic politicians will change their views to conform more with district opinion in order to maximum their probability of winning an election. As public opinion shifts, politicians either become out of step with voters and lose re-election or adjust their preferences and continue to hold the office.

3   Mediating Role of Institutions

To better understand policy responsiveness scholars have frequently examined the mediating effect of institutions on the relationship between public opinion and policy (Gerber 1996; Lax and Phillips 2012). Institutions structure the resources and incentives available to political actors when governing. US states make ideal cases to study the role of institutions in policy responsiveness because they have considerable institutional variation, are nested in the same national context, and there are reliable cross-sectional and over time measures for both policy outputs and public opinion.

One of the primary reasons institutions are expected to influence responsiveness is that they structure the amount and quality of information sent to policymakers about public preferences. Before the 1960s, policymakers had very little polling data or other inputs to inform them of the public's preferences (Geer 1996), and largely relied upon election results to determine if they were in line with public opinion. Winning reelection provided some evidence of public support, but given that the US has largely been a two-party system for most of its history, voters could not electorally indicate support for some components of a candidate's platform, but opposition others pieces (Kingdon 1967). Politicians frequently relied on their own intuition of what their district/constituency wanted (Fenno 1978). Their perceptions of their constituencies were a product of interpersonal connections with the district. However, these interactions are not typically representative of the general population. Not only are activists typically more polarized on issues than the general population, but Broockman and Skovron (2018) finds that constituents that contact policymakers tend to skew more conservative than the general population. Numerous institutions have been created over the last century to help overcome informational deficiencies to give

policy-makers more accurate information about public opinion. Institutions such as the ballot initiative provide information to officeholders if they are out of step (Matsusaka 2018; Kogan 2016*b*; Bowler and Donovan 2004), and highly professionalized legislatures have more resources to learn about public opinion (Squire 1992; Pacheco 2013). The higher quality the information, the better governing actors are able to respond to public opinion.

Institutions also can affect the types of candidates that run for office, and in the case of direct democracy, change the policies that a state adopt. Rules governing campaign finance laws affect the selection mechanism by structuring incentives for candidates to moderate or cater to ideological extremes. Individual campaign donations tend to be driven more by ideology, whereas when parties play a stronger role in the nomination process candidates tend to less polarized as they converge near the center of the ideological spectrum to maximize election prospects (Barber 2016; La Raja and Schaffner 2015). The adoption of term limits also shifted the incentive structure for state legislators (Lewis 2012), leading to different legisltive behavior. Additionally, both the direct and indirect effect of the ballot initiative can force legislators to adopt policies they otherwise would not because the public can use the "gun behind the door" to force policy moves (Gerber 1996; Matsusaka 2001).

Despite a rich literature evaluating specific institutions, far little attention has been paid to collective effect of institutions on policy responsiveness. Some institutions may have an additive effect on policy responsiveness, while others may weaken the relationship between policy and opinion. While there are clear reasons to evaluate individual institutions, I argue researchers should also take a collective approach to understand the total effect of institutions on policy responsiveness. A measurement model of latent dimensions makes an ideal candidate for evaluating the collective effect of institutional configurations because it models shared variation among indicators toward a latent dimension. If institutional design was measured by including separate measures of ten or twenty institutions, not only would the model lose degrees of freedom, but scholars would be assuming that every institution has an independent effect on responsiveness to public opinion. A latent variable approach acknowledges that many of these institutions have overlapping contri-

butions to their moderating effect of public opinion. A collective understanding of institutional design will give researchers a more comprehensive understanding of how states respond to public opinion.

There is a comparative literature that evaluates differences in institutional context, such as the extent to which a democracy is designed to be a majoritarian versus consensus oriented system (Lijphart 1999). Responsiveness scholars recognize that the institutional context structures incentives for politicians to learn about and respond to public opinion (Kang and Powell Jr 2010; Amenta, Caren and Olasky 2005), and have identified important differences in how consensus vs majoritarian systems respond to the public (Wlezien and Soroka 2012). While differences between US states are not as stark as differences between countries, and these measures are theoretically distinct from those of democracy, there are important differences in how states organize their policy making institutions.

Others have evaluated the extent to which institutional configurations give different governing actors negative agenda control (Tsebelis 2002). Decisions on the ability for individual actors to block policy change has been demonstrated to have a large effect on the staying power of the status quo. In the US context some have argued that negative agenda control is so powerful that they system is defined by stasis, with occasional shocks to the system forcing movement in the status quo (Baumgartner and Jones 2010). Systems with more institutional veto points respond more slowly to changes in public opinion because they need a higher critical mass of actors to move the status quo (Henisz 2004).

US states make an ideal candidate for studying institutional design because they are nested in the same national context, but have substantial institutional variation. Roughly half of the states have ballot initiatives (and term limits), and legislatures vary considerably in professionalism, ranging from full-time, well staffed legislatures that meet year round, to other legislatures than only have legislative sessions lasting a few weeks every other year (Squire 1992). I use the measures from LaCombe (forthcoming) to identify two primary dimensions of state institutions. The first, accountability pressure, is a measure of how institutions structure the ability of politicians to

receive information about public preferences. The second dimension, checks and balances, measures the extent to which separate branches of government are empowered to compete for power. Both measures were generated from a Mixed Bayesian Factor Analysis (Quinn 2004) and measure all 50 states from 1975-2015.[1]

3.1   Accountability Pressure

The first dimension of state institutional configuration, accountability pressure, incorporates both the selection and adaptation mechanisms within a single measure. This dimension measures how institutions structure the types of candidates that run for office and the quantity and quality of information about public preferences that can be seen to governing actors. The institutions that load the most on this dimension regulate elections, include campaign finance limits, voter registration laws, and direct democracy. For example, laws the restrict the ability of organized interests such as parties and political action committees may increase polarization as they reduce the ability for pragmatic oriented interests to support moderate candidates, which in turn increases the relative influence of more ideologically driven activists (La Raja and Schaffner 2015; Barber 2016). At the same time, limitations on individual campaign limits may decrease polarization as individuals tend to be more ideologically or issue oriented than access-seeking interests. Donations send important signals to candidates about their bases of support and the incentives for candidates to polarize or moderate on the campaign trail. While there is evidence that campaign finance limits may strengthen the incumbency advantage, states high in accountability pressure also tend to have term limits, which increase legislative turnover and prevent incumbents from remaining in the same office for more than a few terms (Moncrief, Niemi and Powell 2004).

When accountability pressure is high states have institutional configurations designed to received robust and consistent information about voter preferences. States high in accountability pressure have an easy to use initiative process and highly professionalized legislatures. While citizen legislators must rely largely on their intuition to understand district preferences legislators with staffers can accommodate more constituent interactions, and staff can aid legislators with

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[1]See supplemental material and LaCombe (2020) for a more detailed write up of each dimension.

determining what the public prefers (Squire 1992; Maestas 2000; Pacheco 2013). The ballot initiative was an early attempt to give voters more influence of policy-specific decisions at the state and local level. Not only do initiatives allow voters to directly pass preferred legislation, but they also provide important information to politicians about public preferences (Gerber 1996; Matsusaka 2001; Kogan 2016*b*). In sum, states that have institutional configurations rated high in accountability pressure tend to be states that incentivize the election of ideologically moderate candidates through their campaign finance system, and also provide ways for officeholders to receive accurate information about public preferences. Importantly, states high in this dimension tend to have all of these institutions, and states low in this dimension generally lack them. So, just evaluating a single institution may attribute the collective effect of an institutional configuration to a single institution.

That public opinion should have a greater influence on policy in states high in accountability pressure for a number of reasons. Institutions that loads strongly onto this dimension decreases the influence of narrow interests and refocuses incentives to learning about and responding to the average voter. Additionally, states high in accountability pressure have rules that facilitate the election of ideologically moderate candidates, and institutions such as the initiative that can correct the status quo if it deviates from the median voter's preferences. For states low in accountability pressure, low professionalized legislatures are expected to have less information about public preferences, and rules governing elections incentivize ideologically extreme candidates to run for office, and there is no institution such as the initiative to move the status quo back to the median voter.

> **Hypothesis 1:** High levels of accountability pressure will increase the influence of public opinion on policy

3.2 Checks and Balances

The second identified dimension of institutional design, checks and balances, measures the extent to which power is divided among separate branches of government or largely concentrated in a single branch. When checks and balances is high, states have power distributed across multiple branches of government. The largest contributors to this dimension include ballot initiatives (which

empower voters), legislative professionalism and (which empowers the legislature), as well as gubernatorial power and high veto override requirements (which empower the executive branch). States high in checks and balances have stronger veto actors that can develop their own policy solutions and veto those of other branches. When there are more actors with the ability to stop policy change, the probability of policy change decreases (Tsebelis 2002). When checks and balances is high, it should be harder to move the status quo because more actors have the power to stop policy change. Changes to the status quo will also likely require a larger critical mass of policymakers to override veto points, meaning that it may be difficult to move policy dramatically without risking a veto actor preventing any movement (Krehbiel 2010). This measure is negatively correlated with Boehmke and Skinner's (2012) policy innovativeness measure indicating that states with a strong checks and balance system adopt new policies more slowly and are somewhat less likely to innovate.

I therefore expect high levels of checks and balances to somewhat weaken the relationship between public opinion and policy. This is because systems with strong checks and balances by design are more resistant to shocks to the system, including in the form of changes to public opinion. So, systems high in checks and balances will respond more slowly to changes in public opinion because larger coalitions must be assembled to move policy. Policy may move closer to public preferences eventually, but changes may be blocked by veto actors [2]. On average, policy will be less responsive to changes in public opinion when institutional configurations are high in checks and balances.

> **Hypothesis 2:** High levels of checks and balances will decrease the influence of
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> public opinion on policy

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[2]It should be noted that the expectations are much less clear for checks and balances when the question is policy congruence rather than responsiveness. If the status quo is aligned with majority preferences, high levels of checks and balances makes continued congruence more likely, whereas when preferences and policy deviate, low checks and balances would increase the probability of congruence. Future research will address this topic in more detail

4   Data and Method

I use aggregate measures of public and policy ideology [3] to evaluate the role of institutional design on policy responsiveness. The dependent variable is a measure of policy liberalism developed by Caughey and Warshaw (2018). This measure includes dynamics estimates for economic and social policy liberalism in the states from the 1930s to 2014. Both measures are estimates from an IRT model that uses data on 150 state policies to identify the relative levels of policy liberalism for each state year. High values indicate state-year observations that have relatively liberal policies, and negative values signify states with relatively conservative policies. This over time measure encapsulates the overall ideological trajectory of a state's policies over both the social and economic dimensions.

The key independent variables are the two previously described measures of institutional design, accountability pressure and checks and balances [4]. These continuous measures give the relative level of a state's institutional configuration on both dimensions from 1975 to 2015. The base term of both measures does not have a clear theoretical expectation for policy liberalism. Rather, these dimensions are expected to mediate the role between public opinion and policy, so I interact each institutional measure with public opinion.

To measure public opinion I use Caughey and Warshaw's (2018) measure of public liberalism on economic and social scales. This measure aggregates hundreds of thousands of survey responses across hundreds of surveys on policy preferences from the last 80 years and aggregates them into large dataset that is then used to generate state-year level estimates for mass liberalism. Again, the scale is relative so very liberal constituencies have high values, and conservative populations negative values. I use the lagged values of mass liberalism to recognize the public opinion is expected to have a delayed effect on policy output because policymakers must learn about public opinion before they are able to respond to it, also also to ensure that the model specification of

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[3]In both cases liberalism reflects the left side of the political spectrum of American politics. More liberal social and economic policy would indicate policy is further to the left ideologically.

[4]Because the estimates are a posterior distribution I include parallel analyses for the 2.5% and 97.5% posterior estimates for accountability pressure and checks and balances in the appendix

policy driving opinion (Erikson, Wright and McIver 1993). While policy likely has feedback effects on opinion, public opinion in 1990 is not influenced by policy outputs in 1991. These scales will allow me to evaluate the extent to which state policies respond to public preferences on both economic and social policies.

Beyond the advantage of allowing for multi-dimensionality of public opinion, these measures allow for relaxing assumptions about the political sophistication of the average voter. As long as unsophisticated voters are randomly distributed, then movements in mass liberalism reflect real changes in public opinion among the informed percentage of the electorate. While there is evidence that uninformed voters are not completely randomly distributed (Caplan 2011), aggregate measures of public opinion no longer assumes that every voter is sophisticated. Furthermore, even if their opinions are biased, as long a the aggregate public has measurable opinions, then governing actors have something to respond to.

I estimate parallel regressions to understand the effect of institutional design on the relationship between opinion and policy. The first set of model measures policy responsiveness, and the second set estimate dynamic policy responsiveness by including lagged policy liberalism. These two analyses model how institutional design affects policy liberalism as well as how policy is dynamically changing relative to the status quo in a given year. I use the same model specifications as Caughey and Warshaw (2018), which include include fixed effects for state and year to control for state or year specific shocks that cannot be modeled [5]. As part of the replication the only control included is a lagged measure of unified Democratic control. Additional specifications are included to include controls for state income per capita, state population, and the percent of the population that is black (Correlates of State Policy). In sum, I estimate four models, one for responsiveness without controls, dynamic responsiveness without controls, responsiveness without controls, and responsiveness without controls for both social and economic policies.

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[5]As a robustness check models were also estimated with a linear time measure. The conclusion were the same across models

5 Results

Table 1 shows the results for social policy liberalism. Model 1 of table 1 models policy liberalism, and model 2 changes in policy liberalism (dynamic responsiveness). Models 3 and 4 replicates models 1 and 2 but with controls for income, population, and percent black. Holding the institutional measures at their mean of 0, as the public becomes more liberal a state's policy also on average becomes more liberal across all specifications. So more liberal public opinion is associated with more liberal policy and more liberal changes in policy. Lagged policy liberalism strongly predicts policy liberalism as expected. In three of the four specifications, the base terms for institutional design have no relationship with policy liberalism, as expected. In model three (the model of responsiveness with additional controls) both dimensions are associated with somewhat more conservative policy outputs, but the relationship is substantively very small. However, to fully understand the influence of institutional design the interaction terms must be evaluated.

To better understand the interactions between public opinion and the institutional measures I plot the marginal effect on policy liberalism (taken from the results in model 3) in Figure 1.[6] The two institutional measures have dramatically different moderating effects on public opinion's influence on policy. As accountability pressure increases, public opinion's influence becomes much stronger. At high levels of accountability pressure a one unit increase in public liberalism (roughly a one standard deviation move) results in a half a standard deviation change in policy liberalism. This is substantively a very large effect. Holding public opinion constant a state's social policies can go from being moderate to being half a standard deviation more liberal than the average state just by changing institutional structure. In 2010, this is the equivalent of a state moving from having policy liberalism similar to Pennsylvania (.14) to having a similar profile to Illinois (.81). Of course, a one unit shock in public liberalism would be extremely large, but the interaction demonstrates that public opinion has a very different relationship with policy depending on the institutional configuration. The interaction between public liberalism and checks and balances shows a very different relationship. While public opinion consistently has a positive effect on policy lib-

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[6]The histograms show the distribution of observations by their score along each institutional measure.

Table (1)   Modeling Social Policy Liberalism in the States

	(1)	(2)	(3)	(4)
Lagged Policy Liberalism		0.9144*		0.9111*
		(0.0098)		(0.0101)
Public Liberalism	0.6455*	0.0680*	0.5718*	0.0531*
	(0.0412)	(0.0183)	(0.0436)	(0.0194)
Public Liberalism × Accountability Pressure	0.1018*	0.0125*	0.0778*	0.0134*
	(0.0149)	(0.0063)	(0.0151)	(0.0065)
Accountability Pressure	-0.0363	-0.0135	-0.0534*	-0.0103
	(0.0263)	(0.0110)	(0.0264)	(0.0112)
Checks and Balances	-0.0388	-0.0145	-0.0595*	-0.0123
	(0.0310)	(0.0129)	(0.0308)	(0.0131)
Public Liberalism × Checks and Balances	0.0165	0.0027	0.0038	0.0044
	(0.0220)	(0.0092)	(0.0218)	(0.0093)
L.Unified Democratic Control	0.0871*	0.0199*	0.1115*	0.0226*
	(0.0181)	(0.0076)	(0.0179)	(0.0077)
Income			-0.0103	0.0033
			(0.0321)	(0.0137)
Population			0.3154*	0.0130
			(0.0383)	(0.0167)
Percent Black			0.0389*	0.0094*
			(0.0084)	(0.0036)
Constant	-0.8372*	-0.1294*	-1.8459*	-0.3646*
	(0.1281)	(0.0540)	(0.2511)	(0.1081)
Observations	1911	1911	1911	1911

Model includes Fixed Effects for State and Year

eralism, the effect remains constant regardless of levels of checks and balances. accountability pressure has a strong moderating influence on public opinion's influence on policy, but checks and balances does not.

Figure (1) Marginal Effect of Public Liberalism on Social Policy Liberalism
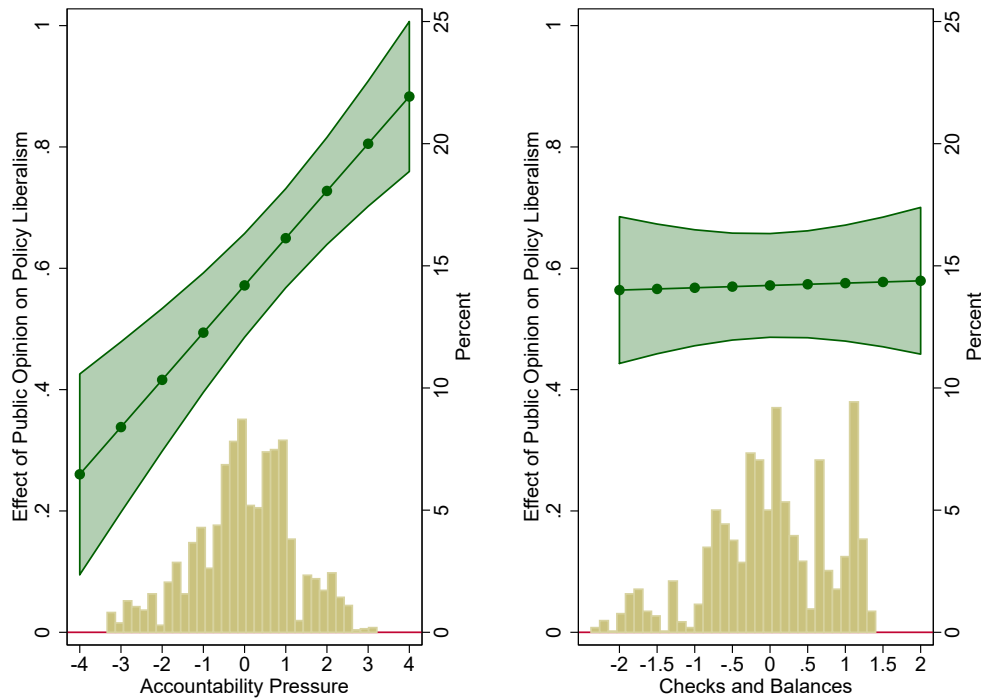

The coefficients for both policy liberalism and the interaction between public liberalism and accountability pressure are much smaller in the models of dynamic responsiveness. This reflects that changes in policy are gradual and that public opinion leads to incremental policy change, not a dramatic change in all policies after a single election. Even after lagged policy absorbs much of the variation in the dependent variable, there is still a significant moderating effect of institutions on public opinion, but the effect size is again smaller.

Figure 2 plots the marginal effects of the same interactions for the dynamic responsiveness models. When accountability pressure is low public opinion is not associated with changes in policy liberalism. This highlights that despite having smaller effect sizes in a model of dynamic responsiveness, institutional design is even more important because states with low levels of ac-

countability pressure see no relationship between public opinion and changes in policy. If institutional designs do not prioritize accountability, then state policy outputs do not move in accordance with public preferences. However, as accountability pressure increases public opinion is associated with policy moving in the same direction, while levels of checks and balances conflict are not associated with the strength of public opinion's influence on policy. Taken together the two figures support the first hypothesis that accountability pressure increases the effect of public opinion on policy in models of responsiveness and dynamic responsiveness. I do not find support for the the second hypothesis because checks and balances is unrelated to the strength of public opinion's influence on policy across all models. Across all specifications democratic control is associated with more liberal policy as expected. In both models with controls states with larger black populations have more liberal policies and more liberal changes in policy, while larger population is associated with more liberal policy but not with changes in policy.

Figure (2)   Marginal Effect of Public Liberalism on Change in Social Policy Liberalism

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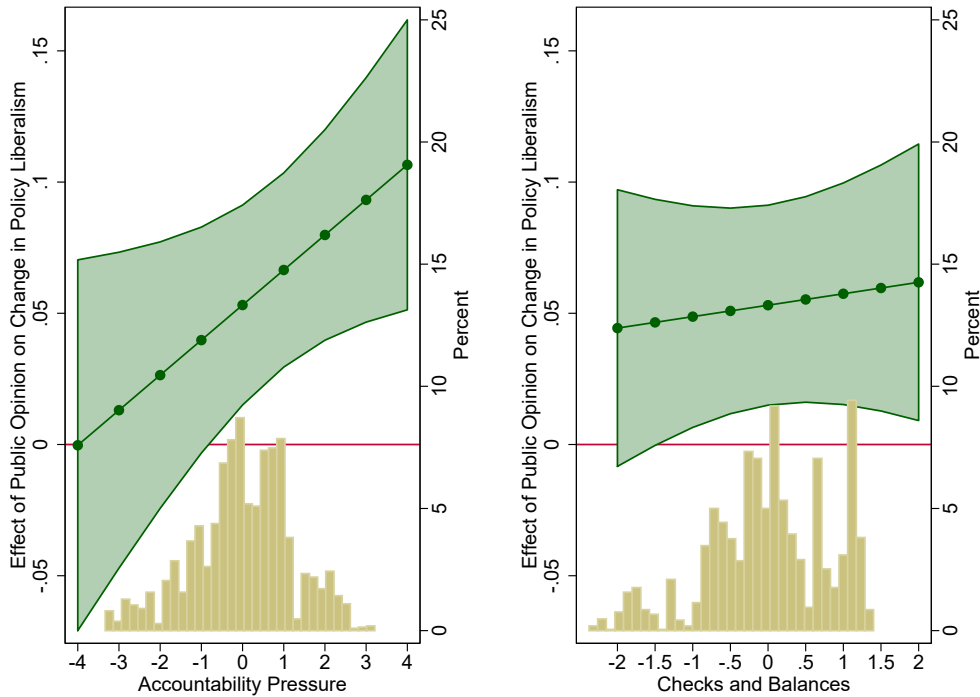
5.1   Economic Policy

Table 2 shows the results for the models on economic policy liberalism. In models 1 and 3, holding the institutional dimensions at zero, public liberalism does not predict economic policy liberalism. However, as can be seen in figure 3 there are significant interactive effects for both institutional measures. When accountability pressure is low public opinion is negatively associated with economic policy liberalism, and when accountability pressure is high a one unit change in public opinion results in .5 increase in economic policy liberalism. When one considers that economic liberalism runs from -2 to 3, a .5 increase in economic liberalism is substantively large. This means that holding public opinion constant, high levels of accountability pressure is associated with states being 10% more liberal than states with average levels of accountability pressure and identical public preferences, and more than a full standard deviation more liberal than a state with low levels of accountability pressure.

The interaction between public liberalism and checks and balances is negative and significant for the models of responsiveness but not for the models of dynamic responsiveness, lending support to the second hypothesis. A stronger checks and balance system reduces the extent to which changes in opinion are associated with changes in policy output. The results from table 2 indicate that without the proper institutional configuration pubic opinion has little influence on economic policy. [7] These findings are consistent with other research that the link between public opinion and policy is stronger for social than economic policy. For the controls states with larger populations and wealthier states have more liberal economic policy, as do states with a larger black population. Only in model 3 does being controlled by Democrats in the previous year result in more liberal economic policy.

Models 2 and 4 of table 2 shows the results for dynamic responsiveness. Lagged policy liberalism again strongly predicts policy liberalism. This relationship is so strong that very few other variables are significant. Holding the institutional dimensions at zero public liberalism again does not predict policy liberalism. The interaction between accountability pressure and public liberal-

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[7]The models were also estimated without the interaction terms, and public opinion still did not predict policy.

Table (2)   Modeling Economic Policy Liberalism in the States

	(1)	(2)	(3)	(4)
Lagged Policy Liberalism		0.8502*		0.8373*
		(0.0120)		(0.0124)
Public Liberalism	-0.1022	-0.0241	-0.0752	-0.0211
	(0.0859)	(0.0443)	(0.0830)	(0.0442)
Public Liberalism × Accountability Pressure	0.2332*	0.0293*	0.2355*	0.0339*
	(0.0327)	(0.0171)	(0.0316)	(0.0171)
Accountability Pressure	0.0749*	0.0105	0.1238*	0.0240*
	(0.0252)	(0.0131)	(0.0254)	(0.0136)
Checks and Balances	0.0239	-0.0044	0.0773*	0.0088
	(0.0306)	(0.0158)	(0.0302)	(0.0161)
Public Liberalism × Checks and Balances	-0.1343*	-0.0121	-0.0719*	-0.0024
	(0.0442)	(0.0229)	(0.0430)	(0.0229)
L.Unified Democratic Control	0.0272	0.0107	0.0386*	0.0117
	(0.0179)	(0.0092)	(0.0173)	(0.0092)
Income			0.2412*	0.0641*
			(0.0307)	(0.0166)
Population			0.1179*	0.0029
			(0.0359)	(0.0192)
Percent Black			0.0524*	0.0064
			(0.0078)	(0.0042)
Constant	-1.2921*	-0.2181*	-2.1352*	-0.2805*
	(0.1112)	(0.0593)	(0.2238)	(0.1223)
Observations	1911	1911	1911	1911

Model includes Fixed Effects for State and Year

Figure (3)   Marginal Effect of Public Liberalism on Economic Policy Liberalism
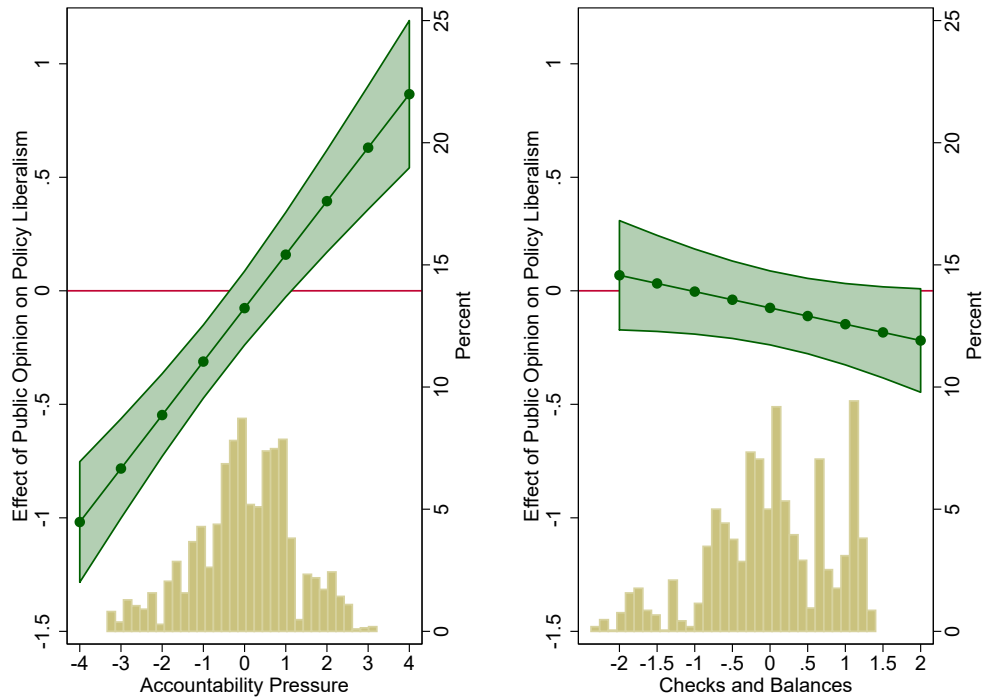
ism is again significant, but substantially smaller than in the model that does not include lagged policy liberalism as can be seen in the marginal effects plot in figure 3. High levels of accountability pressure increase the influence of public opinion on changes in policy. The interaction between checks and balances and public liberalism is again insignificant. The only controls that significantly predict policy are income and percent black. Wealthier states and states with larger black populations tend to see policy move in a more liberal direction. After accounting for lagged policy liberalism, partisan control is not significantly related to a change in economic policy liberalism.

The results from both the social and economic models provide strong support that accountability pressure increases the influence of public opinion on policy. In every specification there is a positive and significant interaction between accountability pressure and public opinion, and the effects are substantively large. These results hold regardless of model specification, including alternative ways to account for temporal and state trends such as random effects or splines, and hold with the addition of other potential control variables. Combined with earlier research showing

Figure (4)   Marginal Effect of Public Liberalism on Change in Economic Policy Liberalism
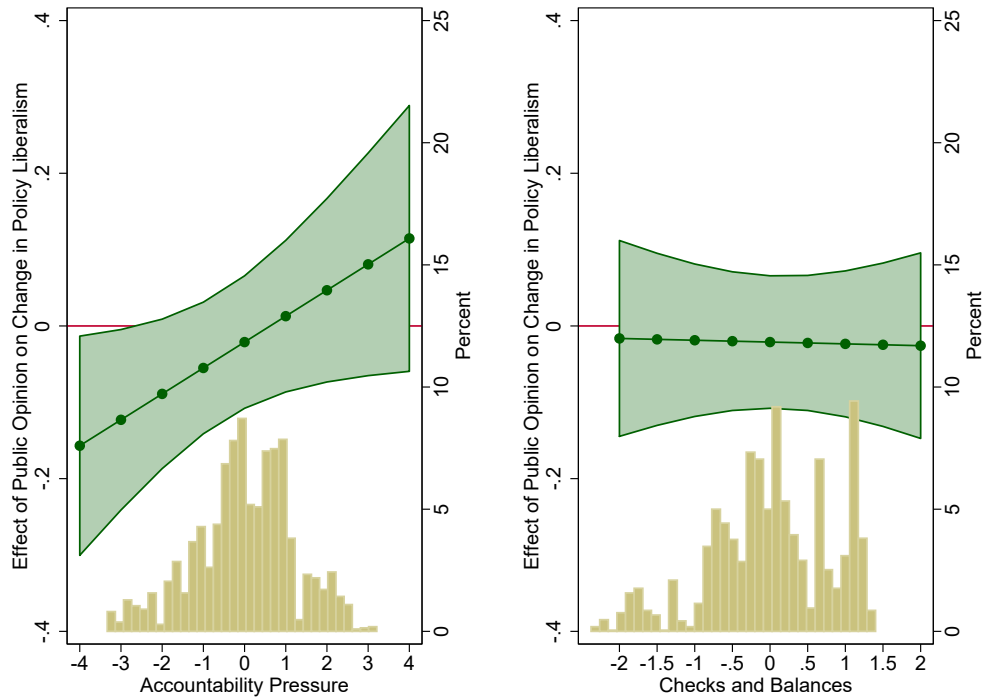
that accountability pressure is also associated with significantly higher levels of policy congruence across dozens of policies (LaCombe 2020), there is ample evidence to show that accountability pressure strengthens the relationship between public opinion and policy. The results for the checks and balance system are less robust. While there is some support that a stronger checks and balance system does weaken the relationship between opinion and policy on economic policy, the results do not hold across every specification. This reflects the less clear expectations of this dimension because it measures the ease of moving policy, not the direction that policy should move with respect to public opinion. These results also highlight that the two dimensions are distinct, despite having some overlapping institutions that load strongly onto each. By using both measures researchers can parse out the multiple effects that institutions such as the ballot initiative are expected to have on state politics.

6 Discussion and Conclusion

In this paper I show that institutional design has a strong mediating effect on the relationship between public opinion and policy. When state institutions are designed to maximize the amount of information sent to policymakers about public preferences and incentivize the nomination of moderate political candidates, public opinion has a much stronger relationship with policy change. At the same time the strength of the checks an balance system appears mostly unrelated to policy responsiveness.

There is considerable disagreement among state politics scholars about the role of institutions in policy responsiveness. For example, some argue that the ballot initiative makes states more responsive to public opinion (Matsusaka 2018) while others find that it has no effect (Caughey and Warshaw 2018; Lax and Phillips 2012). Similar debates can be found on a host of other institutions and rules including term limits and campaign finance limits. The discrepancy may be due to the multi-dimensionality of institutional design. Legislative professionalism may make states more responsive, but also can strengthen the ability of legislatures to check other branches of government and slow up policy change.

One potential explanation for the disparate findings is that state institutions individually have relatively small effects. If this is the case, then we may expect that an institutional specific approach may produce mixed results due to natural variation in sampling procedures. When these institutions are combined, the policy effects are substantially larger and more reliability statistically significant when focusing on institutions that are clearly expected to moderate the relationship between public opinion and policy. I show that accountability pressure is consistently associated with a greater correspondence between public preferences and policy, while checks and balances largely has no effect.

The results show that accountability pressure increases the influence of public opinion on policy in models of responsiveness and dynamic responsiveness. States with high levels of accountability pressure are not more liberal or conservative on average, rather they are more likely be influenced by public opinion. This is consistent other research (LaCombe 2020) finding that states with high

levels of accountability pressure are more likely to have policies congruent with public opinion across a variety of policies. These relationships hold even when lagging the dependent variable, which is such a strong predictor of the policy status quo that virtually all other variables no longer predict policy liberalism. While this research design does not allow me to determine if states are responsive or potentially leap-frogging the median voter, these results give confidence that public opinion is playing a larger role in policy for states with high levels of accountability pressure.

The moderating effect of accountability pressure is also stronger for social than economic policies. State economic policy may be less salient for the average voter, and voters may have better defined opinions about topics like abortion than preferred tax rates. Institutions that convey information to policymakers may be more effective when the signal from the public is salient and better defined. If the public has no defined opinion (or more weakly defined opinions) than the importance of having institutions to send that information is less clear. These institutions do not clarify public opinion, but merely are tools for policymakers to learn about the public.

The results for checks and balances demonstrate states with a robust checks and balance system do not appear to respond differently to public opinion compared to states with lower levels of checks and balances. There is limited evidence that states with higher levels of checks and balances tend to be somewhat more socially conservative and economically liberal, but more research is needed to explore these results, with a particular emphasis on understanding how checks and balances interacts with divided government and with new parties taking control of government. checks and balances may play a weaker role under unified government because co-partisans may not feel pressure to use their power to check other branches of government, as we observe in Congress delegating substantial authority to the president under divided government.

Using aggregate measures of institutional design allows for parsing out that institutions may have multiple, distinct effects, some of which contribute to policy responsiveness, and some that do not. For example, the ballot initiative may act as a "gun behind the door" that forces policy to be more closely aligned to public opinion, while also acting as a check on the other branches of government that, depending on the configuration of preferences, may make policy change more

difficult (LaCombe and Boehmke 2021). Furthermore, including a single institutional indicator in a model omits the many other institutions that may cancel out a single institution's effects, and decisions on what institutions to omit or include can affect conclusions when taking an institutional specific approach (LaCombe 2020).

However, there are trade offs to including a coarsened measure of institutional context over specific measures. First, this research design is unable to attribute increases in responsiveness to a specific institution, meaning that activists cannot attribute blame or credit when proposing new state level reforms. Furthermore, a coarsened measure of state context is unable to distinguish between two states that have very different institutions that aggregate to similar levels of account- ability pressure or checks and balances. Therefore, this project is not suggesting that this analysis replaces individual institutional research, but rather complements existing research on a parallel track so that we can identify both the effects of specific institutions and better understand the role of the larger institutional context.

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7   Supplemental Models

Table (3)   Modeling Dynamic Social Policy Responsiveness at Different Points of Distribution of Posterior Estimates for Institutional Measures

	(1)	(2)	(3)
	Median Estimate	2.5 % Estimate	97.5 % Estimate
Public Liberalism	0.6455*	0.7946*	0.2279*
	(0.0412)	(0.0507)	(0.0738)
Public LiberalismXAccountability Pressure	0.1018*	0.0609*	0.1482*
	(0.0149)	(0.0119)	(0.0173)
Accountability Pressure	-0.0363	-0.0273	-0.0318
	(0.0263)	(0.0162)	(0.0179)
Checks and Balances	-0.0388	-0.0387	-0.0375*
	(0.0310)	(0.0216)	(0.0188)
Public LiberalismXChecks and Balances	0.0165	-0.0156	0.0667*
	(0.0220)	(0.0168)	(0.0217)
L.Unified Democratic Control	0.0871*	0.0897*	0.0857*
	(0.0181)	(0.0181)	(0.0179)
Constant	-0.8372*	-0.8830*	-0.6191*
	(0.1281)	(0.1515)	(0.0746)
Observations	1911	1911	1911

Model includes Fixed Effects for State and Year

Table (4) Modeling Dynamic Social Policy Responsiveness at Different Points of Distribution of Posterior Estimates for Institutional Measures

	(1) Median Estimate	(2) 2.5 % Estimate	(3) 97.5 % Estimate
Lagged Policy Liberalism	0.9144*	0.9147*	0.9161*
	(0.0098)	(0.0098)	(0.0100)
Public Liberalism	0.0680*	0.0991*	0.0606
	(0.0183)	(0.0224)	(0.0312)
Accountability Pressure	-0.0135	-0.0035	-0.0092
	(0.0110)	(0.0067)	(0.0075)
Public LiberalismXAccountability Pressure	0.0125*	0.0106*	0.0067
	(0.0063)	(0.0050)	(0.0074)
Checks and Balances	-0.0145	-0.0055	-0.0100
	(0.0129)	(0.0090)	(0.0079)
Public LiberalismXChecks and Balances	0.0027	0.0029	-0.0031
	(0.0092)	(0.0070)	(0.0092)
L.Unified Democratic Control	0.0199*	0.0203*	0.0199*
	(0.0076)	(0.0076)	(0.0076)
Constant	-0.1294*	-0.1069	-0.0487
	(0.0540)	(0.0635)	(0.0321)
Observations	1911	1911	1911

Model includes Fixed Effects for State and Year

Table (5) Modeling Economic Policy Responsiveness at Different Points of Distribution of Posterior Estimates for Institutional Measures

	(1) Median Estimate	(2) 2.5 % Estimate	(3) 97.5 % Estimate
Public Liberalism	-0.1022	0.1264	-0.9011*
	(0.0859)	(0.1229)	(0.1583)
Public LiberalismX Accountability Pressure	0.2332*	0.1718*	0.3075*
	(0.0327)	(0.0260)	(0.0461)
Accountability Pressure	0.0749*	0.0069	0.0663*
	(0.0252)	(0.0157)	(0.0165)
Checks and Balances	0.0239	-0.0394	0.0362
	(0.0306)	(0.0204)	(0.0187)
Public LiberalismX Checks and Balances	-0.1343*	-0.1405*	0.0282
	(0.0442)	(0.0354)	(0.0507)
L.Unified Democratic Control	0.0272	0.0271	0.0277
	(0.0179)	(0.0179)	(0.0179)
Constant	-1.2921*	-1.5544*	-1.6009*
	(0.1112)	(0.1368)	(0.0698)
Observations	1911	1911	1911

Model includes Fixed Effects for State and Year

Table (6)   Modeling Dynamic Economic Policy Responsiveness at Different Points of Distribution of Posterior Estimates for Institutional Measures

	(1) Median Estimate	(2) 2.5 % Estimate	(3) 97.5 % Estimate
Lagged Policy Liberalism	0.8502*	0.8503*	0.8513*
	(0.0120)	(0.0120)	(0.0120)
Public Liberalism	-0.0241	-0.0075	-0.1399
	(0.0443)	(0.0634)	(0.0822)
Accountability Pressure	0.0105	0.0058	0.0103
	(0.0131)	(0.0081)	(0.0086)
Public LiberalismX Accountability Pressure	0.0293	0.0189	0.0387
	(0.0171)	(0.0136)	(0.0240)
Checks and Balances	-0.0044	-0.0051	-0.0009
	(0.0158)	(0.0105)	(0.0097)
Public LiberalismX Checks and Balances	-0.0121	-0.0230	0.0169
	(0.0229)	(0.0184)	(0.0261)
L.Unified Democratic Control	0.0107	0.0106	0.0106
	(0.0092)	(0.0092)	(0.0092)
Constant	-0.2181*	-0.2194*	-0.2524*
	(0.0593)	(0.0731)	(0.0406)
Observations	1911	1911	1911

Model includes Fixed Effects for State and Year