Divided We Reform?
Evidence from US Welfare Policies

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Abstract

More than one half of all US state governments are typically divided. Divided government is often thought of as causing legislative deadlock. Accordingly, when being dominated by different parties the executive and the legislative politically block each other hindering economic reforms. This paper is the first to systematically analyze this issue using novel data on welfare reforms conducted by US states between 1978 and 2010. First, I conduct a difference-in-differences analysis including a wide range of controls and taking potentially confounding effects from policy spillovers between states and the 1996 US Welfare Reform at the federal level into account. I find that under divided government a US state is between 25 and 50% *more* likely to adopt a welfare reform than under unified government. Second, I show how a standard regression discontinuity design (RDD) focusing on close elections can be adjusted to the divided government setting. This paper is the first to use an RDD with multiple interdependent assignment variables. This approach confirms the counter-intuitive result from before.

Key Words: Divided Government, Legislative Deadlock, Policy Innovation, US Welfare Reform, Multiple Assignment Variables Regression Discontinuity Design

JEL Codes: D72, D78, H11, H75

1 Introduction

"Now, hug a Republican", the Economist told President Obama via the title of its November 10th issue after he had won reelection in 2012 (The Economist (2012)). The newspaper referred to the fact that Democrat Obama would again have to deal with a Republican majority in the House of Representatives. As before the election, government would be divided. Divided government means that the President is faced with a majority of another party in at least one of the two chambers of Congress. Usually, it is argued that this hinders legislative productivity since the government cannot get its bill proposals through Congress without getting the consent of the opposition party. The legislative majority may even decide to block any relevant initiatives taken by the President resulting in complete legislative deadlock. This is the first paper to systematically analyze this issue by answering the following question: Is it really true that political reforms are less likely under divided as opposed to unified government? – I will show that the contrary is in fact the case.

Using novel data from the US states level from 1978 to 2010, I investigate whether welfare policies are more likely to be reformed under divided or under unified government. During this period of time, more than one half of all US state governments were divided. Welfare politics is an interesting case to look at not only because it is one of the policy areas most central to economics, but also since US states had the possibility to reform welfare policies during the whole time span under consideration. Common areas of reform include, for example, family caps, work requirements, sanctions, and time limits. Before 1996, the same federal rules determined welfare politics in all the states. But individual states could apply for waivers at the federal level and design their own welfare policies deviating from the federal rules. Information on these welfare waivers have been obtained from several sources. To measure welfare reforms before 1996, I use an indicator that is equal to one if a state has applied for a welfare waiver. In 1996, the landmark federal welfare reform under Clinton effectively decentralized the power to design welfare policies to the states. Within some federal guidelines, US states were now free to set their own welfare policies without having to apply at the federal level anymore. Yearly data on welfare policies after 1996 have been collected from the Welfare Rules Database (Urban Institute (2012)) which is compiled on the basis of welfare caseworkers' manuals of all states. Based on these data, welfare policy changes are coded. To measure welfare reforms after 1996, I use an indicator that is equal to one if a state has reformed its welfare policies. The resulting data set gives a comprehensive overview of welfare reform activity in US states between 1978 and 2010.

The welfare reform indicators I use as dependent variables in difference-in-differences regressions where the main explanatory variable is an indicator that is equal to one if the government is divided in a certain state and year. By divided government I mean that the state governor is confronted with a majority of legislators of the other party in one or both of the chambers of the state legislature. I show that under divided government a US state's probability to implement a welfare reform is actually between 5 and 10 percentage points *higher* than under unified government. The size of this effect amounts to between 25 and 50% of the unconditional probability of a US state to implement a welfare reform between 1978 and 2010.

The effect is highly significant, stable across specifications, and quantitatively similar before and after the landmark 1996 Welfare Reform at the federal level.

To check the robustness of my finding, I complement this novel welfare reform data set by a range of relevant demographic and political variables. To take into account possible endogeneity of divided government, I control for several legislation demand factors such as welfare state crisis measures (e.g. share of unemployed, share of welfare recipients, share of immigrants). I also control for several other demographic characteristics and allow (next to state and year fixed effects) for state specific linear trends in all my specifications. Besides divided government, there may be other political factors being relevant for welfare reform. Thus, I include variables measuring the ideology of state citizens and the seat shares of the parties in the state legislature. I also include characteristics of the ruling governor such as party affiliation and a lame duck control. Furthermore, I control for potential policy spillovers between neighboring states or states of similar population size. The effect of divided government keeps its size and significance across all these specifications and checks.

However, one serious identification concern remains: If voters understand the effect of divided government and take it into account in elections, we may run into an endogenity problem (Acemoglu (2005)). Namely, if voters know that a divided government is more likely to adopt a reform, they may vote in favor of a divided government exactly when they want a reform to be adopted. To rule out this or similar concerns, one would ideally need an experiment where states are randomly assigned their type of government – unified or divided. Focusing on close elections provides a quasi-experimental environment that gets close to this ideal. This is why I also use a regression discontinuity design (RDD) to analyze the data. The idea to use an RDD in an electoral context has first been explored by Lee et al. (2004) and Pettersson-Lidbom (2008). While the former analyzes the effect of electoral strength on subsequent roll-call voting, the latter investigates the effect of party ideology on policy-making.

Let us suppose, for example, that a state's lower and upper legislative chambers are both controlled by a Democratic majority and the governor's office is currently up for election. Let us further suppose that the race between the Democratic and the Republic candidate for the gubernatorial office is close. If one is willing to accept the assumption that close elections may in the end be at least partially decided by random factors (such as rain on election day), the final outcome of close electins can in fact be considered random. If the Democrat happens to become governor by a vote margin of 1 percentage point, i.e. the Democrat got 1 percentage point more votes than the Republican, state government happens to be unified. But if the Republican candidate had ceteris paribus gained, for example, only two percentage points more, it would have been divided. In the language of impact evaluation, the treatment (divided versus unified government) changes discontinuously at the threshold where the election winner changes. Using this discontinuity can therefore provide us with a quasi-random assignment of divided and unified governments. Similar discontinuities arise when looking at party seat shares resulting from state legislative elections.

To implement the RDD, I consider all state elections of the gubernatorial office, the upper legislative chamber, and the lower legislative chamber between 1978 and 2010. Compared to a standard RDD framework with only one assignment variable, I have three assignment

variables jointly determining treatment: the vote margin in the gubernatorial and the seat shares in the two legislative elections. The standard RDD therefore has to be adjusted to take into account multiple interdependent assignment variables. The basic idea is to collapse the multiple assignment variables into the closest distance to the treatment boundary as single assignment variable while taking into account the interaction in treatment determination. Using this assignment variable in a semiparametric RDD gives me the same result as the difference-in-differences analysis conducted before: Contrary to conventional wisdom, states with a divided government are more likely to reform their welfare policies.

I suggest several theories that may help to explain this counter-intuitive finding. First, if we assume that a welfare reform can fail and therefore carries some risk for reelection-seeking politicians, we might expect more reforms under divided government since in the case of failure the governor can always blame the other party (whereas with unified government always the governing party has to take the responsibility). Second, under divided government political competition between the parties may be more intense since both have a relevant say in policy-making and battle on more equal grounds. Specifically, the leader of the opposing party may use her majority to build a reputation as qualified lawmaker among voters to advertise herself as future governor (Mayhew (2005), p. 105). Third, divided government may to a large degree be the result of voters punishing the incumbent governor at midterm elections (Alesina and Rosenthal (1995)). If this punishment is interpreted by the governor as a signal by voters that she will lose the next election if nothing changes, the governor may be willing to take the risk of implementing a reform as a consequence.

The US is a very prominent case to look at when investigating the consequences of divided government. But it is only one example. In Western democracies in general, unified governments seem to be rather the exception than the rule (Fiorina (1996), p. 111). In France, for instance, the term "cohabitation" is used to describe a very similar phenomenon that occurs when the president faces a majority of an opposing party in parliament and therefore has to appoint a prime minister of this opposing party. Also in many parliamentary democracies different party control of different institutions is often argued to result in blockades which supposedly make reforming impossible. Take the example of Germany where very often the second chamber (consisting of members of state governments) has a different party majority than the first chamber (the parliament electing the federal government). Since most important laws need a majority in both chambers, legislative deadlock can possibly arise. Given my result, one may have to rethink common deadlock claims made with respect to divided government also for these and other countries.

The following section presents the related literature. Section 3 gives some background on US welfare politics and presents the data. Section 4 presents the difference-in-differences analysis and Section 5 the RDD analysis. Section 6 explores theoretical explanations of the findings. Section 7 concludes.

4

2 Literature

My work relates to the growing strand of literature on causes and consequences of divided government.[1] Classics on the causes include, for example, Alesina and Rosenthal (1995), Alesina and Rosenthal (1996), and Alesina and Rosenthal (2000) who put forward a balancing theory of divided government, i.e. voters split political power between political actors of different partisanship to get an ideologically intermediate policy in the end. A more recent example is Schelker (2012) who shows that voters – to restrict power of the unaccountable – are 10% more likely to elect a divided government into office when the incumbent governor cannot be reelected.

The literature on consequences of divided government has so far mainly focused on budgets. For example, Poterba (1994) shows that unified governments' responses to fiscal crises are stronger, Andersen et al. (2012) find that the budget is 10 to 20% more likely to be late under divided government. There seems to be no literature in economics analyzing the effect of divided government on the adoption of economic reforms.[2] There is a literature on policy innovation in political science (started by Walker (1969) and reviewed in Berry and Berry (2007))[3], but most of this literature looking at the effects of divided government has a more narrative approach or focuses on the federal level yielding usually not more than 30 observations.[4]

This paper also relates to the political economy literature analyzing policy choices at the US state level (often using a difference-in-differences approach). Important examples include Besley and Case (1995a), Besley and Case (1995b), List and Sturm (2006), and Besley et al. (2010).[5] None of these looks at divided government or welfare reforms in particular. To my best knowledge, this paper provides the first systematic analysis of the effect of divided government on economic reforms at the US state level.

In terms of methods, the paper also follows the literature employing RDD in political economy. Apart from the already mentioned pioneering work by Lee et al. (2004) and Pettersson-Lidbom (2008), the idea of exploiting close elections for RDD has for example also been used by Lee (2008), Ferreira and Gyourko (2009), and Pettersson-Lidbom (2012). Lee (2008) investigates the incumbency advantage in politics, Ferreira and Gyourko (2009) the effect of party control on policies in US cities, and Pettersson-Lidbom (2012) the effect of legislature size on government size. For nice reviews of papers using close elections RDD, see Caughey and Sekhon (2011) and Snyder et al. (2012).[6] For general practical RDD introductions, see Imbens and Lemieux (2008)

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[1]For an introduction to the topic of divided government, see Fiorina (1996).

[2]Bjørnskov and Potrafke (2013) analyze how party ideology in US states affects an economic freedom index (containing for example tax revenue as share of GDP and union density). Although they interact their party ideology measures with different forms of government, the main interest lies in the effect of ideology.

[3]Berry and Berry (1990) and Berry and Berry (1992) are important examples using event history analysis that both touch the topic of divided government.

[4]Examples are Binder (1999) or Mayhew (2005). Bowling and Ferguson (2001) and Rogers (2005) are exceptions looking at the state level. But the former focuses on the 1994 legislative sessions only and the latter conducts a purely cross-sectional analysis of 23 states only.

[5]For an overview, see Besley and Case (2003).

[6]Caughey and Sekhon (2011) argue that elections RDD may be problematic since close winners may often differ in pretreatment covariates compared to close losers in US House elections due to manipulation around the threshold. But they admit that the problem is less severe at the state level where races often are less professionalized. They also propose to check effects on lagged response variables in the RDD (which I do). Snyder et al. (2012), on the other hand, show that covariate imbalances across the election threshold occur

and Lee and Lemieux (2010).

The RDD in this paper is special since it is characterized by several interdependent treatment assignment variables. For theoretical treatments of this and similar topics, see Imbens and Zajonc (2011) and Papay et al. (2011). See Dell (2010) for a recent application to a case with two independent assignment variables. To the best of my knowledge, this is the first paper to employ an RDD with multiple interdependent assignment variables.

3 Background and Data

3.1 Background on US Welfare Politics

Before the landmark US Welfare Reform under President Clinton in 1996, the "Aid to Families with Dependent Children (AFDC)" program had been in place for several decades. As an entitlement program, it provided financial assistance to eligible families and almost all of its rules were determined at the federal level. Since 1962, states had the possibility to apply for welfare waivers at the Department of Health and Human Services at the federal level under Section 1115 of the Social Security Act. If approved, states could deviate from the rules set at the federal level and experiment with own policy rules as suggested in the waiver application. Such waivers became common in the 1980s when welfare caseloads began to rise and many states wanted to restrict welfare (Lieberman and Shaw (2000)). The common spirit of many such waivers was to go "from welfare to workfare". Major policy changes implemented include work requirements, family caps, time limits, and sanctions.[7] In 1996, President Clinton signed the "Personal Responsibility and Work Opportunity Act" which abolished the "Aid to Families with Dependent Children (AFDC)" in favor of the new "Temporary Assistance for Needy Families (TANF)" program with new federal rules. Within these federal guidlines, the reform also granted states more liberty to decide on their own welfare policy rules and in fact decentralized welfare to the state level. Now, states no longer have to apply at the federal level when they want to reform the welfare system. Policy changes at the state level in the areas of work requirements, family caps, time limits, and sanctions remain popular until today.

The 1996 US Welfare Reform is usually considered the most important one since the New Deal and there exists a large policy evaluation literature on the topic.[8] However, the political economy of welfare reform seems heavily underresearched. We know almost nothing about which states decided to reform their welfare systems and why.[9] Welfare reform case studies and anecdotal evidence suggest that the governors and their electoral concerns play a very important role. This is analyzed in detail in Bernecker and Gathmann (2013). But also the state legislatures played their part. Both, governors and state legislators have been identified as "key

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even without any sorting around the threshold simply due to the underlying distribution of partisanship in the electorate. According to their view, these imbalances do not pose any problems to elections RDD as long as a polynomial of the forcing variable is included (which I do as well). Furthermore, Eggers et al. (2013) show that problematic imbalances seem to be a US House anomaly during the period after WWII. Investigating more than 40,000 close races in several countries, they do not find imbalances in any other electoral context (including, for example, US statewide and state legislative elections).

[7] See Harvey et al. (2000) for more details on these waivers.

[8] See Blank (2002) for an overview.

[9] Lieberman and Shaw (2000), Soss et al. (2001), and Fellowes and Rowe (2004) are exceptions, but none of these looks at the specific role of the governor or the effects of divided government.

actors" in the process of welfare reform (Liebschutz (2000), p. 18). In many states, reforming governors intensively collaborated or struggled with their state legislatures. Liebschutz (2000), for instance, gives examples from Florida, Mississippi, New York, Washington, and Wisconsin (pp. 19, 60, 109). In several of these instances government was divided. There is also some evidence that in some states it was the state legislatures even taking the initiative in the welfare reform process, for example in Wisconsin in 1979 (before well-known reformer Tommy Thomspon took the gubernatorial office) or in New Jersey. In both cases Democratic legislators took the lead (Haskins (2006), pp. 34-35). Thus, it seems worthwhile to also look at the interplay between governors and state legislatures in the process of welfare reform. This makes the setting an interesting case for studying the effects of divided government on reform-making.

3.2 Data

This analysis is based on a novel data set on welfare policy reform activity in US states from 1978 to 2010 that has been assembled and coded from several sources. The dependent variable in the econometric analysis is a dummy that is equal to one if a state has conducted a welfare reform in a given year. Before the 1996 Welfare Reform at the federal level, the reform dummy is equal to one if a state has filed a welfare waiver application. The data on waivers have been obtained and cross-checked from Lieberman and Shaw (2000), Koerper (1996), and Crouse (1999). After 1996, the reform dummy is equal to one if a state has changed its welfare policy. Information on welfare policy changes in the areas family caps, work requirements, sanctions, and time limits is collected from the Welfare Rules Database maintained by the Urban Institute (Urban Institute (2012)). For details regarding data sources and coding of the policy rules, see the Appendix A. The resulting data set spans the years from 1978 to 2010 and gives a comprehensive overview of welfare reform activity in US states.

The resulting distribution of welfare reforms at the state level is depicted in Table A1. One can see that welfare reforms were especially popular in the early 1990s. More than twenty states per year filed waiver applications in these years. This was the period when caseloads were high which in many cases led to the political wish to restrict access to welfare by shifting the focus of the system "from welfare to workfare". This was also the time when President Clinton announced to "end welfare as we know it". In 1996, the Welfare Reform under Clinton decentralized considerable power to shape welfare to the states level. And one can clearly see from Table A1 that many states used the newly gained liberty to do so: The years from 1997 to 2000 are those in the sample under consideration with the highest number of states per year conducting welfare reforms (up to more than fourty). Since 2001, the number of reforming states per year has usually stayed below ten, but never dropped below four. States have remained active in shaping their welfare policy rules until today.

The main explanatory variable is a dummy that is equal to one if a state has a divided government in a given year. Divided government means that in at least one of the legislative chambers the majority is from a different party than the govenor. Thus, this includes so called split branch governments where the governor is confronted with majorities from the opposing party in both chambers of the legislature as well as split legislature governments where the

two legislative chambers have majorities from different parties.[10] The data on party control of state governments and legislatures have been obtained from Klarner (2003). Table A2 gives an overview of divided governments from 1978 to 2010. One can see that over time a bit more than one half of all state governments were divided. The 55% of divided governments consist of 33% split branch governments and 22% split legislature governments. 10% are divided governments with veto proof legislatures, i.e. governments where the opposing majority in the legislature is strong enough to override a veto by the governor. Section 4 will get back to the issue of different forms of divided government.

Figure 1 shows the cross-sectional distribution of welfare reforms and divided governments across US states. The grey bars indicate the share of years between 1978 and 2010 in which a state had a divided government. Among the states who had a divided government very often are, for example, New York and Delaware. At the opposite end, with the state government being unified almost all of the time, one finds states such as Georgia or South Dakota. Note that not a single state in the sample had either unified or divided governments for the whole time span under consideration. The black bars show the share of years between 1978 and 2010 in which a state has reformed its welfare system. These bars are on average considerably shorter than the divided government bars. Note, however, that also in terms of welfare reform years there is quite substantial variation between states. Wisonsin, for example, gets close to 40% whereas Idaho barely reaches 10%. Figures 2 and 3 show the incidence of welfare reforms and divided government across US states using maps.

In the econometric analysis, I control for a wide range of additional variables. Descriptive summary statistics of all variables are provided in Table 1. Means conditioned on the type of government (divided or unified) are presented in Appendix A (Tables A3 and A4). The demographic variables include per capita income, population size, black population, latino population, and population older than 65. These controls are standard in US state level policy analyses. For potential relevance for welfare, I add the share of AFDC/TANF recipients (welfare caseload), the percentage of unemployed and immigrants, the deflated total state revenue per capita, unmarried birth, the maximum AFDC/TANF benefit for a family of three, and the 90th/10th ratio of household income. Most of the demographic data are taken from the Statistical Abstract (United States Census Bureau (2011)). For further variables explanations and data sources, see Appendix A. As political controls, I add information related to the governor (the party, if he/she can be reelected, an election year dummy), information related to the state legislature (the Demcratic seat shares in both legislative chambers, the percentage of women in the state legislature, the polarization of both chambers), and ideology measures (the percentage of Democratic votes in the last presidential election and ideology measures for the state government and the state citizens taken from Berry et al. (1998)). The data are obtained from different sources, see Appendix A.

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[10]Nebraska has a unicameral legislature and is excluded from the econometric analysis (like Alaska and Hawaii). This is standard in the literature, see for example Lott and Kenny (1999).

4 Difference-in-Differences Analysis

4.1 Empirical Strategy

The empirical strategy is twofold: A difference-in-differences approach builds the main part of the analysis.[11] It will be complemented by an RDD analysis in the next section. The dependent variable is the welfare reform dummy. The treatment of interest is divided versus unified government which differs across states and time.

The difference-in-differences estimation equation is:

$$R_{st} = \alpha_t + \gamma_{0s} + \gamma_{1s} * t + \delta * D_{st} + X_{st} * \beta + \epsilon_{st}$$

R_{st} is a dummy that is equal to one if state s has conducted a welfare reform in year t. D_{st} is a dummy that is equal to one if state s had a divided government in year t. δ thus captures the treatment effect of interest. α_t captures year fixed effects, γ_{0s} and γ_{1s} capture state fixed effects and allow for state specific linear trends. X_{st} are relevant controls. Standard errors are clustered at the state level to take serial correlation into account (Bertrand et al. (2004)). For simplicity, linear probability models are estimated.[12]

Besides standard demographic controls, X_{st} includes different variables to take potential endogeneity issues into account. One problem with identification could, for example, be that welfare state crisis is an omitted variable that may cause both divided government and welfare reform. This is why the share of welfare recipients in the population, the share of unemployed, state revenue, and other controls are included as measures of welfare state crisis. It is also known that immigration and race issues frequently come up in debates about the welfare state.[13] The analysis therefore also controls for the racial composition and immigrants in the population. To take into account policy spillovers between states, welfare reform by other states is also used as an explanatory variable – be it geographically neighboring states or states with a similar population size.

The analysis also controls for a range of political variables. Ideology may be an important determinant of both welfare reform and voters' decision to divide government. As one measure of citizen ideology, the Democratic vote share in the last presidential election is included. To measure legislatures' ideology, the Democratic seat shares in both legislative chambers are used. The share of women in the legislature is included as a further control. Since in many cases the governors were main actors in shaping welfare reform, this analysis controls for two key variables.[14] These are the party of the governor and an indicator if he or she is a lame duck, i.e. cannot be reelected. Especially the latter may be relevant since Schelker (2012) seems to find that voters restrict lame ducks by dividing their government.

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[11]The approach is similar in methodology to other political economy studies of the US context. For examples, see Besley and Case (1995a) or List and Sturm (2006).

[12]Probit estimation results are similar.

[13]See Schram et al. (2003).

[14]The role of governors is analyzed in greater detail in Bernecker and Gathmann (2013).

4.2 Results

Table 2 presents the main results of the difference-in-differences analysis. The dependent variable is the reform dummy that indicates if a state has conducted a welfare reform in a given year or not. The main explanatory variable is the divided government dummy. Specification (1) includes year fixed effects, specification (2) adds state fixed effects, specification (3) adds state specific linear time trends. In all three specifications, the effect of divided government on reform is highly significant and in the range of 4 to 7 percentage points. This means that the likelihood of observing a welfare reform is 4 to 7 percentage points higher under divided government than under unified government. The result is very robust across different specifications and robustness checks. Given the fact that between 1978 and 2010 the average unconditional probability of a US state to conduct a welfare reform is 21.5%, the effect of divided government on the probability to adopt a welfare reform amounts to more than 25% of the unconditional probability to implement a reform. All following specifications include year fixed effects, state fixed effects, and state specific linear time trends.

It may be that welfare state crises are common causes of both divided government and welfare reform. Specifications (4), (5), and (6) therefore control for the share of welfare recipients, the share of unemployed in the population, and for state revenue (as a measure of fiscal crisis). Neither of these controls is significant, but the effect of divided government keeps its size and significance. This is also the case when adding the full range of demographic controls in specification (7). These controls include the share of immigrants, the 90th/10th percentile ratio of household income (as inequality measure), the incidence of unmarried birth (since AFDC/TANF policies sometimes related to this issue), the per capita income, the population size, the share of black or latino people, and the share of people older than 65. All the controls are lagged by one year since politics may need some time to react. None of the controls is significant. The effect of divided government, on the other hand, is still significant and has a size of about 7 percentage points. Results are the same when taking the current values of the demographic variables or changes in the demographic variables as controls (not reported).

Table 3 checks the inclusion of other prominent political factors besides divided government. Specification (1) controls for lame duck governors (i.e. governors who cannot be reelected and may have different incentives). The control is not significant. Specifications (2) and (3) check if the results are affected by upcoming or just passed elections. It seems that in the year just after a gubernatorial election the reform adoption propensity is lower. Preparation of welfare reform may just take some time. Since case studies suggest that governors played an important role during the US Welfare Reform in shaping states' individual welfare policies, Bernecker and Gathmann (2013) investigate in great detail the channels through which governors may affect welfare. The important thing to note here is that none of the gubernatorial controls affects the divided government finding. Specifications (4) and (5) include controls related to the state legislature. While (4) checks the effect of polarization of chambers (measured as deviation of the Democratic seat share from 50%), (5) controls for the share of women in the state legislature. The significant coefficient for the polarization of the House is to be interpreted as follows: A 10 percentage points increase in the absolute distance of the Democratic seat share from 50% (implying lower polarization of the chamber) reduces the likelihood of observing a

welfare reform by 3.8 percentage points. Thus, more polarized Houses seem to be more likely to reform. In terms of interpretation, this finding fits the divided government finding. However, even when controlling for polarization, the effect of the divided government dummy itself also stays significant and keeps its size. Specification (5) shows that having more women seems to reduce the likelihood of a welfare reform being adopted.[15] The effect of divided government is not affected. Specification (6) finally includes all political controls from before. Again, the effect of divided government is stable and significant. Thus, even when taking into account several other political key variables, divided governments are significantly and relevantly more likely to reform the welfare system than unified governments.

A very relevant political factor in shaping welfare reform may be ideology (of the state population, the state legislature, or the state governor). Table 4 therefore introduces several ideological controls into the analysis. Specifications (1) and (2) add the share of Democratic votes in the last presidential election and the citizen ideology measure by Berry et al. (1998). The latter measure is constructed from the ideology of state congressional delegations. See Appendix A for details. Neither of the two variables affects reforming or the divided government finding. Specifications (3) and (4) investigate potential effects from the partisan composition of the state legislatures. While (3) introduces the Democratic seat shares in the two chambers, (4) also interacts these seat shares with a Democratic chamber majority dummy (allowing partisan effects to be different depending on majority versus minority status in the chamber). None of these controls is significant, the divided government effect is stable in size and significance. Specification (5) uses the government ideology measure from Berry et al. (1998) as control, specification (6) a simple governor party dummy (Republican versus Democrat). Again, the divided government result is not affected. The same holds true in specification (7) which interacts the divided government dummy with a Democratic governor dummy (allowing the divided government effect to be different for governors of different partisanship).

Another highly important factor potentially determining welfare reform may be learning from others, i.e. policy spillovers between states. Table 5 explores this issue. Specifications (1) to (3) add the average level of reform in geographically neighboring states as explanatory variable, specification (2) adds a lag, specification (3) the second lag. Reforms in neighboring states do not seem to have an effect on a state's reform propensity. The coefficient of divided government is significant and relevant as before. Specifications (4) to (6) explore controlling for the average level of reform in states with a similar population size. Again, specifications (5) and (6) add the lag and the second lag to the analysis. This time, there is a significant negative effect of the current reform level in states with similar population size. It seems that states with a similar population size do not reform their welfare systems at the same time. Importantly, the effect of divided government is stable in size and significance across all specifications.

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[15]If we assume that adopting a welfare reform typically restricts access to welfare, this finding is consistent, for example, with Lott and Kenny (1999) who find that in the US extending suffrage to women came along with increases in government spending and more liberal voting by representatives, Chattopadhyay and Duflo (2004) who show that women in India implement different public good provision policies compared to men, or Funk and Gathmann (2012) revealing that women in Switzerland have stronger preferences for welfare compared to men.

4.3 Robustness

This section presents some further robustness checks of the results presented before. Table 6 differentiates the effect of divided government on the likelihood of welfare reform adoption across space and time. Specification (1) shows the baseline specification from Table 4. Specification (2) adds an interaction for Southern states. This allows the South of the US which seems to be politically different in many respects compared to the rest of the US to also be different with respect to the effect of divided government on reform. It turns out that this seems not to be important: The coefficient of the interaction term is close to zero and not significant. Specifications (3) and (4) split the sample in 1996 when the landmark Welfare Reform under President Clinton was implemented. As outlined in Section 2, this reform fundamentally changed the politics of welfare in the US. We may therefore suspect that the effects of divided government on reform adoption could be different before and after this important event. Also remember that the measure of welfare reform is coded from different data sources before and after 1996. Table 6 shows, however, that the effect is significant and relevant both before and after the 1996 Welfare Reform. The effect seems to be larger after 1996, but this can be explained by the fact that also the unconditional propensity to reform welfare in a given year is larger after 1996. Before 1996, it is around 15%, afterwards it is around 30%. Thus, in both time periods the effect of divided government has a bit larger than one third of the size of the unconditional probability of reform. The increase in welfare reforms at the state level after 1996 could be due to the different data sources for reforms before and after 1996, but it could also be easily explained by the fact that the 1996 Welfare Reform decentralized considerable power in the realm of welfare politics to the states. It should therefore be no surprise that we observe more welfare reforms at the state level after 1996.

Table 7 checks lags and leads of the divided government dummy as regressors in the analysis. This check is recommended by Angrist and Pischke (2009)[16] and can be interpreted as a causality test following Granger (1969). If divided government makes observing a reform more likely (and not vice versa) we should see an effect of current (or lagged) divided government on the probability of reform adoption, but no effect of leads of the divided government dummy. Actually, in the divided government setting, we would probably also expect no effect of lags of the explanatory variable since it may be reasonable to assume that only the current form of government is relevant for current policy-making, but not the form of governments of previous electoral cycles. Table 7 confirms this conjecture: The lags of the divided government dummy (specifications (3) and (4)) are never significant. More importantly, also the leads (specifications (1) and (2)) are never significant. If welfare reforms tended to result in divided government, we would have expected to see something here, but we do not. In contrast, the coefficient of current divided government is significant even in specifications (5) and (6) where lags and leads of divided government are included at the same time. This further illustrates the robustness of the finding: Divided governments are more likely to reform welfare than unified governments.

One other story that could be driving the result is the following: Maybe a unified government can easily implement a welfare reform in its first year in office since it is not confronted with any institutional obstacles, while a divided government has to struggle more, gets blocked, and

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[16]See p. 237 of their book for an exemplary estimation equation.

consequently implements only a part of the reform in the first year and a second part in the second year in office. Since the unit of observation in the analysis is state-years, the reform dummy would be equal to one for the first year for the unified government, but would be equal to one for both the first and the second year for the divided government. Although the two governments may in fact have implemented the very same reform, the differences in timing may make the divided government look more reformist in the analysis. Table 8 investigates this issue by using electoral cycles instead of years as units of observation, i.e. the reform dummy is defined for governments and no longer for years. Since elections usually take place every other year, this reduces the sample size to about one half. Apart from this difference in the definition of what constitutes an observation, Table 8 perfectly replicates the specifications from Table 2. One can see that the divided government effect is robust. Thus, the findings are not driven by a story of differences in reform timing.

4.4 Extension

This preliminary extension explores the possibility of differential effects of different forms of divided government. Split branch governments are the ones where the governor is confronted with majorities of the opposing party in both legislative chambers. Split legislature governments, on the other hand, are situations where the two majorities of the two legislative chambers are from opposing parties. Figure 4 gives a graphical illustration of the different forms. The actual distribution of forms in the data is depicted in Table 9. Column (1) gives the absolute number of state-year observations, column (2) gives the share of all divided government state-year observations. We can see that more than 60% of all divided governments are split branch governments. The remaining 36% are split legislature governments. Both subforms of split legislature (governor and senate from same party and governor and house from same party) are quantitatively relevant in the data. Table 9 also reveals that out of all divided governments almost 20% are veto proof in the sense that there are even enough legislators of the opposing party in the legislature to override a gubernatorial veto.

Tables 10 and 11 investigate the effect of different forms of divided government on reforming. While divided government as a whole category clearly has to be tested against unified government, issues are not so straightforward for different forms of divided government. One can either test these subcategories against unified government as well or one can test them against all other forms of government (i.e. not only including unified governments as a comparison group, but also the other forms of divided government). Table 10 does the former, Table 11 the latter.

Specification (1) of Table 10 again reports the baseline specification from Table 2 putting all different forms of divided government together. Specifications (2) to (6) report the same estimation, but this time each comparing a specific form of divided government against unified government. All estimated coefficients are positive and almost all of them are significant. This seems to underline the importance of general divided government for reforming (irrespective of the particular form). Note, however, that there are relevant differences in size of the estimated coefficients: While the effect is about 5 percentage points for split branch governments, it is more than 8 percentage points for split legislature governments. And among the latter, governments

where governor and senate majority are from the same party (but the house majority from the other) seem to have a particular strong effect on reform adoption (about 15 percentage points). This finding may be useful for disentangling different theoretical channels that may be able to explain the empirical findings of this project.

Table 11 checks the reform adoption effects of the same forms of divided government, but uses all other possible forms of government (not only unified government) as comparison group. Specification (1) replicates the baseline from Table 2 as before. Again, the estimated coefficients for all different forms of divided government in specifications (2) to (6) are positive. But this time, only the general split legislature government and the split legislature government with governor and senate majority of same partisanship have significant effects. Relative to all other forms of government, split legislature divided governments (and in particular those where governor and senate are aligned) are more likely to adopt reforms.

5 Regression Discontinuity Design Analysis

5.1 Empirical Strategy

Although the findings from the difference-in-differences analysis are very robust across specifications, one may still have some remaining doubts about identification. Let me shortly outline three: First, maybe there is no causal relation between divided government and reform, but instead political compention is a relevant omitted variable causing a positive correlation between divided government and reform: States with strong political competition are more likely to implement economic reforms, but are at the same time more likely to end up with divided government. The fixed effects in the difference-in-differences analysis ensure that the result cannot be driven by differences between states with strong political competition and states with weak political competition (but must be driven by within-states variation). But still, political competition may be a relevant concern. Second, reverse causality may be an issue. Assume that a gubernatorial candidate announces during her electoral campaign that she wants to reform welfare after the election and that voters do want the candidate but do not want welfare to be reformed. Voters may then decide to elect the candidate, but to also divide power by electing a state legislature of another partisanship than the gubernatorial candidate. Causality would run from reform intention to divided government in this case. Third, if voters know that divided governments are more (or less) likely to implement reforms, they may vote in such a way to divide (unify) government exactly when they want reforms to be implemented (and vice versa).[17]

To cleanly identify the effect of divided government on reform adoption, we would therefore ideally need an experiment where some states are randomly assigned a divided and others a unified government. The regression discontinuity design (RDD) comes very close to this ideal. The basic difference in terms of identification compared to the difference-in-differences section is to exploit deeper knowledge about the selection rule determing treatment. In particular, the RDD uses the fact that treatment (divided versus unified government) changes discontinuously

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[17]For a general discussion of endogeneity problems arising when voters take into account the effects of institutions, see Acemoglu (2005).

in election results (of governors, state houses, and state senates). Focusing on close elections provides us with quasi-experimental treatment assignment. RDD's "randomized variation is a consequence of agents' inability to precisely control the assignment variable near the known cutoff" (Lee (2008), p. 282), i.e. in this setting the many voters' inability to perfectly manage the joint election result makes the institutional setting "quasi-random". Because of the interplay of three different institutions determining treatment, I have three interdependent assignment variables in this RDD. This is non-standard and I have to adjust the design as explained below. Since this complication causes a need of many observations, this RDD analysis should be considered only complementary to the difference-in-differences analysis presented in the previous section.

Let us suppose that final election results are random to at least some degree. For example, rain on election day could influence the partisan composition of voters going to the polls. If one – just to fix ideas – further assumes that the state house and the state senate are both dominated by Democratic majorites, the outcome of the gubernatorial race also determines if government will be unified or divided. If the gubernatorial election happens to be close the result of the election can be considered random, and thus also the assignment of unified versus divided government. The setting exploits the fact that the result of the election changes discontinuously at the threshold where one politician gets one more vote than the other and thus provides exogenous variation in the assignment of politicians to office. A similar logic applies to state legislative elections and discontinuities in the resulting seat shares determining majority and minority status of the parties in state house and state senate.[18]

The important identifying assumptions of the approach are the following. First, there has to be some randomness in final election results. This seems obvious. Second, there must not be any sorting around the discontinuity, i.e. there must not be any manipulation of election results by candidates close to the threshold. This assumption will be checked in the robustness section by investigating the smoothness of the density of observations around the threshold and by testing the similarity of relevant pretreatment observables across the threshold.

The setting is non-standard since it is characterized by three interdependent assignment variables: the election result of the gubernatorial race and the two seat shares for the two legislative chambers resulting from the legislative elections. These three election results jointly determine if government is divided or unified in a state. When multiple variables are responsible for treatment assignment and only the average treatment effect is of interest, the most straightforward approach is to collapse the multiple variables into one single (artificial) assignment variable taking the value of the one of the original assignment variables which has the value that is closest to the treatment boundary. This makes the RDD unidimensional again by treating the closest distance to the treatment boundary as assignment variable. The

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[18]I use seat shares of parties in state legislative chambers to measure closeness of majorities in chambers. In principle, one could argue that using election results of individual legislators may be preferable to my approach since even an election that results in a 50% Democrats and 50% Republicans seat shares distribution (suggesting a very close race and a random election result) may in principle be perfectly foreseeable if half of the districts are clearly Democrat and the other half are clearly Republican. But I think this is not very likely and in fact seat shares should be fairly good proxies of the overall closeness of the parties' fight for the majority in a chamber. Besides, Folke and Snyder (2012) argue that seat shares may be preferable to individual vote shares since a relevant share of legislative races at the state level is uncontested possibly causing selection bias issues.

new assignment variable therefore measures the closeness of the closest election that could have changed treatment (from divided government to unified or vice versa) if the election had resulted in the other party winning. For most of this analysis, the interest indeed lies in identifying the average effect (of divided versus unified government) and the assignment variables are collapsed in the described way. In parts of the analysis, however, split legislature government (as a subtype of divided government) is in the focus. In that case, not the average treatment effect is relevant, but only the relevant parts of the overall assignment frontier are considered (namely legislative chambers seat shares, but not gubernatorial election results). The collapsing procedure is explained for the average treatment effect case in the following paragraph, and in even greater detail in Appendix B.

The following procedure is followed to determine the collapsed assignment variable (in the average treatment effect case): Every election of governor, senate, and house in US states from 1978 to 2010 is investigated jointly with all other elections of the same three institutions that take place in the same state on the same day.[19] Only those elections are considered where a different election result could have changed treatment (from divided to unified government or vice versa). Take the example of an election where the governor is a Republican, the senate has a Democratic majority, and the house is up for election. In this case the new government will be divided anyway, regardless of the result of the house election. The election will therefore not be assigned a collapsed assignment variable and is excluded from the analysis. In contrast, had the senate also been dominated by a Republican majority, the house election would have been decisive regarding divided versus unified government and the collapsed assignment variable would have been assigned the distance in seats between the Republican and the Democratic seat share in the newly elected house. In elections where several institutions are elected at the same time (and the elections are decisive for treatment), the collapsed assignment variable is assigned the distance of the closest election (in vote share for gubernatorial elections, in seat shares for legislative elections). In short, the collapsed assignment variable measures the closest distance to the treatment boundary for those elections where a treatment change could in principle have occured on election day. Appendix B goes into greater detail regarding the exact coding of the collapsed assignment variable and gives several examples.

The rest of the RDD is fairly standard. The low number of observations makes a parametric approach preferable over a nonparametric approach. The regressions therefore fit a polynomial in the collapsed assignment variable to estimate the treatment effect at the boundary. Restricting the analysis to close elections makes the analysis semiparametric. In that sense the approach could be best described as a semiparametric RDD with multiple interdependent assignment variables.

5.2 Results

Table 12 shows the main results of the multiple interdependent assignment variabes RDD. As before, the dependent variable is the welfare reform dummy. In columns (1) to (4), the

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[19]In fact, most states elect the governor, the house, and the senate on the same day every four years, but have additional elections ("midterm elections") for the house and the senate after two years since state legislators are usually only elected for two years terms in office.

explanatory variable is the divided government dummy. Since the previous section showed that split legislature may be especially relevant, columns (5) to (8) focus on this specific type of divided government as explanatory variable and test it against all other forms of government. Each triple of numbers (coefficient, standard error, R squared) shows the result of one regression.

The first row of Table 12 looks at the full sample, the second and the third restrict the sample. The restriction is made with respect to the new assignment variable (after collapsing the original three assignment variables into one as described before) which gives the closest distance to the treatment boundary. The second row shows regression results where only observations that are at maximum 5% away from the treatment boundary have been used. The third row further narrows the number of observations to a 2% closeness sample. This implies, for example, that for all observations used in the second row of specifications (1) to (4) a difference in votes or seat shares of 5% or less in the last election (of one of the institutions governor, house, or senate) would have been sufficient to change treatment from divided to unified government or vice versa. Restricting the sample mimics a nonparametric approach. A fully nonparametric approach is infeasible because of the small number of observations. Adding polynomials of the assignment variable to the design in close samples makes the approach semiparametric. Columns (1) to (4) and (5) to (8) add a polynomial of degree 0 to 3 in the assignment variable.

Let us first look at the results for divided government (columns (1) to (4)). In the full sample, the coefficients are highly significant and of around 6 percentage points in size, i.e. of about the same size as in the difference-in-differences analysis presented before.[20] States with divided government are more likely to adopt a reform compared to states with unified government. When looking at close elections (in the second row), the coefficients do not only keep their significance, but do also more than double in size. This clearly shows that a political competition story cannot explain the finding. As outlined before, this story could go as follows: Possibly, there is no direct relation between reforms and divided government, but instead political competion is a relevant omitted variable in this analysis. States with strong political competition are more likely to implement economic reforms since these states are also characterized by more intense policy competition among politicians. But at the same time these states tend to end up with divided government very often since they experience a lot of close elections. – If this story was indeed true, we would expect to see a positive effect of divided government on reform in the full sample (driven by the political competition omitted variable), but no effect anymore when looking at the subset of states with strong political competition (i.e. with close electoral races). We can see that the contrary is in fact the case in the data. The effect for closely elected divided governments on reform adoption is highly significant and of about 14 percentage points in size. If anything, this implies that in swing states the effect of divided government is even stronger compared to states with weaker political competition. Finally, when looking at very close races (in the third row) we still see a relevant positive effect. The lack of significance and can be explained by the considerable increase in the standard errors due to the heavily shrinked sample size.

Columns (5) to (8) look at the specific effect of split legislature governments on reform. The difference-in-differences analysis presented before had shown that this form of government may

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[20]Although the coefficients are not directly comparable since the RDD estimates the effect at the boundary.

be the driving force behind the finding. The full sample regressions reveals an effect of about 4 to 7 percentage points in size (which, however, reaches significance only in the linear polynomial case). But when restricting attention to close elections in the second row, one consistently finds a significant 14 percentage points effect. This effect even stays significant and stable in size in the sample of very close elections in the third row (with just more than 100 observations). This confirms the finding from the difference-in-differences analysis from before: The result seems to be driven by split legislature governments.

5.3 Robustness

This section contains further regressions and a graphical analysis to show the robustness of the RDD results. Table 13 starts by replicating the main analysis presented in Table 12, but adds fixed effects. In particular, year fixed effects, state fixed effects, and state specific linear trends are now included in all specifications. If the RDD sample is indeed quasi-random, fixed effects are not necessary for identification and should not change much in terms of results. However, it has been argued that including fixed effects can increase the precision of the estimates and may be especially worthwhile in the case of a low number of observations.[21] As can be seen from Table 7b, as expected fixed effects do indeed not change much. The results are very similar compared to before.

It seems reasonable to assume that the current form of government affects current and possibly future reform adoption, but cannot affect reform adoption in the past. If the empirical design is valid, one should therefore not find any effect of divided government or split legislature on previous year reform. This is what Table 14 checks as a placebo test, i.e. it replicates Table 12, but uses the reform dummy lagged by one year as dependent variable. Indeed, none of the coefficients is significant at any conventional level, all of them are small in size, and many are even close to zero.

Table 15 performs two more robustness checks. For divided government (specifications (1) to (4)), besides fixed effects it also adds a broad range of control variables to the original analysis. As should be expected, this does not affect the results in any relevant way and confirms the original RDD analysis. For split legislature (specifications (5) to (8)), the definition of the explanatory variable is changed slightly. Whereas so far split legislature governments have been compared to all other (i.e. unified legislature) governments (including, for example, split branch divided governments), now split legislature governments are compared to unified governments only. One can see from Table 15 that this does not make any relevant difference.

Figure 5 shows some graphical illustrations of the discontinuity analyzed in the RDD analysis. Keep in mind here that the propensity to reform may in fact be influenced by many other factors (besides the form of government) which are not visible or controlled for in the graphs and also that the number of observations is fairly small. Graph A shows the average reform propensity for 10 different bins of the assignment variable and fits a quadratic polynomial on either side of the cutoff at zero. All observations to the right of the cutoff belong to divided governments, those to the left to unified governments. As expected, the averages are fairly jumpy, but it seems that in general divided governments have a larger propensity to reform.

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[21]See Hoxby (2000), Pettersson-Lidbom (2008), and Pettersson-Lidbom (2012).

One can also see a discontinuous upwards jump in the reform propensity when passing the cutoff. Graph B is based on the same data, but instead of the polynomial shows the resulting lines from conducting non-parametric kernel regressions on both sides of the cutoff. Again, one sees a jump at the cutoff. To get a clearer picture of the discontinuity, graphs C and D zoom in by looking at observations only that are at maximum +/- 20% from the cutoff. When focusing on this closer sample, the discontinuity at the cutoff is clearly visible. The jump in the reform propensity when passing from unified to divided government is even larger when looking at split legislature versus unified legislature governments in graphs E and F.

For a valid RDD one needs the density of the assignment variable to be smooth around the cutoff (i.e. that there is no sorting of observations across the threshold). Figure 6 shows the density of the closeness assignment variable for different numbers of bins. One can clearly see that the distribution is smooth at zero and manipulation around the cutoff is not of any concern in this analysis. As another validity check, Tables A3 and A4 present means of variables by divided versus unified government observations in the full sample and in the 5% closeness sample. The difference in the reform dummy is highly significant for both samples. But while the difference in means is also significant for several other variables in the full sample, none of these differences keeps its significance in the 5% closeness sample. This further supports the random sample assumption made for close assignments of divided versus unified government: In the close sample unified and divided government states are indeed similar in terms of predetermined covariates.

6   Theoretical Explanations

This section hints at some very preliminary suggestions on how to theoretically explain the empirical finding that divided governments are more likely to implement welfare reforms. It should be stressed here that so far these are only ideas and that these ideas certainly still need more sophisticated elaboration before they can be empirically tested and disentangled. The three different ideas are: (1) the risk-sharing theory, (2) the competition theory, and (3) the signaling theory. The ideas are sketched in the following.

Risk-Sharing Theory: Suppose that there is a status quo welfare policy in place that has a fixed payoff for the voters in a state. The governor is the welfare policy agenda setter and can propose a new welfare policy to the legislature that replaces the status quo welfare policy if adopted, i.e. the governor can propose a welfare reform. Since a reformed welfare policy deviates from the status quo, it carries some risk. The outcome of a new policy is unknown to everybody beforehand and its payoff for voters can be higher or lower than the fixed payoff from the status quo policy. If a new policy is implemented, its outcome is revealed to everybody before the next election. Voters tend to reelect governors who implement policies with higher payoffs realized than status quo policies, but tend not to reelect governors who implement policies with lower payoffs realized than status quo policies. If government is unified, the governor as key actor with a legislature dominated by his own party is fully held accountable by voters for the policy payoff. If government is divided, however, the governor has the option of blaming the legislature for unfavorable policy consequences and, in the case of blaming, is only partially held accountable

by voters for the policy payoff. This implies that with unified government the governor has to carry the full risk of implementing a new policy, but with divided government she can shift at least part of the responsability to the legislature (dominated by the opposing party) in case the new policy fails. This and similar settings may induce the governor to be more willing to implement welfare reforms when there is a to be blamed opposition majority in the legislature, i.e. when government is divided.

Competition Theory[22]: Assume a similar environment as before. But now suppose that not only the governor but also the leader of the opposition party is held accountable by voters in case the opposition leader has a majority in the legislature. This means that in the case of unified government only the governor is in the center of voters' attention for the future elections, but in the case of divided government also the majority leader in the legislature receives attention as another key actor in state politics. Admittedly, the opposition leader may not be as powerful as the governor, but at least has a majority in the legislature that can support her policy proposals. She may use this majority to qualify herself as a qualified policy-maker (and potential future governor) in the eyes of the voters. The idea then is that increased voter attention increases competition between political key actors for suggesting welfare reforms. With more intense competition in the case of divided government, one may then expect to observe more welfare reforms suggested and implemented under divided government as opposed to unified government.

Signaling Theory: Imagine again a similar setup as in the first theory. Now, interpret divided government as a result of frustrated voters punishing an incumbent governor for policy disappointments by taking away the governor's majority in the legislature in midterm elections.[23] This then is a clear signal to the governor that voters are not happy with her performance in office and that the likelihood may be large that voters will not reelect her in the next election. The idea is that in this situation the governor is not likely to be reelected if she sticks to status quo policies resulting in average payoffs for voters. In this desperate situation, the only chance for the incumbent governor to get reelected may be to be lucky with new policies which have uncertain payoffs. In other words, the governor may be willing to take the risk of an uncertain welfare reform since she will otherwise lose the next election anyway. If we interpret divided government as signal to the incumbent governor in this way, we may expect to see more policy reforms under divided than under unified government.

7   Conclusion

Conventional wisdom suggests that under divided government political parties block each other resulting in a lack of economic reforms. This is the first paper to systematically test this view by analyzing novel data on welfare policy reforms at the US state level between 1978 and 2010. Differences-in-differences estimates show that the probability to implement welfare reforms is in fact between 5 to 10 percentage points *higher* for states with divided government as opposed to states with unified governments. This effect amounts to 25 to 50% in size of the unconditional

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[22]A similar idea is sketched on p. 105 of Mayhew (2005)

[23]See Alesina and Rosenthal (1995) on this.

probability to implement a welfare reform and is robust with respect to the inclusion of a wide range of demographic and political control variables. The effect also keeps its significance and size when differentiating between the time periods before and after the landmark 1996 US Welfare Reform, when controlling for welfare policy spillovers between states, or when differentiating southern and non-southern states.

Focusing on close elections of political institutions also allows conducting a regression discontinuity design in this setting. Since the treatment of interest (divided versus unified government) is jointly determined by three separately elected institutions (governor, house, senate), however, the standard regression discontinuity design has to be adjusted to fit this application. To my best knowledge, this paper is one of the first to use a regression discontinuity design with multiple interdependent assignment variables. Although this design would be expected to need even more data than a standard regression discontinuity design and the number of observations is fairly limited in this study, the approach confirms the findings from the difference-in-differences analysis: Divided governments are more likely to adopt reforms. The paper also suggests several preliminary theories that may help to explain this counter-intuitive finding.

Given that more than one half of all US state governments are divided, my results are certainly very relevant in the US context. Also note that my results may not only carry over to other countries with presidential systems like France (or countries with political systems similar to the US system), but may even have implications for countries with a parliamentary system like Germany. In Germany, for example, the two legislative chambers are often said to politically block each other when being dominated by different party majorities. But further research is needed until any conclusions about reform-making in different political contexts can be drawn.

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A Data Appendix

Note that most of the data come directly from Bernecker and Gathmann (2013). Summary statistics are provided in Table 1, means of variables by divided versus unified government in Tables A3 and A4.

A.1 Divided Government Variables

Divided Government is a dummy that is equal to one when either the majority of the state's lower legislative chamber or the majority of the state's upper legislative chamber is from another party than the governor. Split Branch is equal to one if the governor in a state is confronted with majorities of the opposing party in both legislative chambers. Split Legislature

is equal to one if the majorities in the two legislative chambers in a state are from opposing parties. Split Legislature with Governor and House from same Party denotes split legislature governments where governor and house majority are from one party and senate majority from the other. Split Legislature with Governor and Senate from same Party denotes split legislature governments where governor and senate majority are from one party and house majority from the other. Divided Government with Veto Proof Legislature is equal to one if there is divided government and there are enough legislators (from the opposing party) to override a gubernatorial veto. The underlying data (i.e. party control of the gubernatorial office, party control of the two legislative chambers, and the variable Divided Government with Veto Proof Legislature) have been obtained from Klarner (2003) and Klarner's webpage (http://www.indstate.edu/polsci/klarnerpolitics.htm).

A.2   Welfare Reform Variables

The Reform Dummy used as dependent variable in most of the analyses in this paper is constructed from different data sources. From 1978 to the Welfare Reform in 1996, the reform dummy is equal to one if a state has filed a waiver application at the federal level in a given state and year. This includes waiver applications rejected by the federal level and also applications referring to only some counties of the state. The data on waivers have been obtained from Lieberman and Shaw (2000) and cross-checked using Koerper (1996) and Crouse (1999). The waiver data do not go back to the period before 1978. However, states have in principle been in a position to file waiver applications already since 1962. But since waivers did not become popular before the late 1970s, the data starting in 1978 will nevertheless capture most relevant welfare waiver activity in the states.

With the implementation of the Welfare Reform in 1996, welfare waivers became irrelevant. Within some federal guidelines, states were now free to set their own welfare policy rules. After 1996, the reform dummy is equal to one if a state changed its welfare policy rules. Information on welfare policy changes at the state level is obtained from the Welfare Rules Database maintained by the Urban Institute (Urban Institute (2012)). This database contains the states' welfare rules from 1996 onwards. The basis of the data are the plans of the states (approved by governor and legislature). Data collection is done via states' caseworker manuals and policy updates that are sent to them during the year. TANF administrators of the states verify the data on the policy rules before publication. This makes the data most complete and uptodate and "one of the most reliable sources on TANF social policies available" (Fellowes and Rowe (2004), p. 365). As in Bernecker and Gathmann (2013), the analysis focuses on twelve important welfare policy rules out of the areas family caps, work requirements, sanctions, and time limits. For details on the rules, see the data appendix of Bernecker and Gathmann (2013).

For the analysis of spillover effects, the reform dummy in neighboring states is relevant. The Reform Dummy Geographic Neighbors is the average of the Reform Dummy for all geographically adjacent states. For each state, it thus measures the share of neighboring states that have conducted a reform in a given year. The Reform Dummy Population Size Neighbors does the same, but considers states with a similar population size instead of geographic neighbors. For this second measure, the states are divided into ten different bands according

to their population size in 1978. The ten bands are (CA NY TX PA IL), (OH MI FL NJ MA), (NC IN GA VA MO), (WI TN MD LA MN), (WA AL KY CT SC), (IA OK CO AZ OR), (MS KS AR WV NE), (UT NM ME RI HI), (ID NH MT NV SD), (ND DE VT WY AK).

The Reform Dummy per Government does no longer treat state-years as unit of observation, but instead state-governments. The dummy is equal to one if a government during its time in office implemented a welfare reform. Typically the duration in office is two years since usually every two years at least one of the three institutions governor, senate, house is up for election.

Data on the Maximum AFDC/TANF Benefit Level for a Family of Three (with no income) which is used as a control in parts of the analysis has been obtained from Han et al. (2009) who made their data available at http://www.nber.org/workfamily/ and updated using data provided in the Welfare Rules Database maintained by the Urban Institute (Urban Institute (2012)) available at http://anfdata.urban.org/wrd/tables.cfm (Table II.A.4).

A.3 Demographic Variables

The Share of AFDC/TANF Recipients in Population (Caseload) is taken from Moffitt (2002) until 1998 and updated to 2010 using the Statistical Abstract (United States Census Bureau (2011)). The % Unemployed is also taken from Moffitt (2002) until 1998 and updated to 2010 using the website of the Bureau of Labor Statistics. Per Capita Income is taken from the website of the Bureau of Economic Analysis and deflated by the urban consumer price index (with year 2002=100). The variables Population, % Black Population, % Population Aged 65+ are all taken from the Statistical Abstract (United States Census Bureau (2011)). The % Population Latino has been obtained from several websites of the US Census Bureau: http://www.census.gov/popest/data/historical/1980s/state.html (for the 1980s), http://www.census.gov/popest/data/state/asrh/1990s/st_race_hisp.html (for the 1990s), and http://www.census.gov/popest/data/intercensal/state/state2010.html (for the 2000s). The % Immigrant Population refers to legal immigrants admitted by state of intended residence (then divided by state population) and is taken from Fang and Keane (2004) for 1970 to 2002 and updated using the Yearbook of Immigration Statistics (U. S. Department of Homeland Security (2011)) for 2011 and for previous years (available at http://www.dhs.gov/yearbook-immigration-statistics). Unmarried Birth refers to the % of all births to unmarried women per 1,000 unmarried women aged 15-44 years by state of residence. For the years 1992 to 2003, the data are avaiable from Table 8.3 in the TANF Annual Reports to Congress. For the remaining years, data have been obtained from the Centers for Disease Control and Prevention and the National Vital Statistics System (available at http://www.cdc.gov/nchs/data_access/vitalstats/VitalStats_Births.htm and http://205.207.175.93/VitalStats/) and completed and cross-checked using data available at the National Bureau of Economic Research: http://www.nber.org/data/vital-statistics-natality-data.html. The 90th/10th Ratio of Household Income (90th percentile divided by 10th percentile of all positive household incomes) is calculated from the March Current Population Survey (Center for Economic and Policy Research (2012)).

A.4 Political Variables

The % Democratic Votes in Last Presidential Election is taken from the Statistical Abstract (United States Census Bureau (2011)) and updated using Leip (2012). The Democratic Seat Share in Upper House and the Democratic Seat Share in Lower House are calculated based on information about the number of legislators by party and the total number of seats of state legislatures obtained from Klarner (2003) and Klarner's webpage (http://www.indstate.edu/polsci/klarnerpolitics.htm). This is also the source for the Governor Party variable. Polarization of Senate and House are calculated as |democratic seat share–50%|and measured in percentage points. The % Women in State Legislature is obtained from the website of the Center for American Women and Politics (Center for American Women and Politics (2012)). Governor Lame Duck is equal to one if the incumbent governor cannot run for reelection. Governor Vote Margin Last Election measures the incumbent governor's advantage in votes over the runner-up. Gubernatorial Election is a dummy equal to one if a gubernatorial election took place this year. All three variables are obtained from List and Sturm (2006) until 2000 and updated using Leip (2012). Citizens Ideology and Government Ideology are calculated by Berry et al. (1998) from ideology ratings of the state's congressional delegation, the American for Democratic Action (ADA) rating and the AFL/CIO's Committee on Political Education (COPE) rating. Berry et al. assign an ideology rating to the citizens of each congressional district using a weighted average of the score of the congressional member and his or her election opponent, weighting the scores according to the number of votes they received. Zero denotes the most conservative and 100 the most liberal. They then generate a state-wide measure by averaging over all congressional districts. The measure of government ideology is constructed by assigning to the governor and major party delegations in the legislature the ratings of the members of Congress from their party. Updates of these ideology data are available at http://www.bama.ua.edu/ rcfording/stateideology.html.

A.5 Public Finance Variables

The variables Deflated State Revenue Per Capita, Deflated State Debt Outstanding Per Capita, and Deflated State Expenditures Per Capita are calculated by using data on state revenues, outstanding debt, and expenditures (in thousands of US Dollars; obtained from Paul Ehmann at the US Census Bureau (http://www.census.gov/govs/state/)) and dividing those numbers by the state population (see demographic variables explained above) and by the urban consumer price index (with years 1982-1984=100) provided by the US Bureau of Labor Statistics at ftp://ftp.bls.gov/pub/special.requests/cpi/cpiai.txt.

B RDD Treatment Assignment Variable

This section describes in greater detail how the new assignment variable for the regression discontinuity design with multiple assignment variables is defined and coded. The goal is to reduce the dimensionality of assignment from three to one to be able to analyze the setting using the standard univariate regression discontinuity framework. Therefore, the three assignment

variables have to be collapsed into one. The treatment of interest is divided versus unified government. Unified government refers to a situation when the governor, the majority of legislators in the house, and the majority of legislators in the senate are all from the same party. Divided government refers to all other cases. The three institutions determining treatment therefore are governor, house, and senate. The three variables determining treatment assignment are the election results for these three institutions. We seek to identify exogenous variation in the treatment, i.e. we want to focus the analysis on elections that fulfill two criteria: First, they had the potential to change treatment from divided to unified or vice versa. Second, they were close in the sense that it was not entirely clear to voters beforehand which party would win the election.

An election that does *not* fulfill the first criterion would be the election of a state senate when the governor's office and the house are not up for election, the governor is a Republican, and the senate is Democrat (meaning having a Democratic majority). In that case, regardless of the outcome of the house election the future government will be divided since incumbent governor and senate majority are not from the same party. There is no way the house election can produce a unified government. In some sense, the house election result is not even a treatment assignment variable here. In contrast, all elections where the election has the potential to theoretically result in both treatments fulfill the first criterion, have the potential to provide us with quasi-random treatment assignment, and are included in the regression discontinuity analysis. For all those elections, the closeness to the treatment boundary (where divided changes to unified government or vice versa) is determined and assigned as value of the new assignment variable. It is not entirely clear which values of the assignment variable are to be considered close in the sense of the second criterion. It is common to report several sets of regression discontinuity regressions using different levels of closeness of the assignment variable. This is also what is done in this paper. The creation of the new assignment variable is illustrated using some examples in the following paragraph.

The most common electoral structure in US states is to elect governor, senate, and house on the same day every four years and to additionally elect the house and the senate (but not the governor) after two years since state legislators are usually elected for two years only. The second type of elections (when only house and senate are elected) are usually called "midterm elections" since they take place in the mid of the term of the governor (who is in office for four years). There are states with different electoral structures and all these different structures are taken into account when coding the new assignment variable, but the just presented structure is by far most common in US states. In the sample from 1978 to 2010, there are more than 400 elections of the first type (governor, house, and senate up for election) and more than 300 elections of the midterm type (house and senate up for election). But there are only between 1 and 40 elections of any other type. The creation of the new assignment variable proceeds in 6 steps for every election day in every state between 1978 and 2010. The steps are:

(1) Check which of the three institutions (governor, house, senate) are up for election on the election day under consideration.
(2) Determine party control of those institutions that are not up for election.

(3) Determine if the election day can potentially change treatment from divided government to unified government or vice versa. If yes, determine which of the elections (of which institutions) can change treatment.

(4) For those elections that can change treatment determine the value of the (multiple) assignment variables, i.e. the election results. For governors, this is the vote margin. For legislatures, this is the deviation of the Democratic seat share from 0.5.[24]

(5) Assign the smallest value of these assignment variables from step (4) that would have been sufficient for a treatment change to the new (to be created) assignment variable.

(6) Extend the new assignment variable as a measure of closeness to the treatment boundary to all following years until the next election takes place.

Let us have a look at some examples for midterm elections. The logic for elections where other combinations of institutions are up for elections is similar.

Example 1: Suppose we are confronted with a standard midterm election day where senate and house are up for election. Let us suppose that the incumbent governor who is not up for election is a Republican. Let us further suppose that both house and senate happen to get a Republican majority in the current election. Government is unified. Clearly, both elections (the house and the senate election) had the theoretical potential of having assigned a divided government treatment instead of a unified government treatment (if they had resulted in the Democrats winning a majority). If in only one of the two legislative elections the Democrats would have gained a majority, government would have been divided. The new treatment assignment variable will be assigned the assignment variable of house or senate depending on which election was closer.

Example 2: Suppose we are confronted with a standard midterm election day where senate and house are up for election. Let us suppose that the incumbent governor who is not up for election is a Republican. Let us further suppose that the senate happens to get a Democratic majority in the current election, the house happens to get a Republican majority. Government therefore is divided. In this case, only the senate election had the theoretical potential of changing the treatment to unified government. If the house election would have resulted in a Democratic majority, this would have not changed treatment. The new treatment assignment variable will therefore be assigned the assignment variable of the senate.

Example 3: Suppose we are confronted with a standard midterm election day where senate and house are up for election. Let us suppose that the incumbent governor who is not up for election is a Republican. Let us further suppose that both house and senate happen to get a Democratic majority in the current election. Government is divided. Clearly, only both elections together had the potential of having resulted in unified government instead had they *both* resulted in a Republican majority. The new treatment assignment variable will therefore be assigned the sum of the assignment variables of the house and the senate election.

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[24]The usually very small number of independent legislators are split equally between Republicans and Democrats when calculating seat shares.

Figure 1: Share of Years between 1978 and 2010 with Reform and Divided Government
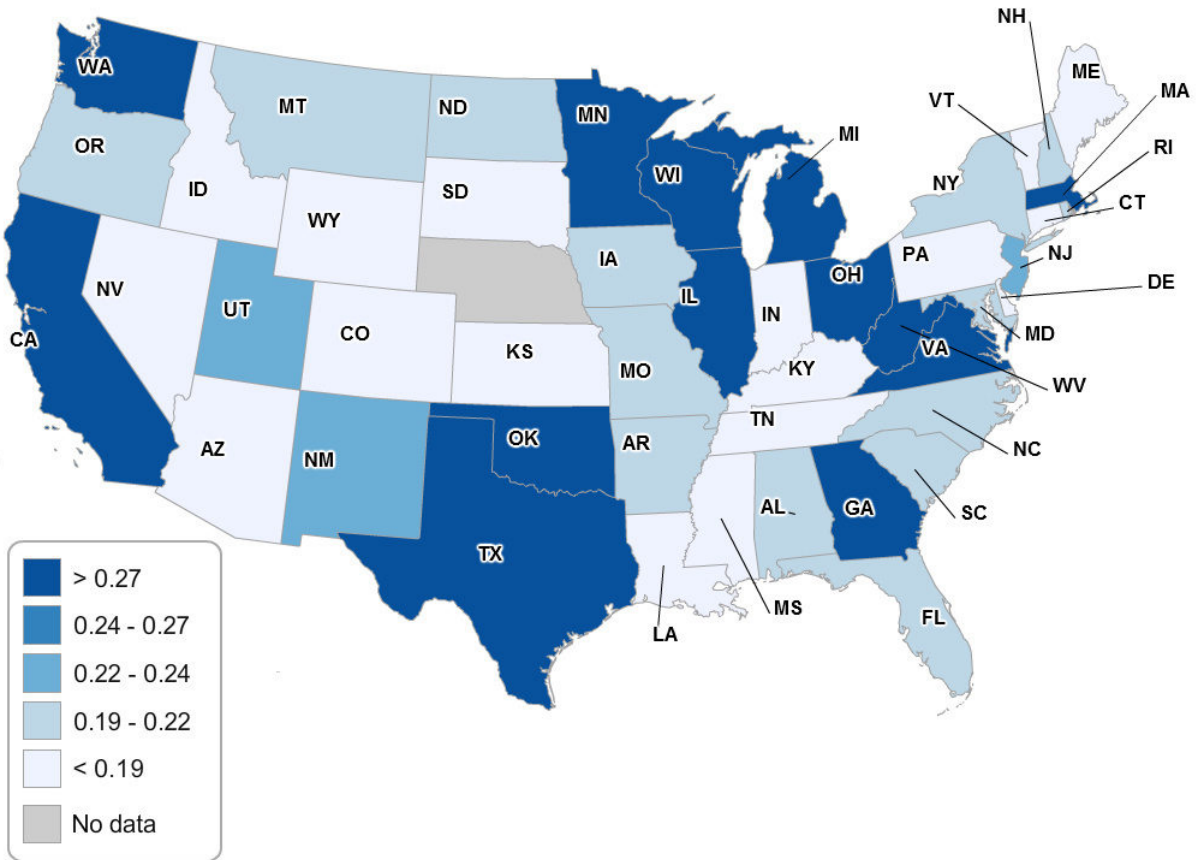
Figure 2: Share of Years between 1978 and 2010 with Reform
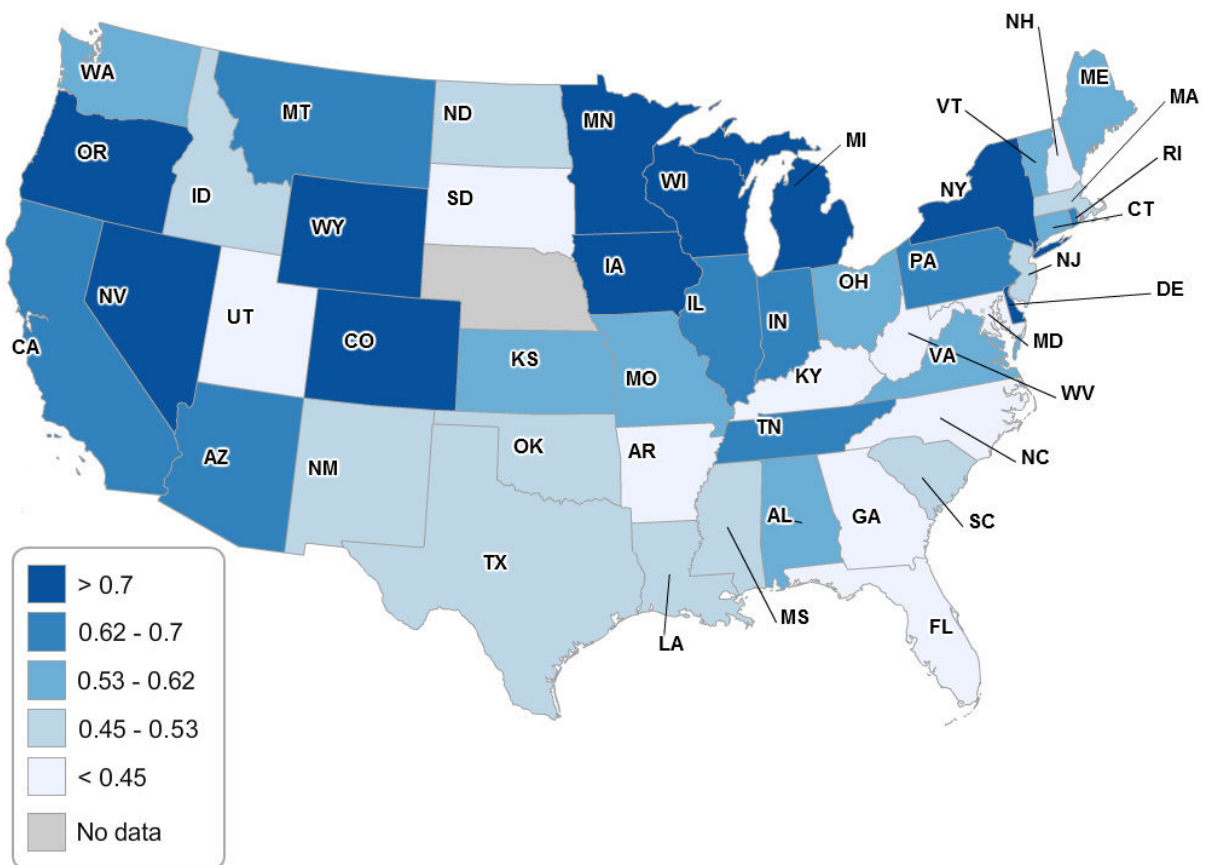
Figure 3: Share of Years between 1978 and 2010 with Divided Government
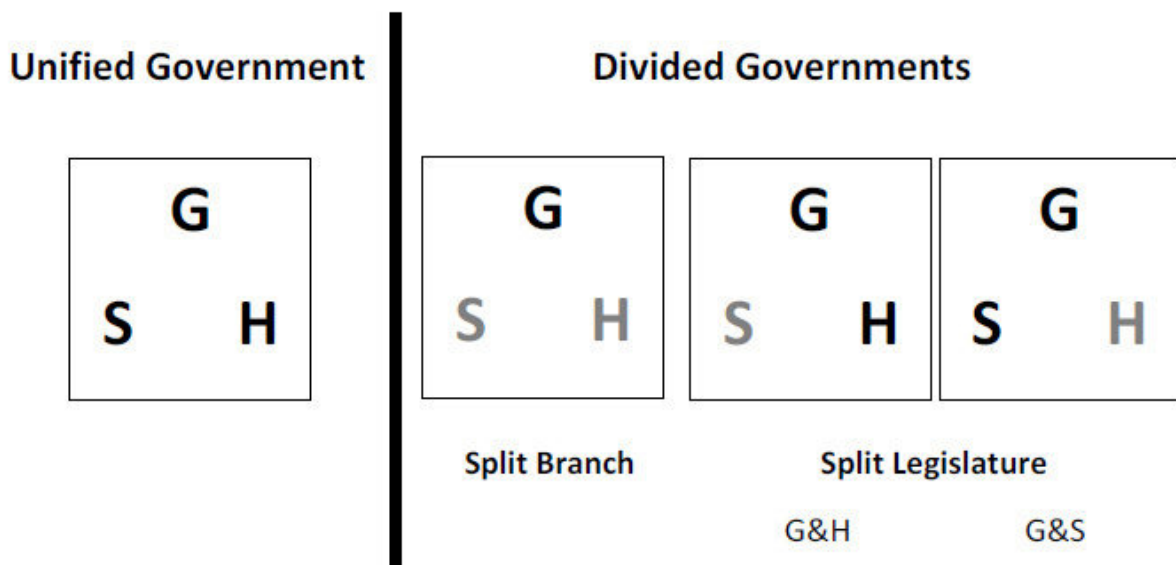
Figure 4: Different Forms of State Government. G means Governor, S means Senate, H means House. The colors black and grey symbolize two different parties. Colored letters reflect party dominance of that institution by the respective party.

Figure 5: Reform Effect of Divided Government and Split Legislature in Different Samples. Graphs A and B show the average reform propensity for 10 different bins of the assignment variable (measuring closeness of unified versus divided government). Graph A fits a quadratic polynomial on either side of the cutoff at 0, Graph B shows the resulting lines from conducting kernel regressions (local mean smoothing with Epanechnikov kernel and rule of thumb bandwidth) on both sides of the cutoff. Graphs C and D do the same, but restrict the sample to observations that are at maximum +/- 20% from the cutoff (the number of bins is 8). The polynomials in Graph C are now linear. Graphs E and F do the same as C and D, but look at split legislature versus unified legislature observations.
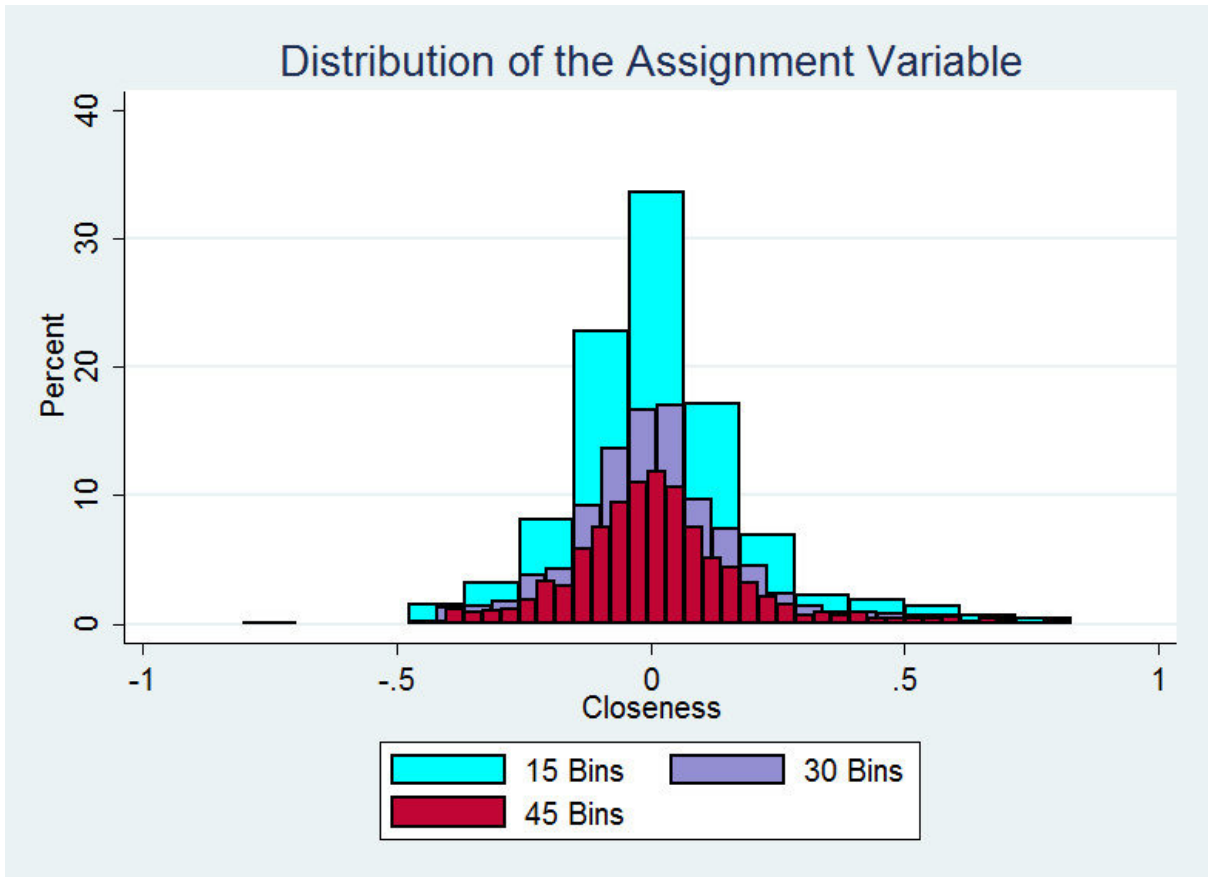
Figure 6: Distribution of the RDD Assignment Variable

Table 1: Summary Statistics

Variable	N	Mean	Std. Dev.
Divided Government	1533	.5459883	.4980431
Split Branch	1533	.3287671	.4699184
Split Legislature	1533	.2172211	.4124889
Split Legislature with Governor and House from same Party	1533	.1108937	.3141029
Split Legislature with Governor and Senate from same Party	1533	.0900196	.2863032
Divided Government with Veto Proof Legislature	1551	.0967118	.2956603
Reform Dummy	1551	.2224371	.4160174
Reform Dummy Geographic Neighbors	1551	.2033488	.2627619
Reform Dummy Population Size Neighbors	1551	.2149151	.2666841
Reform Dummy per Government	733	.366985	.4823115
Share of AFDC/TANF Recipients in Population (Caseload)	1551	.0298058	.0175428
% Unemployed	1551	5.981173	2.082305
Deflated Total State Revenue per Capita (/1000)	1551	2.172952	.6870612
Unmarried Birth	1493	28.86322	9.354135
Maximum AFDC/TANF Benefit Level for a Family of Three	1551	364.1747	137.3198
Per Capita Income (/1000)	1551	22.68841	10.29914
Population (/1000)	1551	5.533714	5.838488
% Population Black	1551	10.18884	9.437654
% Population Latino	1457	6.748263	8.579229
% Population Aged 65+	1551	12.4299	1.805541
% Immigrant Population	1551	1.88313	1.971532
90th/10th Ratio of Household Income	1551	7.976531	1.375012
Governor Lame Duck	1551	.2649903	.4414704
Gubernatorial Election	1551	.27853	.4484202
Polarization House	1551	.1512385	.113841
Polarization Senate	1551	.1451961	.1086098
% Women in State Legislature	1551	18.43739	8.479272
% Democratic Votes in Last Presidential Election	1551	44.55835	7.900737
Citizens Ideology (Berry et al. 1998)	1551	48.85927	15.39844
Democratic Seat Share in Senate	1551	.5607368	.1793217
Democratic Seat Share in House	1551	.5587129	.1715873
Government Ideology (Berry et al. 1998)	1457	50.025	24.20533

Notes: For details on coding, variables meanings, and data sources, see the Appendix A.

Table 2: Divided Government and Reform

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Divided Government	0.0461**	0.0579***	0.0630***	0.0630***	0.0632***	0.0634***	0.0707***
	(0.0184)	(0.0179)	(0.0190)	(0.0190)	(0.0191)	(0.0186)	(0.0205)
Share of AFDC/TANF Recipients				0.0402			0.0451
				(2.345)			(2.605)
% Unemployed					0.00221		-0.0127
					(0.0100)		(0.0147)
State Revenue defl. per cap. (/1000)						-0.0164	-0.0215
						(0.0529)	(0.0551)
Unmarried Birth							0.00657
							(0.00794)
AFDC/TANF Benefit Family of 3							0.000124
							(0.000549)
Per Capita Income (/1000)							-0.0148
							(0.0181)
Population (/1000)							0.0941
							(0.0734)
% Population Black							-0.00334
							(0.0431)
% Population Latino							-0.0239
							(0.0249)
% Population Aged 65+							-0.0410
							(0.0605)
% Immigrant Population							-0.00423
							(0.00772)
90th/10th Ratio of Household Inc.							0.00306
							(0.0129)
Year FE	YES	YES	YES	YES	YES	YES	YES
State FE	NO	YES	YES	YES	YES	YES	YES
State Specific Linear Trend	NO	NO	YES	YES	YES	YES	YES
Observations	1,533	1,533	1,533	1,533	1,533	1,533	1,393
R-squared	0.261	0.288	0.322	0.322	0.322	0.322	0.332

Notes: The dependent variable in all specifications is a reform indicator that is equal to one if one or more welfare reforms have been introduced in a given state and year. Divided Government is a dummy that is equal to one when either the majority of the state's lower legislative chamber or the majority of the state's upper legislative chamber is from another party than the governor. For details regarding the these or any of the demographic controls, see Appendix A. The demographic controls are all lagged by one year. Standard errors clustered at the state level are shown in parentheses. *** $p<0.01$, ** $p<0.05$ and *$p<0.1$.

Table 3: Other Political Factors and Reform

	(1)	(2)	(3)	(4)	(5)	(6)
Divided Government	0.0630***	0.0628***	0.0625***	0.0576**	0.0663***	0.0604***
	(0.0191)	(0.0191)	(0.0190)	(0.0227)	(0.0183)	(0.0220)
Governor Lame Duck	0.000400					0.00557
	(0.0214)					(0.0222)
Year before Election		0.0222				0.00449
		(0.0192)				(0.0197)
Year after Election			-0.0715***			-0.0690***
			(0.0216)			(0.0234)
Polarization Senate				0.00108		0.106
				(0.00241)		(0.237)
Polarization House				-0.00383*		-0.367*
				(0.00211)		(0.217)
% Women in Legislature					-0.00904**	-0.00864**
					(0.00404)	(0.00407)
Year FE	YES	YES	YES	YES	YES	YES
State FE	YES	YES	YES	YES	YES	YES
State Specific Linear Trend	YES	YES	YES	YES	YES	YES
Observations	1,533	1,533	1,533	1,533	1,533	1,533
R-squared	0.322	0.322	0.325	0.323	0.324	0.329

Notes: The dependent variable in all specifications is a reform indicator that is equal to one if one or more welfare reforms have been introduced in a given state and year. Divided Government is a dummy that is equal to one when either the majority of the state's lower legislative chamber or the majority of the state's upper legislative chamber is from another party than the governor. For details regarding these variables or any of the political controls, see the Appendix A. Standard errors clustered at the state level are shown in parentheses. *** $p<0.01$, ** $p<0.05$ and *$p<0.1$.

Table 4: Ideology and Reform

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Divided Government	0.0631***	0.0630***	0.0630***	0.0655***	0.0698***	0.0600***	0.0713*
	(0.0190)	(0.0190)	(0.0191)	(0.0186)	(0.0197)	(0.0168)	(0.0370)
% Dem. Votes in Last Pres. Election	0.000681						
	(0.00282)						
Citizens Ideology (Berry et al. 1998)		0.00134					
		(0.00203)					
Democratic Seat Share in Senate			0.00726	-0.275			
			(0.157)	(0.242)			
Democratic Seat Share in House			-0.211	-0.117			
			(0.235)	(0.253)			
Dem. Seat Share in Senate * Dem. Maj.				0.147			
				(0.102)			
Dem. Seat Share in House * Dem. Maj.				-0.0356			
				(0.0755)			
Government Ideology (Berry et al. 1998)					-0.000580		
					(0.000707)		
Governor Party						-0.0128	0.000213
						(0.0217)	(0.0467)
Divided Government * Dem. Governor							-0.0210
							(0.0643)
Year FE	YES	YES	YES	YES	YES	YES	YES
State FE	YES	YES	YES	YES	YES	YES	YES
State Specific Linear Trend	YES	YES	YES	YES	YES	YES	YES
Observations	1,533	1,533	1,533	1,533	1,439	1,533	1,533
R-squared	0.322	0.322	0.322	0.324	0.336	0.322	0.322

Notes: The dependent variable in all specifications is a reform indicator that is equal to one if one or more welfare reforms have been introduced in a given state and year. Divided Government is a dummy that is equal to one when either the majority of the state's lower legislative chamber or the majority of the state's upper legislative chamber is from another party than the governor. For details regarding these variables or the political and ideological controls, see Appendix A. Standard errors clustered at the state level are shown in parentheses. *** p<0.01, ** p<0.05 and *p<0.1.

Table 5: Neighbors' Reforms and Own Reform

	(1)	(2)	(3)	(4)	(5)	(6)
Divided Government	0.0640***	0.0614***	0.0607***	0.0592***	0.0570***	0.0567***
	(0.0193)	(0.0195)	(0.0198)	(0.0196)	(0.0203)	(0.0205)
Geographic Neighbors Reforms	-0.0882	-0.0848	-0.0906			
	(0.0789)	(0.0806)	(0.0831)			
Geographic Neighbors Reforms (t-1)		0.0109	0.00410			
		(0.0668)	(0.0659)			
Geographic Neighbors Reforms (t-2)			0.0456			
			(0.0624)			
Population Size Neighbors Reforms				-0.126**	-0.133**	-0.133**
				(0.0562)	(0.0562)	(0.0586)
Population Size Neighbors Reforms (t-1)					0.0562	0.0569
					(0.0544)	(0.0563)
Population Size Neighbors Reforms (t-2)						0.0745
						(0.0486)
Demographic Controls	YES	YES	YES	YES	YES	YES
Year FE	YES	YES	YES	YES	YES	YES
State FE	YES	YES	YES	YES	YES	YES
State Specific Linear Trend	YES	YES	YES	YES	YES	YES
Observations	1,533	1,487	1,440	1,533	1,487	1,440
R-squared	0.324	0.325	0.328	0.327	0.329	0.334

Notes: The dependent variable in all specifications is a reform indicator that is equal to one if one or more welfare reforms have been introduced in a given state and year. Reform Dummy Geographic Neighbors is equal to the average of the reform indicator for all geographically adjacent states. Reform Dummy Population Size Neighbors is equal to the average of the reform indicator for all states with a similar population size (where all states are grouped into 10 different bands of similar population size). Divided Government is a dummy that is equal to one when either the majority of the state's lower legislative chamber or the majority of the state's upper legislative chamber is from another party than the governor. The demographic controls included are the same as in Table 2 (again lagged by one year), with the exception of Unmarried Birth, AFDC/TANF Benefit for Family of 3, and % Population Black (since for these three variables several years are missing). For details on any of the variables, see Appendix A. Standard errors clustered at the state level are shown in parentheses. *** $p<0.01$, ** $p<0.05$ and *$p<0.1$.

Table 6: Divided Government and Reform Differentiated Across Space and Time

	(1)	(2)	(3)	(4)
Divided Government	0.0630***	0.0657**	0.0638**	0.114**
	(0.0190)	(0.0247)	(0.0285)	(0.0482)
Divided Government * Southern State		-0.00771		
		(0.0390)		
Year FE	YES	YES	YES	YES
State FE	YES	YES	YES	YES
State Specific Linear Trend	YES	YES	YES	YES
Observations	1,533	1,533	885	648
R-squared	0.322	0.322	0.344	0.398

Notes: The dependent variable in all specifications is a reform indicator that is equal to one if one or more welfare reforms have been introduced in a given state and year. Divided Government is a dummy that is equal to one when either the majority of the state's lower legislative chamber or the majority of the state's upper legislative chamber is from another party than the governor. For details, see Appendix A. Southern State is a dummy equal to one for the following states: Alabama, Arkansas, Delaware, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia, West Virginia. Specifications (3) and (4) separate the sample in 1996 when the landmark US Welfare Reform at the federal level was implemented. Standard errors clustered at the state level are shown in parentheses. *** $p<0.01$, ** $p<0.05$ and *$p<0.1$.

Table 7: Lags and Leads of Divided Government and Reform

	(1)	(2)	(3)	(4)	(5)	(6)
Divided Government (t+2)	-0.00975					-0.0213
	(0.0181)					(0.0245)
Divided Government (t+1)		0.0176			-0.0331	-0.0274
		(0.0180)			(0.0259)	(0.0349)
Divided Government					0.0947***	0.112***
					(0.0319)	(0.0350)
Divided Government (t-1)			0.0295		-0.0237	-0.0287
			(0.0229)		(0.0281)	(0.0356)
Divided Government (t-2)				0.0164		-0.00223
				(0.0242)		(0.0316)
Demographic Controls	YES	YES	YES	YES	YES	YES
Year FE	YES	YES	YES	YES	YES	YES
State FE	YES	YES	YES	YES	YES	YES
State Specific Linear Trend	YES	YES	YES	YES	YES	YES
Observations	1,486	1,533	1,532	1,531	1,523	1,467
R-squared	0.322	0.319	0.318	0.321	0.322	0.329

Notes: The dependent variable in all specifications is a reform indicator that is equal to one if one or more welfare reforms have been introduced in a given state and year. Divided Government is a dummy that is equal to one when either the majority of the state's lower legislative chamber or the majority of the state's upper legislative chamber is from another party than the governor. The demographic controls included are the same as in Table 2 (again lagged by one year), with the exception of Unmarried Birth, AFDC/TANF Benefit for Family of 3, and % Population Black (since for these three variables several years are missing). For details, see Appendix A. Standard errors clustered at the state level are shown in parentheses. *** $p<0.01$, ** $p<0.05$ and *$p<0.1$.

Table 8: Divided Government and Reform per Government

	(1)	(2)	(3)	(4)	(5)
Divided Government	0.0677*	0.0683*	0.0674*	0.0712*	0.0984**
	(0.0348)	(0.0348)	(0.0348)	(0.0391)	(0.0430)
Share of AFDC/TANF Recipients		-1.042			0.856
		(3.933)			(4.299)
% Unemployed			-0.00999		-0.0393*
			(0.0214)		(0.0222)
State Revenue defl. per cap. (/1000)				0.0208	0.0151
				(0.0548)	(0.0551)
Unmarried Birth					0.00551
					(0.0171)
AFDC/TANF Benefit Family of 3					0.00106
					(0.00100)
Per Capita Income (/1000)					-0.0577
					(0.0389)
Population (/1000)					0.241
					(0.179)
% Population Black					0.0781
					(0.0656)
% Population Latino					-0.0358
					(0.0395)
% Population Aged 65+					-0.00363
					(0.110)
% Immigrant Population					-0.000952
					(0.0116)
90th/10th Ratio of Household Inc.					0.0302
					(0.0331)
Year FE	YES	YES	YES	YES	YES
State FE	YES	YES	YES	YES	YES
State Specific Linear Trend	YES	YES	YES	YES	YES
Observations	725	725	725	632	582
R-squared	0.471	0.471	0.472	0.508	0.530

Notes: The dependent variable in all specifications is a reform indicator that is equal to one if one or more welfare reforms have been introduced in a given state during a government's term. Divided Government is a dummy that is equal to one when either the majority of the state's lower legislative chamber or the majority of the state's upper legislative chamber is from another party than the governor. Demographic controls included are exactly the same as in Table 2 (again lagged by one year). For details regarding any of the variables, see Appendix A. Standard errors clustered at the state level are shown in parentheses. *** $p<0.01$, ** $p<0.05$ and *$p<0.1$.

Table 9: Different Forms of Divided Government

	Total	Relative
Divided Government	813	100%
Split Branch	521	64.1%
Split Legislature	292	35.9%
Split Legislature with Governor and Senate of same Party	127	15.6%
Split Legislature with Governor and House of same Party	165	20.3%
Divided Government with Veto Proof Legislature	159	19.6%

Notes: Divided Government is a dummy that is equal to one when either the majority of the state's lower legislative chamber or the majority of the state's upper legislative chamber is from another party than the governor. Split Branch is equal to one if the governor in a state is confronted with majorities of the opposing party in both legislative chambers. Split Legislature is equal to one if the majorities in the two legislative chambers in a state are from opposing parties. Divided Government with Veto Proof Legislature is equal to one if there is divided government and there are enough legislators (from the opposing party) to override a gubernatorial veto. For details on the different divided government variables, see Appendix A. Column (1) shows the number of state-year observations where the row variable takes the value one. Column (2) shows the number of column (1) as share of the total divided government state-year observations (813). Note that this numbers exclude states with independent governors and also states with at least one legislative chamber being split between Democrats and Republicans (with both parties having a seat share of exactly 50%).

Table 10: Different Forms of Divided Government (against Unified) and Reform

	(1)	(2)	(3)	(4)	(5)	(6)
Divided Government	0.0636***					
	(0.0194)					
Split Branch		0.0473**				
		(0.0228)				
Split Legislature			0.0833**			
			(0.0315)			
Split Legislature (G & S)				0.149**		
				(0.0592)		
Split Legislature (G & H)					0.0608	
					(0.0378)	
Veto Proof Legislature						0.0773*
						(0.0416)
Demographic Controls	YES	YES	YES	YES	YES	YES
Year FE	YES	YES	YES	YES	YES	YES
State FE	YES	YES	YES	YES	YES	YES
State Specific Linear Trend	YES	YES	YES	YES	YES	YES
Observations	1,533	1,200	1,029	834	866	861
R-squared	0.323	0.330	0.351	0.370	0.344	0.356

Notes: The dependent variable in all specifications is a reform indicator that is equal to one if one or more welfare reforms have been introduced in a given state and year. Divided Government is a dummy that is equal to one when either the majority of the state's lower legislative chamber or the majority of the state's upper legislative chamber is from another party than the governor (and zero if government is unified). Split Branch is equal to one if the governor in a state is confronted with majorities of the opposing party in both legislative chambers (and zero if government is unified). Split Legislature is equal to one if the majorities in the two legislative chambers in a state are from opposing parties (and zero if government is unified). Split Legislature (G&S) refers to those split legislature governments where governor and senate are from the same party, Split Legislature (G&H) refers to those split legislature governments where governor and house are from the same party. Divided Government with Veto Proof Legislature is equal to one if there is divided government and there are enough legislators (from the opposing party) to override a gubernatorial veto (and zero if government is unified). The demographic controls included are the same as in Table 2 (again lagged by one year), with the exception of Unmarried Birth, AFDC/TANF Benefit for Family of 3, and % Population Black (since for these three variables several years are missing). For details on the variables, see Appendix A. Standard errors clustered at the state level are shown in parentheses. *** p<0.01, ** p<0.05 and *p<0.1.

Table 11: Different Forms of Divided Government (against all other) and Reform

	(1)	(2)	(3)	(4)	(5)	(6)
Divided Government	0.0636***					
	(0.0194)					
Split Branch		0.0222				
		(0.0232)				
Split Legislature			0.0715***			
			(0.0265)			
Split Legislature (G & S)				0.116**		
				(0.0511)		
Split Legislature (G & H)					0.0298	
					(0.0236)	
Veto Proof Legislature						0.0534
						(0.0402)
Demographic Controls	YES	YES	YES	YES	YES	YES
Year FE	YES	YES	YES	YES	YES	YES
State FE	YES	YES	YES	YES	YES	YES
State Specific Linear Trend	YES	YES	YES	YES	YES	YES
Observations	1,533	1,533	1,533	1,533	1,533	1,551
R-squared	0.323	0.319	0.322	0.323	0.319	0.321

Notes: The dependent variable in all specifications is a reform indicator that is equal to one if one or more welfare reforms have been introduced in a given state and year. Divided Government is a dummy that is equal to one when either the majority of the state's lower legislative chamber or the majority of the state's upper legislative chamber is from another party than the governor. Split Branch is equal to one if the governor in a state is confronted with majorities of the opposing party in both legislative chambers. Split Legislature is equal to one if the majorities in the two legislative chambers in a state are from opposing parties. Split Legislature (G&S) refers to those split legislature governments where governor and senate are from the same party, Split Legislature (G&H) refers to those split legislature governments where governor and house are from the same party. Divided Government with Veto Proof Legislature is equal to one if there is divided government and there are enough legislators (from the opposing party) to override a gubernatorial veto. The demographic controls included are the same as in Table 2 (again lagged by one year), with the exception of Unmarried Birth, AFDC/TANF Benefit for Family of 3, and % Population Black (since for these three variables several years are missing). For details on the variables, see Appendix A. Standard errors clustered at the state level are shown in parentheses. *** $p<0.01$, ** $p<0.05$ and *$p<0.1$.

Table 12: Reform Effect of Divided Government and Split Legislature in Close Samples

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	
	Divided Government				Split Legislature				
Polynomial Order	0	1	2	3	0	1	2	3	Polynomial Order
Full Sample	0.0630***	0.0590***	0.0566***	0.0572***	0.0416	0.0711*	0.0463	0.0494	Full Sample
1,459 observations	(0.0190)	(0.0206)	(0.0204)	(0.0202)	(0.0361)	(0.0420)	(0.0410)	(0.0421)	897 observations
R squared	0.004	0.005	0.014	0.015	0.002	0.005	0.016	0.018	R squared
5% Sample	0.137***	0.137***	0.137***	0.137***	0.136**	0.139**	0.139**	0.142**	5% Sample
467 observations	(0.0461)	(0.0459)	(0.0457)	(0.0458)	(0.0623)	(0.0638)	(0.0634)	(0.0637)	231 observations
R squared	0.012	0.012	0.012	0.013	0.023	0.024	0.024	0.026	R squared
2% Sample	0.0778	0.0643	0.0646	0.0688	0.130*	0.130*	0.144**	0.151**	2% Sample
206 observations	(0.0819)	(0.121)	(0.120)	(0.120)	(0.0655)	(0.0679)	(0.0645)	(0.0594)	113 observations
R squared	0.003	0.009	0.012	0.013	0.022	0.034	0.049	0.051	R squared

Notes: This table shows the effect of divided government (compared to unified government) and split legislature (compared to unified legislature) on reform in different samples. The explaining variable in specifications (1) to (4) is a dummy that is equal to one when either the majority of the state's lower legislative chamber or the majority of the state's upper legislative chamber is from another party than the governor. The explaining variable in specifications (5) to (8) is a dummy that is equal to one when the majority of the state's lower legislative chamber is of different partisanship than the majority of the state's upper legislative chamber. The dependent variable in all specifications is a reform indicator that is equal to one if one or more welfare reforms have been introduced in a given state and year. For details on the variables, see Appendix A. The sample restriction criterion is always the closeness of a hypothetical treatment assignment change from divided to unified government (or split to unified legislature) or vice versa. I.e. the 5% sample in specifications (1) to (4), for example, includes all observations where a difference of 5% or less in the gubernatorial vote margin or in seat shares (for upper or lower chamber) would have been sufficient for a treatment change from divided to unified government or vice versa. For details on this, see Appendix B. Specifications (1) to (4) and (5) to (8) fit a polynomial of degree 0 to 3 in the assignment variable (measuring the hypothetical treatment closeness). *** $p<0.01$, ** $p<0.05$ and *$p<0.1$.

Table 13: Reform Effect of Divided Government and Split Legislature in Close Samples (Including Fixed Effects)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	
	Divided Government				Split Legislature				
Polynomial Order	0	1	2	3	0	1	2	3	Polynomial Order
Full Sample	0.0538**	0.0602**	0.0515*	0.0525*	0.0587*	0.0855**	0.0825**	0.0832**	Full Sample
1,459 observations	(0.0267)	(0.0268)	(0.0266)	(0.0265)	(0.0298)	(0.0352)	(0.0366)	(0.0374)	897 observations
R squared	0.322	0.329	0.331	0.331	0.347	0.359	0.359	0.359	R squared
5% Sample	0.0955**	0.0960**	0.0952**	0.0978**	0.138	0.144	0.141*	0.155*	5% Sample
467 observations	(0.0412)	(0.0415)	(0.0412)	(0.0419)	(0.0843)	(0.0855)	(0.0831)	(0.0803)	231 observations
R squared	0.465	0.465	0.465	0.465	0.564	0.566	0.567	0.569	R squared
2% Sample	0.0444	0.0485	0.0519	0.0540	0.132	0.118	0.118	0.133	2% Sample
206 observations	(0.0512)	(0.0510)	(0.0510)	(0.0498)	(0.306)	(0.330)	(0.347)	(0.425)	113 observations
R squared	0.710	0.711	0.711	0.711	0.741	0.741	0.741	0.741	R squared
Year FE	YES	YES	YES	YES	YES	YES	YES	YES	Year FE
State FE	YES	YES	YES	YES	YES	YES	YES	YES	State FE
State Specific Linear Trend	YES	YES	YES	YES	YES	YES	YES	YES	State Specific Linear Trend

Notes: This table shows the effect of divided government (compared to unified government) and split legislature (compared to unified legislature) on reform in different samples. The explaining variable in specifications (1) to (4) is a dummy that is equal to one when either the majority of the state's lower legislative chamber or the majority of the state's upper legislative chamber is from another party than the governor. The explaining variable in specifications (5) to (8) is a dummy that is equal to one when the majority of the state's lower legislative chamber is of different partisanship than the majority of the state's upper legislative chamber. The dependent variable in all specifications is a reform indicator that is equal to one if one or more welfare reforms have been introduced in a given state and year. For details on the variables, see Appendix A. The sample restriction criterion is always the closeness of a hypothetical treatment assignment change from divided to unified government (or split to unified legislature) or vice versa. I.e. the 5% sample in specifications (1) to (4), for example, includes all observations where a difference of 5% or less in the gubernatorial vote margin or in seat shares (for upper or lower chamber) would have been sufficient for a treatment change from divided to unified government or vice versa. For details on this, see Appendix B. Specifications (1) to (4) and (5) to (8) fit a polynomial of degree 0 to 3 in the assignment variable (measuring the hypothetical treatment closeness). All specifications include year fixed effects, state fixed effects, and state specific linear trends. Standard errors clustered at the state level are shown in parentheses. *** $p<0.01$, ** $p<0.05$ and *$p<0.1$.

Table 14: Previous Year Reform Effect of Divided Government and Split Legislature in Close Samples

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	
	Divided Government				Split Legislature				
Polynomial Order	0	1	2	3	0	1	2	3	Polynomial Order
Full Sample	0.0215	0.0253	0.0192	0.0212	0.00963	0.0169	-0.00473	-0.000693	Full Sample
1,463 observations	(0.0272)	(0.0276)	(0.0282)	(0.0282)	(0.0314)	(0.0387)	(0.0387)	(0.0389)	894 observations
R squared	0.001	0.001	0.005	0.009	0.000	0.001	0.010	0.014	R squared
5% Sample	-0.0115	-0.00964	-0.00884	-0.00401	0.0234	0.0287	0.0340	0.0399	5% Sample
475 observations	(0.0455)	(0.0461)	(0.0460)	(0.0465)	(0.0672)	(0.0692)	(0.0664)	(0.0675)	233 observations
R squared	0.000	0.004	0.004	0.006	0.001	0.005	0.015	0.020	R squared
2% Sample	-0.0337	-0.0323	-0.0303	-0.0271	0.0383	0.0382	0.0545	0.0645	2% Sample
214 observations	(0.0628)	(0.0617)	(0.0619)	(0.0605)	(0.0915)	(0.0914)	(0.0861)	(0.0802)	115 observations
R squared	0.002	0.005	0.006	0.011	0.002	0.003	0.028	0.033	R squared

Notes: This table shows the effect of divided government (compared to unified government) and split legislature (compared to unified legislature) on previous year reform in different samples. The explaining variable in specifications (1) to (4) is a dummy that is equal to one when either the majority of the state's lower legislative chamber or the majority of the state's upper legislative chamber is from another party than the governor. The explaining variable in specifications (5) to (8) is a dummy that is equal to one when the majority of the state's lower legislative chamber is of different partisanship than the majority of the state's upper legislative chamber. The dependent variable in all specifications is a reform indicator that is equal to one if one or more welfare reforms have been introduced in a given state and year (lagged by one year). For details on the variables, see Appendix A. The sample restriction criterion is always the closeness of a hypothetical treatment assignment change from divided to unified government (or split to unified legislature) or vice versa. I.e. the 5% sample in specifications (1) to (4), for example, includes all observations where a difference of 5% or less in the gubernatorial vote margin or in seat shares (for upper or lower chamber) would have been sufficient for a treatment change from divided to unified government or vice versa. For details on this, see Appendix B. Specifications (1) to (4) and (5) to (8) fit a polynomial of degree 0 to 3 in the assignment variable (measuring the hypothetical treatment closeness). *** $p<0.01$, ** $p<0.05$ and *$p<0.1$.

Table 15: Reform Effect of Divided Government (Including Controls) and Split Legislature (compared to Unified Government) in Close Samples

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	
	Divided Government				Split Legislature				
Polynomial Order	0	1	2	3	0	1	2	3	Polynomial Order
Full Sample	0.0629***	0.0583***	0.0560**	0.0566***	0.0407	0.0438	0.0455	0.0460	Full Sample
1,459 observations	(0.0195)	(0.0211)	(0.0209)	(0.0207)	(0.0405)	(0.0449)	(0.0460)	(0.0458)	897 observations
R squared	0.325	0.332	0.334	0.335	0.002	0.012	0.014	0.014	R squared
5% Sample	0.138***	0.138***	0.138***	0.138***	0.139**	0.141**	0.142**	0.146**	5% Sample
467 observations	(0.0484)	(0.0484)	(0.0482)	(0.0483)	(0.0643)	(0.0653)	(0.0651)	(0.0656)	231 observations
R squared	0.477	0.477	0.478	0.478	0.024	0.025	0.025	0.027	R squared
2% Sample	0.0384	0.0394	0.0411	0.0456	0.130*	0.130*	0.144**	0.151**	2% Sample
206 observations	(0.133)	(0.160)	(0.165)	(0.166)	(0.0655)	(0.0679)	(0.0645)	(0.0594)	113 observations
R squared	0.756	0.756	0.756	0.757	0.022	0.034	0.049	0.051	R squared
Year FE	YES	YES	YES	YES	NO	NO	NO	NO	Year FE
State FE	YES	YES	YES	YES	NO	NO	NO	NO	State FE
State Specific Linear Trend	YES	YES	YES	YES	NO	NO	NO	NO	State Specific Linear Trend
Controls	YES	YES	YES	YES	NO	NO	NO	NO	Controls

Notes: This table shows the effect of divided government (compared to unified government) and split legislature (compared to unified government) on reform in different samples. The explaining variable in specifications (1) to (4) is a dummy that is equal to one when either the majority of the state's lower legislative chamber or the majority of the state's upper legislative chamber is from another party than the governor. The explaining variable in specifications (5) to (8) is a dummy that is equal to one when the majority of the state's lower legislative chamber is of different partisanship than the majority of the state's upper legislative chamber and zero when the governor and the majorities of both legislative chambers are all three of the same party. The dependent variable in all specifications is a reform indicator that is equal to one if one or more welfare reforms have been introduced in a given state and year. For details on the variables, see Appendix A. The sample restriction criterion is always the closeness of a hypothetical treatment assignment change from divided to unified government (or split legislature to unified government) or vice versa. I.e. the 5% sample in specifications (1) to (4), for example, includes all observations where a difference of 5% or less in the gubernatorial vote margin or in seat shares (for upper or lower chamber) would have been sufficient for a treatment change from divided to unified government or vice versa. For details on this, see Appendix B. Specifications (1) to (4) and (5) to (8) fit a polynomial of degree 0 to 3 in the assignment variable (measuring the hypothetical treatment closeness). Specifications (1) to (4) include year fixed effects, state fixed effects, and state specific linear trends. Furthermore, they include the following controls: Share of AFDC/TANF Recipients in Population, % Unemployed, % Immigrant Population, Per Capita Income, Population, % Black Population, % Population Aged 65+, Deflated State Revenue Per Capita, Maximum AFDC/TANF Benefit Level for a Family of Three, 90th/10th Ratio of Household Income. For details on the controls, see Appendix A. *** $p<0.01$, ** $p<0.05$ and *$p<0.1$.

Table A1: Distribution of Welfare Reforms

Year	# States with Reform	States with Reform
1978	4	CA, UT, VT, WI
1979	5	CO, MA, MI, NY, WI
1980	8	CA, CO, CT, FL, GA, IL, NJ, WV
1981	9	FL, IL, KY, MA, NJ, OH, TX, WV, WI
1982	6	NY, OH, OK, TX, WV, WY
1983	0	-
1984	0	-
1985	2	CA, IL
1986	2	CA, MN
1987	4	IA, MS, WA, WI
1988	4	AL, CA, NY, OH
1989	2	CA, MD
1990	5	GA, MN, OK, UT, WI
1991	2	OH, VA
1992	15	CA, GA, IL, MD, MI, MO, NJ, OK, OR, SC, UT, VA, VT, WI, WY
1993	23	AR, CA, CO, CT, FL, GA, HI, IA, IL, MA, MO, MS, ND, NH, NM, OH, OR, SD, TX, VA, WA, WI, WY
1994	23	AR, AZ, CA, GA, IL, IN, KS, MA, MD, ME, MI, MO, MT, ND, NM, NY, OH, OK, OR, PA, SC, VA, WI
1995	24	CT, DE, FL, GA, HI, IL, IN, LA, MA, ME, MO, MS, NC, NH, OH, OK, OR, SC, TX, UT, VA, WA, WI, WV
1996	7	CA, IA, MD, MI, MN, TN, UT
1997	36	AL, AK, AR, CO, DC, FL, GA, HI, ID, IL, IN, IA, KS, KY, LA, MD, MI, MN, MS, MO, MT, NV, NH, NJ, NM, OK, PA, RI, SC, TN, UT, VA, WA, WV, WI, WY
1998	26	AL, AK, AZ, CA, DE, KY, LA, ME, MI, MN, MT, NE, NV, NJ, NM, NY, NC, ND, OH, OK, PA, SD, WA, WV, WI, WY
1999	30	AK, AZ, AR, DE, DC, FL, GA, ID, IL, IA, KY, LA, ME, MA, MI, MO, MT, NE, NV, NH, NM, NC, OK, OR, SC, SD, TN, TX, VA, WV
2000	43	AL, AK, AR, CO, CT, DE, DC, FL, GA, HI, ID, IL, IN, IA, KS, KY, ME, MA, MN, MS, MO, MT, NV, NH, NJ, NM, NY, NC, ND, OH, OK, OR, PA, RI, SC, SD, TX, UT, VT, WA, WV, WI, WY
2001	7	IL, MN, NH, NJ, NM, VT, WA
2002	6	AK, AR, HI, IA, MI, RI
2003	9	AK, AZ, IN, MN, NV, NJ, ND, TX, WA
2004	14	AL, AZ, KS, LA, MD, MN, NV, NC, OH, SC, TX, VT, WA, WV
2005	4	MD, MA, NC, RI
2006	6	AL, GA, MA, MS, PA, WA
2007	18	AL, CO, DE, GA, HI, MI, MT, NH, NM, ND, OH, RI, TN, TX, UT, VA, WA, WV
2008	8	AR, IN, MI, MN, MT, ND, OR, VA
2009	5	KS, ME, RI, VT, WV
2010	5	AZ, LA, NY, NC, RI

Notes: The reform indicator is equal to one if one or more welfare reforms have been introduced in a given state and year. More specifically, before the US Federal Welfare Reform in 1996, the indicator is equal to one if a state has filed one or more waiver applications at the Department of Health and Human Services under Section 1115 of the Social Security Act. The waiver data have been obtained from Lieberman and Shaw (2000). Since 1996 states have in general been free to set their own welfare policy rules and the indicator is equal to one if a state has changed its policy rules. The data on the policy rules after 1996 has been obtained from the Welfare Rules Database assembled by the Urban Institute (Urban Institute (2012)). For more details on coding and data sources, see the Appendix A.

Table A2: Distribution of Divided Government

Year	# States with Divided Government	States with Divided Government
1978	22	AK, AZ, CO, DE, IA, ID, IL, IN, KS, MI, MT, ND, NE, NH, NY, OH, SC, SD, UT, VA, VT, WY
1979	25	AK, AZ, CO, DE, ID, IL, KS, ME, MI, MN, MT, ND, NH, NV, NY, OH, OR, PA, TN, TX, UT, VA, WA, WI, WY
1980	26	AK, AZ, CO, DE, ID, IL, KS, LA, ME, MI, MN, MT, ND, NH, NV, NY, OH, OR, PA, TN, TX, UT, VA, WA, WI, WY
1981	26	AK, AR, AZ, CO, DE, ID, IL, KS, LA, ME, MI, MN, MO, MT, NH, NV, NY, OH, OR, TN, TX, UT, VA, WA, WI, WY
1982	25	AK, AR, AZ, CO, DE, ID, IL, KS, LA, ME, MI, MN, MO, MT, NH, NJ, NV, NY, OH, OR, TN, TX, UT, WI, WY
1983	23	AK, AZ, CA, CO, DE, IA, ID, IL, KS, LA, MO, MT, ND, NE, NJ, NY, OR, PA, TN, UT, WA, WY
1984	25	AK, AZ, CA, CO, DE, IA, ID, IL, KS, MI, MO, MT, ND, NE, NJ, NY, OR, PA, TN, UT, WA, WY
1985	29	AK, AZ, CA, CO, CT, DE, IA, ID, IL, KS, MI, MN, MO, MT, NC, ND, NE, NJ, NM, NV, NY, OH, OR, PA, RI, TN, VT, WV, WY
1986	29	CA, AK, AZ, CO, CT, DE, IA, ID, IL, KS, MI, MN, MO, MT, NC, ND, NE, NJ, NM, NV, NY, OH, OR, PA, RI, TN, VT, WV, WY
1987	28	AK, AL, CA, CO, DE, FL, IA, ID, IL, ME, MI, MO, MT, NC, ND, NJ, NM, NV, NY, OH, OK, PA, RI, SC, TX, WI, WV, WY
1988	29	AK, AL, CA, CO, DE, FL, IA, ID, IL, ME, MI, MO, MT, NC, ND, NJ, NM, NV, NY, OH, OK, PA, RI, SC, TX, WI, WV, WY
1989	30	AK, AL, AZ, CA, CO, DE, FL, IA, ID, IL, IN, ME, MI, MO, MT, NC, ND, NJ, NM, NV, NY, OH, OK, PA, RI, SC, TX, WA, WI, WY
1990	29	AK, AL, AZ, CA, CO, DE, FL, IA, ID, IL, IN, ME, MI, MO, MT, NC, ND, NM, NV, NY, OH, OK, PA, RI, SC, TX, WA, WI, WY
1991	29	AK, AL, CA, CO, DE, IA, ID, IL, IN, KS, MA, ME, MI, MN, MO, MT, NC, ND, NE, NY, OH, OR, PA, SC, VT, WA, WI, WY
1992	31	AK, AL, AZ, CA, CO, DE, IA, ID, IL, IN, KS, MA, ME, MI, MN, MO, MS, MT, NC, ND, NE, NJ, NY, OH, OR, PA, SC, VT, WA, WI, WY
1993	28	AK, CA, CO, DE, FL, IA, ID, IL, IN, KS, MA, ME, MI, MN, MS, MT, ND, NE, NJ, NV, NY, OH, OR, SC, SD, VT, WI, WY
1994	31	AK, CA, CO, DE, FL, IA, ID, IL, IN, KS, MA, ME, MI, MN, MS, MT, ND, NE, NV, NY, OH, OR, PA, SC, SD, VA, VT, WI, WY
1995	26	AK, AL, CA, CO, CT, DE, FL, IA, IN, MA, MN, MS, NC, NE, NM, NV, NY, OK, OR, RI, SC, TN, TX, VA, VT, WA
1996	29	AK, AL, CA, CO, CT, DE, FL, IA, IN, LA, MA, ME, MN, MS, NC, NE, NM, NV, NY, OK, OR, RI, SC, TN, TX, VA, VT, WA
1997	31	AK, AL, AR, CA, CO, CT, DE, FL, IL, IN, LA, MA, MI, MN, MS, NC, NE, NH, NM, NV, NY, OK, OR, RI, SC, TN, TX, VA, WA, WI, WV
1998	31	AK, AL, AR, CA, CO, CT, DE, FL, IL, IN, LA, MA, MI, MN, MS, NC, NE, NH, NM, NV, NY, OK, OR, RI, SC, TN, TX, VA, WA, WI, WV
1999	24	AK, AR, CT, DE, IA, IL, IN, LA, MA, MS, NH, NM, NV, NY, OK, OR, RI, SC, TN, TX, VA, WA, WI, WV
2000	30	AK, AR, CT, DE, IA, IL, IN, KY, LA, MA, NH, NM, NV, NY, OK, OR, RI, SC, TN, TX, WA, WI, WV
2001	27	AK, AR, AZ, CO, CT, DE, IA, IL, IN, KY, LA, MA, ME, MO, NH, NM, NV, NY, OK, OR, RI, SC, TN, TX, VT, WA, WI
2002	28	AK, AR, AZ, CO, CT, DE, IA, IL, IN, KY, LA, MA, ME, MO, NH, NJ, NM, NV, NY, OK, OR, RI, SC, TN, TX, VA, VT, WI
2003	29	AL, AR, AZ, CT, DE, GA, HI, IA, IN, KS, KY, LA, MA, MD, MI, MN, MO, NC, NJ, NV, NY, OR, PA, RI, VA, VT, WA, WI, WY
2004	29	AL, AR, AZ, CA, CT, DE, GA, HI, IA, IN, KS, KY, MA, MD, MI, MN, MO, MS, NC, NV, NY, OR, PA, RI, VA, VT, WA, WI, WY
2005	29	AL, AR, AZ, CA, CO, CT, DE, HI, IA, KS, KY, MA, MD, MI, MN, MS, MT, NH, NV, NY, OK, OR, PA, RI, TN, VA, VT, WI, WY
2006	28	AL, AR, AZ, CA, CT, DE, HI, IA, KS, KY, MA, MD, MI, MN, MS, MT, NH, NV, NY, OK, OR, PA, RI, TN, VA, VT, WI, WY
2007	25	AL, AZ, CA, CT, DE, HI, IN, KS, KY, MI, MN, MS, MT, NV, NY, OH, OK, PA, RI, TN, VA, VT, WI, WY
2008	28	AL, AZ, CA, CT, DE, HI, IN, KS, KY, LA, MI, MN, MO, MS, MT, NJ, NV, NY, OH, OK, PA, RI, TN, VA, VT, WI, WY
2009	24	AK, AL, AZ, CA, CT, HI, IN, KS, KY, LA, MI, MN, MO, MS, MT, NJ, NV, OH, PA, RI, TN, VA, VT, WY
2010	21	AK, AL, IA, IN, KY, LA, ME, MI, MO, MS, MT, NJ, NM, NV, OH, PA, VA, WI

Notes: Divided Government is a dummy that is equal to one when either the majority of the state's lower legislative chamber or the majority of the state's upper legislative chamber is from another party than the governor. The underlying data have been obtained from Klarner (2003) and updated using the Klarner's website (http://www.indstate.edu/polisci/klarnerpolitics.htm).

Table A3: Means by Divided versus Unified Government in Full Sample

Variable	Unified Govt. Mean	Divided Govt. Mean	t test p value
Reform Dummy	.191092	.2449223	.0113489
Reform Dummy Geographic Neighbors	.1958829	.2050691	.490264
Reform Dummy Population Size Neighbors	.2137213	.2139586	.9861623
Reform Dummy per Government	.3312693	.3880597	.1142513
Share of AFDC/TANF Recipients in Population (Caseload)	.0289919	.0304011	.1183715
% Unemployed	6.040517	5.954719	.4230475
Deflated Total State Revenue per Capita (/1000)	2.078512	2.244066	2.60e-06
Unmarried Birth	28.60624	29.06273	.3536672
Maximum AFDC/TANF Benefit Level for a Family of Three	346.255	376.353	.0000168
Per Capita Income (/1000)	22.13657	23.07655	.0761048
Population (/1000)	5.245749	5.836192	.0495467
% Population Black	10.89838	9.737914	.016692
% Population Latino	6.39544	7.12433	.110229
% Population Aged 65+	12.42191	12.41222	.9168866
% Immigrant Population	1.677196	2.062119	.0001454
90th/10th Ratio of Household Income	7.957056	8.007652	.4732205
Governor Lame Duck	.2945402	.2413381	.0188363
Gubernatorial Election	.2816092	.2759857	.8069625
Polarization House	.1924776	.1186597	1.86e-38
Polarization Senate	.1811641	.11712	6.20e-32
% Women in State Legislature	17.41642	19.12136	.0000848
% Democratic Votes in Last Presidential Election	44.2291	44.75915	.1924941
Citizens Ideology (Berry et al. 1998)	47.39995	49.87163	.0017637
Democratic Seat Share in Senate	.584603	.5412227	2.49e-06
Democratic Seat Share in House	.5753483	.5450924	.0006094
Government Ideology (Berry et al. 1998)	49.3182	50.28935	.4509299
N	696	837	1533

Notes: The first and second column give variables means for the group of unified and the group of divided governments respectively. The third column gives p values from a two sided group mean comparison t test. For details on coding, variables meanings, and data sources, see Appendix A.

Table A4: Means by Divided versus Unified Government in 5% Closeness Sample

Variable	Unified Govt. Mean	Divided Govt. Mean	t test p value
Reform Dummy	.2009346	.2964427	.0179178
Reform Dummy Geographic Neighbors	.2191422	.221885	.9125438
Reform Dummy Population Size Neighbors	.2355919	.2193676	.5282373
Reform Dummy per Government	.3653846	.4416667	.2482626
Share of AFDC/TANF Recipients in Population (Caseload)	.0298097	.0327447	.0680022
% Unemployed	5.793925	6.002372	.2569331
Deflated Total State Revenue per Capita (/1000)	2.09866	2.132187	.54893
Unmarried Birth	28.78723	27.57338	.1409928
Maximum AFDC/TANF Benefit Level for a Family of Three	360.1344	379.7866	.128959
Per Capita Income (/1000)	22.23039	22.00148	.7946049
Population (/1000)	5.55135	6.347854	.1231316
% Population Black	10.1088	9.138546	.2469914
% Population Latino	6.415446	6.403069	.9882764
% Population Aged 65+	12.38331	12.58009	.1994666
% Immigrant Population	1.650881	1.84158	.2859877
90th/10th Ratio of Household Income	7.871063	7.878771	.9468255
Governor Lame Duck	.228972	.1620553	.0679899
Gubernatorial Election	.182243	.1778656	.9025918
Polarization House	.1259108	.1099947	.1093244
Polarization Senate	.1093714	.1089385	.9631439
% Women in State Legislature	18.88579	18.08782	.3030959
% Democratic Votes in Last Presidential Election	44.10859	44.79213	.2966472
Citizens Ideology (Berry et al. 1998)	48.46934	50.66145	.1037312
Democratic Seat Share in Senate	.5423812	.5562207	.323617
Democratic Seat Share in House	.5407015	.5577868	.1889388
Government Ideology (Berry et al. 1998)	50.40387	49.81513	.802409
N	214	253	467

Notes: The sample is restricted to observations with a closeness assignment variable of 5% or smaller. For details on this variable, see Appendix B. The first and second column give variables means for the group of unified and the group of divided governments respectively. The third column gives p values from a two sided group mean comparison t test. For details on coding, variables meanings, and data sources, see Appendix A.