Bad Times Keep us Together: Policy Priorities and Economic Shocks

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Objective: We analyze how economic shocks affect the partisan nature of budgetary trade-offs, and use data from the U.S. Census Annual Survey of Government Finance to illustrate it. **Methods**: We propose a compositional approach to model trade-offs among 10 budgetary categories across both time and space in US states. **Results**: We find support for the notion that partisanship drives the allocation of budgetary expenditures. However, during times of negative economic shocks, either within a state or in neighboring states, Democratic and Republican governors have a similar budgetary response. **Conclusions**: The results show the effects of economic and political shifts, as well as the implications of spillovers from other states, on partisan decisions about trade-offs in government budgets.

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The priorities and preferences of policymakers relate to fundamental aspects of democratic governance—differing partisan visions, types of government intervention and responsiveness, and means to achieve effective policymaking. One way in which elected officials reveal their priorities is through decisions regarding how to use finite monetary resources that require trade-offs to be made among multiple expenditure categories. In acknowledging the importance of budgetary decisions, scholars have explored the underlying drivers of budgets and expenditures from multiple theoretical angles. Research has emphasized how political characteristics, particularly partisanship and ideology, shape spending on policy areas (e.g., Alt and Lowery 1994, 2000; Barrilleaux and Berkman 2003). Additional work has shown how economic fluctuations can influence expenditures and that such shifts are compounded by the tendency of voters to reward or punish incumbents for economic performance at the ballot box (Hibbs 1979; Powell and Whitten 1993).

Research has emphasized the role of economic factors in influencing political values and behavior in a variety of ways (Margalit 2013; Kam and Nam 2008; Lewis-Beck and Stegmaier 2000), yet scholarship addressing the combinatory effect of political and economic factors on the subnational budgetary process remains scarce (but see, for example, Lipsmeyer 2011). In this paper, we depart from the notion that partisan differences consistently drive budgetary decision making and argue that, while politics often shape spending priorities, economic constraints are likely to push patterns observed in spending closer together as demand increases for non-discretionary entitlement programs and elected officials attempt to protect their constituents from harsh conditions. Importantly, when considering how constraints shape governmental budgetary behavior during economic busts, we include the effects of both internal and external dynamics of a state's environment. Internal state dynamics, the focus of the majority of prior literature on budgets, only provide part of the picture in a modern environment now characterized by an increasing number of cross-state collaborations. Although there are strong theoretical reasons to expect that budgeting decisions in linked polities are likely to affect each other (e.g., Case and Hines 1993; Figlio and Reid 1999), the spillover effects of economic busts have received little attention in scholarship on the budgetary decisions and

trade-offs made by policymakers (Alt and Lowery 1994; Nicholson-Crotty, Theobald and Wood 2006).

It is also the case that previous research on budgets focuses on either patterns observed in the overall budget (e.g., year-to-year changes in the U.S. federal budget) or trade-offs between two budgetary categories (e.g., particular benefits vs. collective goods); more recent work has relied on compositional modeling strategies to capture the movement that takes place among multiple categories in a budget (Lipsmeyer, Philips and Whitten 2017; Yu, Jennings Jr and Butler 2019; Jacques 2020; Adolph, Breunig and Koski 2020; Lipsmeyer, Philips and Whitten 2023). To explore how economic downturns influence state budgets, we build on this recent scholarship in order to test hypotheses about the composition of–and trade-offs between–a comprehensive range of categories over time.

In analyzing trade-offs among spending categories using data on the budgets of the 48 contiguous U.S. states between 1977 and 2007, we find support for the notion that partisanship drives the general division of budgetary expenditures, with Democrats and Republicans allocating resources in different ways. However, during times of negative economic shocks, either within the state or in neighboring states, Democratic and Republican governors have a similar budgetary response. Such findings lend support to the notion that budgetary behavior is as much about economic pressures as it is about partisan priorities.

Political and Economic Factors that Drive Budgetary Decisions

A sizable body of research has focused on the political nature of budgets. Despite continued debate regarding the ways in which politics affects fiscal policies (De Haan and Sturm 1994; Potrafke 2011), students of politics and budgeting commonly detect linkages between political actors and budgetary priorities. Studies that are either cross-national or focus on a single country find that left-leaning governments embrace governmental intervention and redistribution, while right-leaning governments prioritize individual responsibility and market forces (e.g., Hicks and Swank

1992; Wlezien 1995). In the U.S. context, scholars have looked to partisanship rather than ideology when exploring how governmental actors and institutions influence budgets. For example, in investigating whether partisan configurations, specifically united or divided government, have any meaningful influence on how policymakers respond to either a surplus or deficit, Alt and Lowery (1994, 2000) find that changes in party control can affect strategies for budgetary decisions. Barrilleaux and Berkman (2003) further demonstrate the influence of politics when considering codified gubernatorial influence compared to the power of the state legislature on budgets; their work suggests that governors with more control often seek to benefit statewide constituencies over those that are localized. More recently, Adolph, Breunig and Koski (2020) employ compositional models and find that partisanship helps to explain policy spending patterns with governments funding their priorities by under-funding their rivals priorities.

However, a variety of constraints inhibit politics from being the sole determinant of budgetary allocations and expenditures. Among these possible factors, significant attention has been devoted to exploring how economic pressures affect spending or the budget making process. For example, in affluent democracies from 1960-1980, Swank (1988) successfully juxtaposed the ideological preferences of policymakers and economic pressures, illustrating that both were necessary components for understanding spending priorities (see also Cusack 1999; Shelton 2007). Lipsmeyer (2011) illustrates how economic booms can offer governments opportunities to move ahead with their political preferences regarding welfare spending, while busts can prevent policymakers from adhering to their partisan or ideological preferences (see also Poterba 1994). Similar work shows that left-leaning governments will engage in deficit spending only when required by economic conditions instead of as a general norm (Carlesen 1997); financial crises can force fiscal reforms, even if not in the interest of the political incumbent (Alt, Lassen and Rose 2006); and the tradeoffs forced by fiscal crises can work to protect entitlement programs over discretionary spending, though such patterns vary by electoral system (Breunig and Busemeyer 2012).

In this study, we build on research contending that economic declines are likely to alter the decision making environment of policymakers, making it difficult for governments to adhere to their

partisan budgetary priorities. More specifically, we argue that key pressures introduced by economic factors constrain policymakers and produce budgetary shifts that look similar across states regardless of ideological or partisan affiliation. First, constituents will expect political actors to adjust to and potentially fix economic shocks. The budgetary process will become more salient to a range of actors, including voters, media outlets, and the bureaucrats who must compete for more limited resources (Soroka, Stecula and Wlezien 2015). It is also the case that policymakers, who must be reelected to remain in office, will face attribution in terms of blame for an economic downturn or credit for spurring an economic rebound (Alt, Lassen and Rose 2006; Anderson 2000; Marsh and Tilly 2010, but see also Stigler 1973). While economic voting may require some minimum threshold of political sophistication on the side of constituents (Gomez and Wilson 2007), they are more likely to closely examine the trade-offs made in the budget during difficult times. Should policymakers stray too far from the expectations and demands of the median, they are more likely to jeopardize their own political and professional futures.

While the need to be responsive to voters is key in shaping budgetary responses to economic downturns, it may not be sufficient for predicting that policy makers will respond in the same manner despite differences in partisanship and ideology. However, a second condition comes into play: an economic downturn also means that fewer resources are available. These scarce resources will result in more competition across budgetary areas and less room for discretionary decision-making. Some types of policy spending will increase because of rising demand—for instance, automatic stabilizers such as unemployment and welfare assistance (Cameron 2012; Breunig and Busemeyer 2012). Governments cannot avoid putting more resources into these expenditure categories in a relative or absolute sense in the short term given the logistical and political challenges of quickly changing eligibility requirements; as these program are likely to remain stable or grow, difficult decisions are required regarding how to distribute the remaining portions of a strained budget. Under economic duress, we therefore expect that governments across the partisan spectrum may find themselves making similar budgetary trade-offs that will lead to less ideological or partisan differences in budget expenditures (Lipsmeyer 2011).

Past literature has shown the extent to which economic hardships can shape the priorities of the mass public and, in some cases, policymakers. In reference to the former, Margalit (2013) found that economic hardship increased individual support for welfare among both Republicans and Democrats during and after the 2008 recession, although these views again shifted as employment situations later improved (see also Blekesaune 2007; Kam and Nam 2008; Aaroe and Petersen 2014; Owens and Pedulla 2014; Compton and Lipsmeyer 2019). Considering the latter, a growing number of studies on state-level policymaking, provide support for the logic presented here. For example, Poterba (1994), in reviewing how states responded to fiscal crises in the late 1980s, was not able to confirm meaningful differences in fiscal adjustments made by states that were under unified Republican or unified Democratic control. Though not primarily focused on differences in red and blue states, Johnson, Oliff and Williams (2011) more recently found that the vast majority of states cut higher education, K-12 education, and the state workforce following the Great Recession of 2007-2009.

Accounting for Internal and External Budgetary Pressures

Existing research largely focuses on how the economic and political dynamics *within* states and countries shape budgets, implicitly assuming that what happens in a geographic area only influences the spending decisions that occur within it (e.g., Alt and Lowery 1994; Nicholson-Crotty, Theobald and Wood 2006). As such, common internal explanations of budgets include state revenue, unemployment rates, and the ideology or party of the governor or legislature. However, political and economic influences occur both within and outside of a state. Especially in a federal system like the United States or in a connected system like the European Union, there exists great potential for fiscal decisions in one state to spillover to others (Baicker 2005; Franzese and Hays 2006; Lipsmeyer et al. 2019).

As made evident in research on the spread of a variety of specific policies, spillovers can sometimes be intentional; states or countries seek information from one another and often choose to

emulate the actions of other jurisdictions. For example, Case and Hines (1993) found that a one dollar increase in a neighboring state's expenditures increased a state's own expenditures by 70 cents. Also in the U.S. context, Figlio and Reid (1999) conclude that states are responsive to changes in welfare benefits by neighboring states, such that they are more concerned about being left ahead than left behind in welfare benefit levels. Outside of the U.S. context, Basinger and Hallerberg (2004) observe that OECD countries are sensitive to tax reforms in competitor countries, but their responses are mediated by internal constraints and political costs. Scholars make similar conclusions for active labor markets across the EU (Franzese and Hays 2006) and municipal investment in temporary employment programs in France (Foucault and Paty 2008). Others also discuss broader spillover effects among multiple types of fiscal policies (Case and Hines 1993; Coughlin and Hernandez-Murillo 2007), although how these external factors specifically shape governments' budgetary behavior remains less clear.

Previous research has focused extensively on how public policies in a neighboring state can influence a government's policy behavior. Here, we argue that nearby external factors are also likely to shape budgetary behavior. Economic downturns in adjacent areas may push governments to alter their budgets either to account for the effects of a neighboring economic decline or in anticipation that their own jurisdiction may experience some degree of decline. In some cases, this may look like a race to the bottom (Bruckner 2000; Volden 2002), while in others it may mirror isomorphism that is a result of similar pressures faced by multiple states (Frumkin and Galaskiewicz 2007; Ashworth and Delbridge 2009). For example, two states may reach similar decisions on a budgetary trade-off not only because they are scanning the external environment to see what other jurisdictions have tried, but also because various pressures constrain their choice of reactions. In either situation, governments are reacting to the economic situations of their neighbors.

The Compositional Nature of Budgets

Theoretically, we are interested in understanding how governments shift budgetary resources when experiencing economic duress. Do they continue to make changes that align with their ideological or partisan priorities, or do economic slumps push governments with differing policy priorities to make similar decisions? To address this question, we must consider how governments change the composition of their budgets across multiple categories, as some areas of the budget are expected to rise or fall relative to other areas of spending. While past work has only been equipped to consider changes in one budget category over time or the relative nature of a few categories (e.g., Alt and Lowery 1994; Nicholson-Crotty, Theobald and Wood 2006), more recent research utilizing compositional models has revealed a finer level of relative trade-offs across multiple categories. For example, Breunig and Busemeyer (2012) consider trade-offs across pensions, public investments, and unemployment for 21 OECD counties across 24 years. Yu, Jennings Jr and Butler (2019) develop four categories–developmental, redistributive, allocational, and educational spending–for the U.S. states between 1982 and 2010 (see also a compositional approach for European countries in Lipsmeyer, Philips and Whitten 2017).

Building on previous research regarding the political and economic drivers of budgets, as well as the compositional nature of budgets, we expect that ideological or partisan distinctions between governments will influence how they allocate their resources. With budgets, the core difference between governments on the left and right will revolve around their ideal role of government—either as an active participant in the economic and social spheres or one relying more heavily on market forces and individual responsibility. More specifically, left-wing versus right-wing governments will compose their budgets differently, with the left prioritizing policy areas that allow for government assistance and redistribution and the right highlighting business and market-oriented policy areas.

In times of economic distress, however, we argue that the influence of ideology and partisanship will decrease as the pressure of other constraints increases. With fewer resources and more

attention from citizens, governments will find it difficult to protect their preferred policy areas. Instead, a downturn may cause governments to prioritize the most urgent policy areas above those they may favor during stable economic conditions. Building on our argument that governments make trade-offs across multiple budgetary categories, we discuss the expected relative shifts in resources in response to different economic shocks.

In this study, we consider the ways in which state governments, regardless of ideology or partisanship, respond to four types of economic shocks that signal downturns—an increase in unemployment or a drop in personal income within the state, as well as in surrounding states. First, when economic constraints within a state rise, we expect governments will be pushed to distribute a larger share of the budget to labor market policies that cover unemployment, worker's compensation, and job training programs. The relative gain in this type of spending will come at the expense of discretionary expenditures. As previous research has not adequately addressed compositional trade-offs among discretionary expenditures in the face of economic distress, we expect that those that lose the most relative to others will be categories that serve smaller portions of the state population or categories where other revenue streams may exist. For example, the relative funding of higher education may be targeted as colleges and universities have some ability to look elsewhere for revenue streams and serve only some groups in the state. Though generally focused on absolute shifts in resources, research in educational policy (e.g., Delaney and Doyle 2011) illustrates that in good economic times, higher education is an attractive area of investment for states, but in economic downturns it is among the first to be cut given the expected ability of institutions to generate revenue from tuition, fees, and other gifts or grants. Alternatively, relative spending for housing or public safety may not experience large changes relative to other areas of spending when internal unemployment levels change as these services benefit large swaths of the general population, and demand for both may be influenced by unemployment and economic stress.

Second, we expect that the economic constraints in surrounding states (e.g., external to the state) will also garner the attention of those within the state given research on spillover effects that

stem from budgetary and policy decisions (e.g., Case and Hines 1993; Figlio and Reid 1999; see also work on isomorphic pressures such as Radaelli 2000). Fiscal stress in a neighboring state may cause policymakers to become more risk averse or to anticipate their own fiscal pressures in the short-term. Still, the shock will be partially removed making adjustments less potent than internal constraints that are more personal and pose a greater threat to re-election. Specifically, our expectations are as follows:

H1: Economic constraints will increase relative spending on labor market policies, including entitlement programs, across left- and right-leaning state governments.

H2: Economic constraints that occur in surrounding states will have a weaker effect on relative budgetary trade-offs than economic constraints that occur within the state.

Research Design

Building on previous work that explores how governments and political ideology help to shape budgetary expenditures, we argue that economic constraints may influence the ability of governments to alter components of the budget. Examining US states is an ideal setting, as budgetary flexibility is much more scare and budgets reflect more of a zero-sum game than do national budgetary decisions (Garand and Hendrick 1991; Nicholson-Crotty, Theobald and Wood 2006; Lipsmeyer et al. 2019). Importantly, policies in most states require that budgets be balanced, which largely prohibits states from simply growing expenditures without planning for a growth in revenues. Since this strategy is not always feasible when a shock occurs, trade-offs among two or more expenditure categories are unavoidable. Further, even within a single federal system of governance, significant variation exists within budgets over time, as well as across state lines. State budgets have grown at times but have shrunk at others, mandating that policymakers revisit how and in what ways to allocate resources for an ever-expanding list of responsibilities (Jacoby and Schneider 1991). Gaining a better understanding of what mechanisms explain these levels of variance in a way that captures both the internal and external pressures on states allows us to more precisely predict observable

changes in these budgets with a particular focus on when and how economic shifts constrain political preferences.

In order to test how economic constraints affect trade-offs among budgetary categories, we use U.S. Census data on state government finances from 1977-2007 across the 48 contiguous states.[1] Census files provide information on expenditures across multiple categories and subcategories. In this study, we use ten categories that constitute the majority of expenditures by each state: elementary education, higher education, transportation, social services, housing, natural resources and sanitation, public safety, labor market policy, interest on debt, and "other." Each of these ten categories is one component of the larger budget composition.[2]

To examine our expectations about the theoretical determinants of the many trade-offs among these expenditure categories, we include a set of political and economic factors. Using a collection of independent variables from Klarner (2013*a*,*b*) that capture economic, political, and demographic contexts, we create our independent and control variables. To measure economic conditions, we include personal income (in $1000s) in constant dollars from the Bureau of Economic Analysis and the unemployment rate from the Bureau of Labor Statistics. Our political variable is a dichotomous indicator that equals "1" if the governor is a Democrat and "0" otherwise.[3] In the Supplemental Materials we also investigate the robustness of our findings to alternative codings of political control at the state level.[4] We control for state wealth by including a state's own-source

[1] We excluded Hawaii and Alaska since they would be large outliers when we construct our spatial weights matrix, as described below.

[2] Elementary education and higher education include all state expenditures for each level of public education in a state. Transportation encompasses travel via highways, air, water, or public transit. Social services includes subcategories of public welfare, hospitals, health, and veterans affairs. Housing includes all expenditures related to housing and development, while the category of natural resources and sanitation covers natural resources, parks and recreation, sewerage, and solid waste management. Public safety includes police, corrections, and additional protective inspections. Labor market policy refers to insurance trust expenditures, as well as interest on debt. Finally, the "other" category includes expenditures for libraries, government administration, liquor stores, utilities, and general miscellaneous or unallocable items.

[3] The vast majority of zeros in this dichotomous variable are for Republican governors; Independent governors made up less than two percent of our sample.

[4] Work such as Potrafke (2018) uses a regression discontinuity design to consider the effect of change in party on policy-making. These studies largely focus on close elections rather than jurisdictions with clear majorities. We do not focus explicitly on level of support or the margin of victory in this analysis but, instead, can offer some theoretical lines of arguments for why we might see policymakers from either party act in similar ways.

revenue (expressed as a percent of total revenue). To account for the fact that governments might increase or decrease the size of the budget in addition to, or as a substitute for, reallocating the composition, we also include total expenditures, which is the sum of the ten expenditure categories. Last, we account for inflation by calculating the annual percentage change in a state's consumer price index, as measured in July of each year (Berry and Hanson 2000).

Methodological Approach: Assessing Compositions

Compositional dependent variables such as ours, which consist of the proportion of the total budget going to each budgetary category, present challenges for empirical models (Aitchison 1982; Katz and King 1999). In order to test our expectations, we take advantage of a recent paper by Lipsmeyer et al. (2019) that extends the dynamic pie modeling strategy proposed by Philips, Rutherford and Whitten (2015, 2016*a*) from single time series to pooled times series. Following the suggestions of these authors, each component of the budget in a particular year, $Bud.\ Component_{ict}$, is triple indexed to represent the value within a state "i" of budget category "c" at time "t." One budgetary component, $Bud.\ Component_{i1t}$, is designated as the baseline category.[5] We then construct a logged ratio for all other categories ($i \neq 1$) relative to the baseline budget category, $Bud.\ Component_{i1t}$, such that our dependent variable is

$$Composition_{ict} = ln\left(\frac{Bud.\ Component_{ict}}{Bud.\ Component_{i1t}}\right), \quad \forall\ c \neq 1. \tag{1}$$

This results in C-1 dependent variables. We next specify the following equation:

$$\begin{aligned} Composition_{ict} = \beta_{0c} + \phi_c Composition_{ict-1} + \boldsymbol{\alpha}(\text{Internal Conditions}) + \boldsymbol{\beta}(\text{External Conditions}) + \\ \boldsymbol{\delta}(\text{Partisanship}) + \boldsymbol{\gamma}(\text{Conditions} \times \text{Partisanship}) \end{aligned} \tag{2}$$

[5] Since none of our categories take on a value of zero, this choice is arbitrary and does not effect our results.

This equation represents a pooled lagged dependent variable model. All independent variables on the right-hand side of our model enter into the equation both at time t (e.g., the inflation rate in 1997 is used to predict the composition in 1997) and at time $t-1$ (e.g., the inflation rate in 1997 is used to predict the composition one year later, in 1998), as is commonly done in models with lagged dependent variables. Independent variables specific to the internal economic conditions of a state include personal income, unemployment rate, own-source revenue, total expenditures, and inflation. Our expectations about how conditions in other states—the "External conditions" part of the equation—are likely to affect budgeting in each state follow those of Lipsmeyer et al. (2019). We expect this to be a function of both geographic proximity and relative economic size. We therefore constructed a spatial weight of these two factors for both external unemployment and personal income.[6] In other words, these spatial variables will allow us to test whether higher/lower unemployment or personal income in spatially "proximate" states (that is, states either geographically close by or states with large economic heft) affect the budgetary composition of other states. Equation 2 also includes our governor partisanship measure. Last, as described in our expectations section, we expect that government responses to internal and external economic factors will be shaped by partisanship, which implies an interaction. However, interacting all variables (in both their contemporaneous and lagged forms) would result in a massively over-parameterized model, so instead, we follow Lipsmeyer, Philips and Whitten (2023) in interacting *only* the variable of interest. For example, if surrounding state unemployment is the focus, then we only interact surrounding state unemployment with the governor's partisanship (as well as the interaction between the lag of both surrounding state unemployment and partisanship).

[6] We thus constructed a weights matrix, $\mathbf{W}$, that is the product of two different weights matrices (Neumayer and Plmper 2016):

$$\mathbf{W} = (\mathbf{W}_{1/dist} \cdot \mathbf{W}_{row-std.Econ}) \tag{3}$$

where $\mathbf{W}_{row-std.Econ}$ is a row-standardized weights matrix of each state's contribution to national personal income, which we pre-multiply by $\mathbf{W}_{1/dist}$, an un-standardized inverse distance matrix (such that states that are further away get lower weights). We row-standardize personal income to reflect the fiscal size of the state relative to all other states. $\mathbf{W}$ is then post-multiplied by either unemployment or personal income to form the spatial-x variables present in the "External Conditions" portion of Equation 2.

To summarize, our model framework is ideal for testing the implications of our theory, as it allows for examining multiple influences on state budgetary compositions: the combination of the history of the budget in each state, the dynamics inside state "i," and the influence of external pressures from theoretically relevant states (state "j" in our notation). All of these relationships can have both short-run and long-run effects on budget compositions.

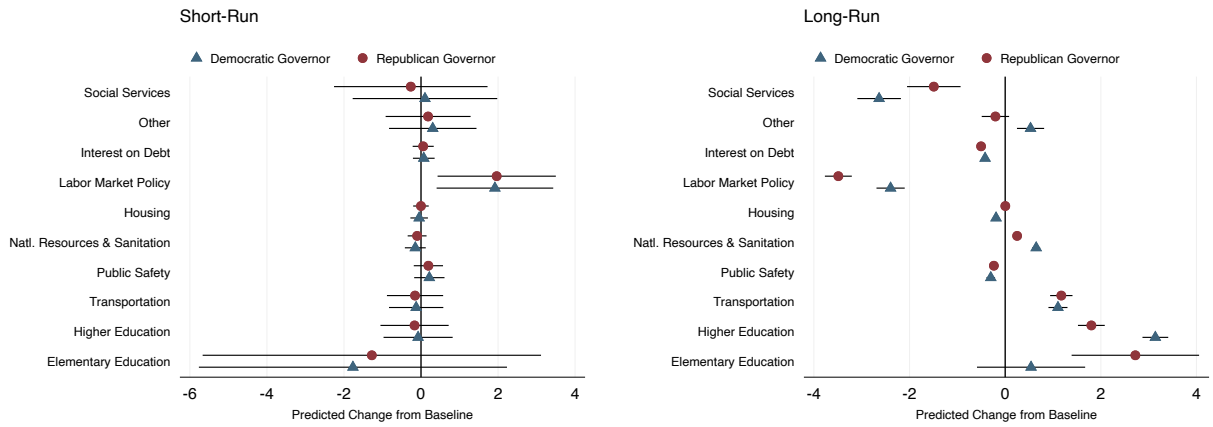
Findings

To examine whether negative economic shocks can trigger different trade-offs between budgetary expenditure categories in states with Democratic governors, as compared to Republican governors, we use changes in both personal income and unemployment rates within states and in surrounding states. Because a seemingly unrelated regression model with error correction specifications produces a rather complex table of results, we use the Stata program written by Philips, Rutherford and Whitten (2016*b*) to produce dynamic simulations of the predicted value of each spending category under a scenario where only one variable changes over the simulated time period. However, we present full tabular results in the Supplemental Materials. The confidence bounds depicted in these figures are the 95% confidence intervals from stochastic simulations conducted using the estimated parameter values and covariance matrices from the estimated models.[7]

To compare the short (e.g. in the year it occurs) and long-term (e.g., the total or cumulative) effects effects of a within-state drop in personal income, in Figure 1 we present the estimated change in each budgetary category (and associated 95 percent confidence intervals), in both the short-term (Figure 1a) and long-term (Figure 1b) following a one standard deviation decrease in income for states with either a Republican (red circle) or Democratic (blue triangle) governor. In the short-run, we find remarkably similar responses across partisanship in response to a within-state income

[7] As reported in Tomz, Wittenberg and King (2003) and verified in a dynamic context by Williams and Whitten (2012), these point estimates and confidence intervals are identical to what we would get if we calculated them analytically (though this would be more time consuming). We calculate these simulations as in-sample inferences, meaning that we do not take into account the fact that, from the second period of the simulation forward, the lagged dependent variable value has been estimated (in other words, we do not incorporate additional 'forecasting' uncertainty). This follows the norms of the discipline in conducting similar research.

drop, although the only statistically significant change in budgets appears to be for increased labor market policy (rising by about 2 percentage points of the total budget). In the long-run governors of different parties also respond in similar budgetary directions, although the *magnitude* of these changes differ. Areas such as social services, interest on debt, labor market policy, and public safety tend to decline in response to drops in a state's personal income, while natural resources and sanitation, transportation, and education rise. In terms of partisan differences, we find that Republicans cut labor market policy more than Democratic governors, while the opposite is true for social services. In contrast, drops in personal income result in (relative) budgetary increases for higher education—with Democratic governors increasing more, as a percentage of the total budget, than Republican governors—and for elementary education, where Republicans relatively spend more than Democrats. Overall, the findings in Figure 1 support the claim that governors respond by cutting or increasing mostly the same budgetary categories in response to an internal economic crisis, although the magnitude of these cuts/increases does differ somewhat by partisanship.



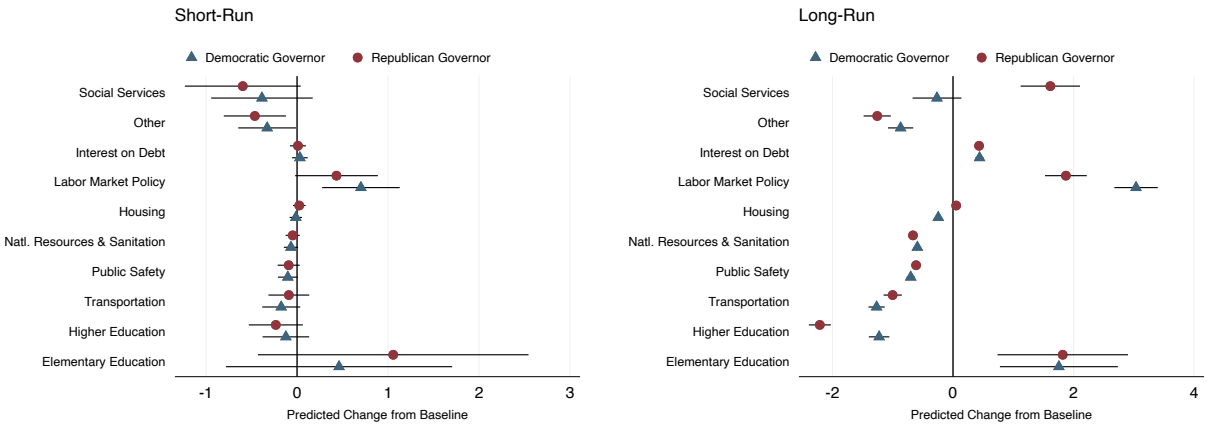
(a) Short-Run **(b)** Long-Run

Figure 1: Drop in Own Personal Income

Note: Plots show the contemporaneous and long-run changes in relative budgets in response to a one standard deviation drop in personal income. 95% confidence intervals shown.

In Figure 2, we show the estimated short- and long-run expected values for each of the 10 budgetary categories following an increase in a states' unemployment rate. In the short-run, the only statistically significant changes are for a decline in other types of spending (for Republican

governors) and increases in labor market policy (for Democratic governors). Moreover, all short-run changes tend to be almost identical across partisanship. In the long-run, governors tend to behave similarly across partisanship in response to an increase in unemployment, although there are exceptions. Republican governors increase social services, while Democrats decrease it (although the latter is not statistically significant). For similarities, both decrease other spending, natural resources and sanitation, public safety, and transportation to similar extents, while raising the percentage of the budget spent on interest payments and elementary education. Both increase budgetary allocations to labor market policy, although Democrats more so by about one percentage point, while Republicans cut higher education more than Democrats (also, by about one percentage point). Once again, while there are some differences across partisanship, we find that governors largely respond similarly in response to increased unemployment when reallocating their budgets.



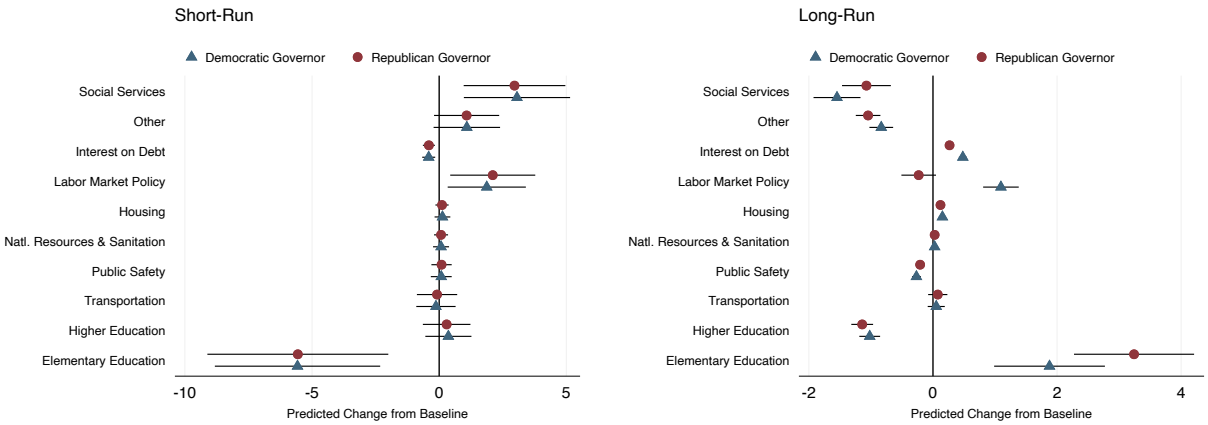
(a) Short-Run **(b)** Long-Run

Figure 2: Rise in Own Unemployment

Note: Plots show the contemporaneous and long-run changes in relative budgets in response to a one standard deviation increase in unemployment. 95% confidence intervals shown.

As we theorized above, in addition to internal economic shocks, external shocks from neighboring states may also influence a state's budgetary allocations. To test whether negative economic shocks in surrounding states affect how governors of different parties alter their budgetary priorities, we now shock the spatial variables in our models, while holding all other explanatory variables constant. As described above, our spatial variables are a function of geographic proximity and eco-

nomic size. Beginning with personal income, we examine a one-half standard deviation drop in surrounding states' personal income, as shown in Figure 3. In the short run, both Democratic and Republican governors respond in nearly identical ways, by sharply decreasing elementary education and increasing social services, other (though not a statistically significant increase) and labor market policy. Interest payments on debt also experience a slight, statistically significant relative decline. In the long run, both types of governors tend to relatively decrease social services, other, public safety, and higher education, while relatively increasing interest payments, housing, and elementary education. In fact, the only clear partisan difference in budgetary priorities appears to be that Republicans cut the allocation to labor market policy slightly, while Democrats increase it.



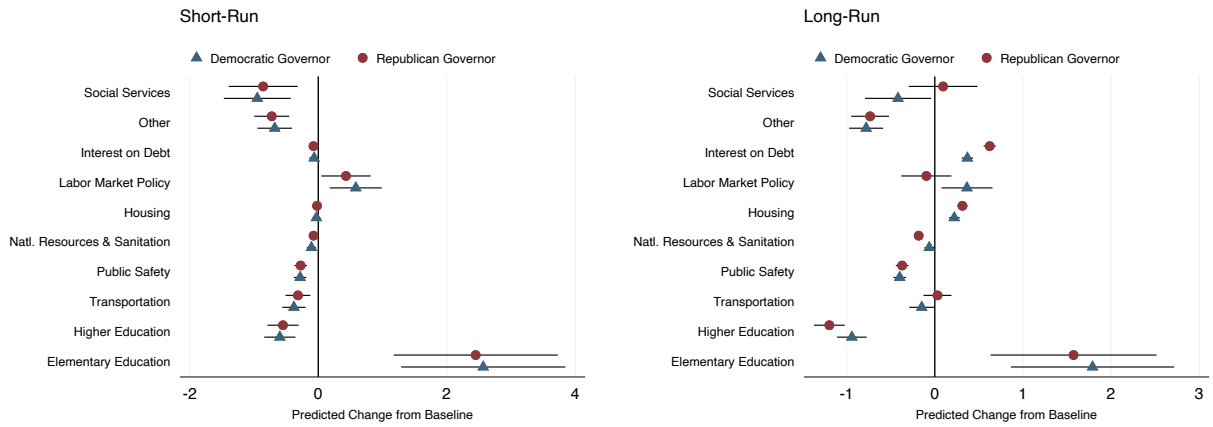
(a) Short-Run **(b)** Long-Run

Figure 3: Drop in Surrounding Income

Note: Plots show the contemporaneous and long-run changes in relative budgets in response to a one-half standard deviation drop in surrounding state personal income. 95% confidence intervals shown.

In Figure 4, we show a one-half standard deviation increase in the surrounding states' unemployment rate. One again we find very similar responses across partisanship. In the short-run, increases in the proportion of the budget going towards elementary education come at the expense of nearly every other category, although housing and natural resources and sanitation are only marginally different from zero. In the long-run, relative increases to interest on debt, labor market policy (only for Democratic governors), housing, and elementary education are associated with corresponding declines in social services (only for Democrats), other, natural resources and

sanitation, public safety, and higher education. Overall, almost no category remained unchanged in either the short- or long-run in response to increased unemployment experienced by a state's spatially-proximate neighbors.

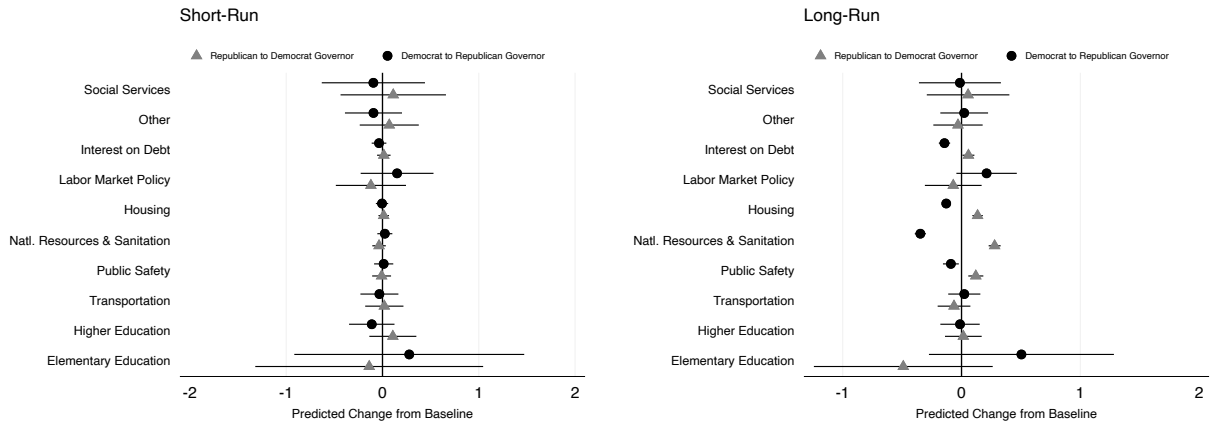


(a) Short-Run **(b)** Long-Run

Figure 4: Rise in Surrounding Unemployment

Note: Plots show the contemporaneous and long-run changes in relative budgets in response to a one-half standard deviation rise in surrounding state unemployment. 95% confidence intervals shown.

Last, in Figure 5, we now show how budgetary allocations change when a state moves from either a Republican to a Democratic governor (gray triangles) or from a Democratic to Republican governor (black circles), while holding all economic variables constant. In other words, Figure 5 allows us to examine how budgets might change across partisanship, if governors were capable of moving them in their ideologically-preferred direction. In the short-run, we observe no statistically significant differences from either of these changes, which suggests that, at least during a governor's first year in office, they are not able to adjust budgets. However, in the long-run we observe that moving from a Republican to a Democrat results in relative budgetary increases to interest payments, housing, natural resources and sanitation, and public safety. Moving from a Democrat to Republican is associated with relative increases in labor market policy and elementary education, although neither of these effects are statistically significant at conventional levels. Such differences help highlight partisan priorities of governors.



(a) Short-Run **(b)** Long-Run

Figure 5: Switching Partisanship

Overall, our findings suggest when partisanship is more and less likely to influence budgetary behavior. On the one hand, partisan politics appears to matter for trade-offs among budgetary categories when the environment is stable. Partisanship influences the relative proportions that state governments spend on each budgetary category, highlighting differing policy priorities. Our results suggest that in the long-run, gubernatorial elections and changes to the partisanship of governors can alter the makeup of state budgets.[8]

Implications and Conclusions

The findings in this study provide several advances to the literature on budgetary trade-offs. First, most importantly, the results here show that partisanship (measured as party control of a state governorship) affects budgetary allocations in times of relative stability, but partisan reactions to both internal and external negative economic shocks are largely similar. This pattern is not one that has been made particularly clear in prior literature, nor is it a finding we might naturally expect given popular discussions of increasing polarization and opposing viewpoints. That Democratic

[8]In the Supplemental Materials, we use four different operationalizations of partisanship to see if results from the variables presented here (the party of the governor) is atypical. We recode partisan government if all three chambers are controlled by the same party as well as if only the legislature is unified. We also parse these two codings out by Democratic versus Republican unified governments. Overall, our findings are largely similar to those shown above, especially in the short-run, although there are some differences in sign and magnitude occasionally in the long-run.

and Republican governors actually react in similar ways when confronted with internal and external economic pressures might be explained in multiple ways. For instance, it could be that the majority demands of a state's population become more cohesive in times of economic distress such that opinions that are more polarized become much less salient. Then, the governor and state legislature can more easily identify the median voter and observe less variance in all voters, making decisions about trade-offs less contentious. On the other hand, voters may drive the conversation, pushing policymakers to respond directly to the economic conditions. For example, they may find greater political benefits in spending more on labor market policies and less on higher education in an effort to lower unemployment rates (e.g., Figure 2). Therefore, regardless of party affiliation, policymakers might be able to secure future electoral success by claiming responsibility for solving a problem.

While the exact mechanism for these similar reactions is outside of the scope of the research in this paper, the realization that a governor's political party matters less in times of economic downturn not only encourages additional theoretical questions but carries practical importance given recent economic challenges in the U.S., as well as other countries around the world. That politics might not drive responses to economic pressures highlights key differences in the power and discretion of policymakers to make policy in times of stress versus times of stability or abundance.

Second, this study illustrates that for negative economic shocks—specifically, increases in unemployment or decreases in personal income—budgetary reactions are somewhat similar when the shock happens within a state versus when a shock occurs in surrounding states. This finding suggests that state policymakers are not solely internally focused; they are also scanning their environment and react to pressures and changes that arise in other states. Although this reflects the logic of policy diffusion and inter-state collaboration, it has not always been easy to integrate into empirical budgetary models. While our example is focused on the context of the U.S. states, we expect that neighbor effects are also meaningful for countries around the world. Whether the effects take such a mirror-image form in these other contexts, however, is less clear but can be addressed in additional empirical work. Finally, an important limitation to consider from this finding is that it

remains difficult to consider the effect of shocks in non-bordering states on a given state of interest. In this paper, we theorized connectivity between states as one that is decreasing with distance and a function of a state's total economic weight compared to other states. It is likely the case that other forms of connectivity occur. Future specifications may include theoretical considerations about the network of states via personal relationships of state governors or legislators or perhaps through networks determined by political party affiliations. Still, neighboring states provide clear spillover possibilities in which citizens may have more open lines of communication and travel across state borders.

Understanding budgetary trade-offs over time is a complex undertaking that offers insights into when partisan differences shape budgetary behaviors. By delving into the policy budgets and considering these reallocations in reaction to economic pressures, we have uncovered both similarities and differences in budgetary behavior across partisanship in the U.S. states. The findings in this study illustrate that party politics may have minimal effects over budgetary trade-offs during times of economic constraint, even in times when discussions of polarization are rampant. Future work can further explicate the questions raised here regarding limits to policymaker discretion, the extent to which partisanship matters across other contexts, and the various effects of the states' intertwined relationships.

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