The Fiscal Consequences of State Legislative Term Limits

Pavel A. Yakovlev
Duquesne University

Mehmet S. Tosun
University of Nevada, Reno

William P. Lewis
University of Pittsburgh

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Abstract

This study estimates the effect of state legislative term limits on state tax revenue, general expenditure and its main components: welfare, highways, health, education, and state aid to local governments. Two alternative measures of term limits are used: an original term limit index developed in this paper and the potentially endogenous average legislative turnover rate. Controlling for economic, institutional, political, and demographic factors as well as the endogeneity of legislative turnover, we find that the two distinct measures of term limits have qualitatively similar effects on state government finances. Our estimates indicate that stricter legislative term limits not only increase legislative turnover and the size of government, but also change the composition of government spending.

1 Introduction

As of this writing, fifteen American states have binding legislative term limits. At the time of their passage, legislative term limits were virtually an untested experiment in the United States.[1] Prior to the 1990s, it was a common practice to impose term limits on the executive but not on the legislative branch of government. The enactment of legislative term limits in several American states can be viewed as yet another constraint on the public office in addition to the already existing gubernatorial term limits and various other institutional constraints. Sweeping across about one-fourth of American states, legislative term limits amount to one of the most significant institutional changes to state governments in a generation and offer scholars an exceptional quasi-natural policy experiment for analysis (Mooney, 2009).

Proponents of term limits often view them as panacea against incumbency advantage, excessive spending, legislative shirking, and many other shortcomings associated with the current political system (Will, 1992; Reed, 1994; Herron and Shotts, 2006). Ironically, several recent studies suggest that term limits, at best, may have no effect on public spending (Keele et al., 2013) and, at worst, may actually increase legislative shirking and government size (Erler, 2007; Tien, 2001; Cummins, 2013; Uppal and Glazer, 2015).

In this study, we combine several innovations not found in previous research on legislative term limits. The use of more recent data (1970 to 2010) allows us to estimate the effect of term limits after they become binding (effective) rather than when they are passed as is common in many earlier studies. We also examine a significant and previously overlooked budget category in this line of research: state aid to local governments. Furthermore, we develop an original term limit index (TLI) that captures in a more theoretically rigorous

[1] The proposal to impose term limits on federal legislators was ruled by the Supreme Court to be unconstitutional (U.S. Term Limits, Inc. v. Thornton, 1995).

fashion the vast differences in term limit stringency across states. Finally, we compare the estimates for our TLI measure and the legislative turnover rate, which is the official target of term limit laws. Ideally, these two measures should produce similar effects on state government finances.

Our initial panel data analysis of 47 American states reveals that our TLI (1970-2010) and the legislative turnover rate (1980-2010) have different effects on state fiscal variables. However, after instrumenting for the endogenous legislative turnover rate, the estimated fiscal impacts of both measures of term limits become qualitatively similar. Our results suggest that legislative term limits have a positive and statistically significant impact on state government spending per capita through the increased turnover of legislators. We also find a particularly strong positive impact of term limits (i.e. higher turnover) on state aid to local governments and healthcare spending, but a negative impact on state welfare spending.

In the next section, we discuss the relevant empirical literature. In section 3, we provide a detailed description of our data, followed by the empirical model and estimates in section 4. In the remaining section, we offer concluding remarks and ideas for future research.

2 Literature Review

The adoption of legislative term limits by several U.S. states in the 1990s has generated a large amount of academic research, which we attempt to survey in this section. It has been hypothesized that a decrease in legislative seniority (i.e. higher legislative turnover) due to term limits may affect anything from electoral competition to government spending and its composition. Although an empirical consensus on how term limits affect the overall level of public spending appears to be forming, much remains unknown about how term limits affect the composition of government spending. The literature on term limits is numerous and broad in scope since term limits may exist at different branches (executive v. legislative) and levels (federal, state, and local) of government, domestically and abroad. Voters have also attempted to limit their representatives through tax and expenditure limits or TEL. In this section, we try to combine a broad yet relevant overview of scholarly research on term limits and their multifaceted effects, which can be difficult to reconcile at times.

We begin by reviewing the arguments in favor of term limits. Term limit proponents often argue that limiting the number of terms that legislators can serve in office would usher in a new era of "citizen legislators" who are more concerned with serving their constituents than advancing their own political careers (Will, 1992). In light of the well-documented incumbency advantage[2], term limits are often viewed as a way to limit the power of incumbents, increase political competition, and make legislators more accountable to constituents (Herron and Shotts, 2006). According to Gamm and Kousser (2011), a more competitive political environment favors broad, statewide spending programs rather than geographically targeted spending. Friedman and Wittman (1995) claim that term limits can redistribute legislative power away from districts with all but the most senior incumbents. Dick and Lott (1993) argue that term limits can improve voter welfare because less-skilled junior legislators have to provide a better mix of transfers (pork) in order to get re-elected. Reed (1994) also argues that longer-serving politicians perform worse, on average, than shorter-serving politicians, implying that term limits can improve voter welfare by decreasing legislative tenure.

Bernhardt et al. (2004) model pork-barrel spending as a zero-sum redistribution of resources from districts with junior representatives to districts with senior representatives. They conclude that term limits might have their advantages in the presence of pork-barrel spending. Moncrief et al. (2004) find that the increasing adoption of state legislative term limits in the 1990s has abated the decreasing trend in legislative turnover, suggesting that term limits may actually succeed in increasing turnover. For these reasons, it is often argued that term limits can reduce pork-barrel spending by replacing the long-serving, fiscally liberal incumbents with the fiscally conservative citizen legislators (Will, 1992; Payne, 1992; Carey et al., 1998; Dick and Lott, 1993; Bails and Tieslau, 2000).

Ironically, recent studies suggest that some of these claims are inconsistent with the evidence (Lopez, 2003; Erler, 2007; Cummins, 2013). In a seminal paper, Besley and Case (1995) find that governors in the

[2]See, for example, Kalt and Zupan (1984, 1990); Matsusaka (1992); Biglaiser and Mezzetti (1997); Berry et al. (2000); Yakovlev (2007, 2011).

United States tax and spend more when they face binding term limits. Johnson and Crain (2004) show that executive term limits in democratic countries lead to a steady increase in government size over time. Alt et al. (2011) find that economic growth is higher, while taxes, public spending, and borrowing costs are lower under reelection-eligible incumbent governors than "lame duck" governors. Asako et al. (2011) demonstrate that lowering legislators' seniority through term limits increases pork-barrel spending at the state level. Lewis (2012) shows that legislative term limits lower state bond ratings, while Day and Boeckelman (2012) determine that legislative term limits increase state debt through higher government spending.

In one of the first analyses of the U.S. state legislative term limits, Erler (2007) shows that they have a significant positive effect on state transportation, welfare, health, and overall spending. However, one recent study suggests that legislative term limits might have had only a transient, if any, effect on the overall size of the U.S. state governments. Keele et al. (2013) focus on addressing the two main challenges encountered in term limit research: treatment effect heterogeneity and suitability of non term-limited states as good counterfactuals. Using two different identification strategies, Keele et al. find little evidence that legislative term limits affect state government spending.

Another string of research shows that term-limits also make legislators more shortsighted in their fiscal decisions. Hefner and Burson (1992) argues that the transient nature of term limits forces legislators to spend more on the projects with short-term payoffs and less on the projects with long-term payoffs. Examining capital outlay expenditures from 1969 to 1987, Hefner et al. find that capital outlays are inversely related to public welfare expenditures. Garrì (2010) argues that term limits seem to exacerbate the already existing bias in political behavior that favors short-term policy solutions, an effect he calls political "short-termism". Cummins (2013) theorizes that states with term-limited legislatures should have a harder time managing its fiscal policies for two reasons: less experienced legislators are likely to be ill-equipped and too shortsighted for making complex fiscal policy decisions. Cummins finds that states with term limits are more likely to run year-end general fund balances that are on average 2% lower compared to states without term limits. Similarly, Donovan (2010) estimates that term limits at the local government level exacerbate fiscal impatience. Uppal and Glazer (2015) also find that term limits increase legislative turnover, which seems to make the tax policy more short-sighted: spending and taxation rise in total dollar amounts and as a share of GDP, leading to slower economic growth.

Term limits can also make legislators less accountable to their constituents, a problem commonly known as shirking. Shirking can be either ideological, which is when legislators purposefully deviate from their constituents' ideologies, or participatory, which is when legislators simply do not feel very compelled to perform even routine tasks. The "lame duck" argument postulates that the soon to be ex-legislators may find it advantageous to deviate from their constituents' interests (i.e. shirk on the job) given the lack of re-election incentives (Besley and Case, 1995; Tien, 2001). Term limits can exacerbate the populist bias in policies, which is indicative of ideological shirking (Acemoglu et al., 2011), and make legislators less likely to participate in roll-call votes, which is indicative of participatory shirking (Wright, 2007).

However, if incumbent politicians really care about their party reputations, then the "lame duck" effect might be weakened (Smart and Sturm, 2013; Ferraz and Finan, 2011). Nonetheless, several studies find evidence of increased ideological shirking in the presence of term limits (Rothenberg and Sanders, 2000; Lott and Bronars, 1993; Besley and Case, 1995; Carey, 1996; Carey et al., 2006). Because politicians are self-interested agents, term limits may merely succeed in decreasing seniority rather than preventing shirking and political careerism (Krueger, 1974). In fact, term limits may produce a new breed of transient-minded career politicians who use the legislative office as a stepping-stone for further political or private sector advancement (Carey et al., 1998; Sarbaugh-Thompson et al., 2004). Interestingly, Leguizamon and Crowley's 2016 analysis of state governors from 1950 to 2005 reveals that the lame-duck effect on electoral accountability is statistically observable only for politicians with longer expected careers.

Several studies also note that legislative term limits are associated with a decline in the relative power of the legislative branch (Kousser, 2005; Moncrief and Thompson, 2001; Peery and Little, 2002; Carey et al., 2006). Cain and Kousser (2004) find that the enactment of term limits (Proposition 140) in California has accelerated the existing trend towards more female and minority representation in state legislature. Cain and Kousser also find that frequent changes in legislators brought about by term limits diminish expertise and collective memory, thereby reducing legislators' ability to weed out bad bills and oversee government agencies as well as the executive branch. The scholars argue that legislative term limits in California might

have lowered fiscal accountability and oversight, causing a proliferation of trailer bills that escape a full set of hearings. Yet, high legislative turnover in term-limited states may not severely reduce legislators' experience and expertise in upper chambers as termed-out legislators usually move from house to senate (Moncrief et al., 2004, 2007). Also, term limits have not decreased the importance of campaign fundraising because special interest money still continues to pour in after the enactment of term limits (Cain and Kousser, 2004). Some studies suggest that interest groups have more influence (Berman, 2004; Cain and Kousser, 2004; Mooney, 2007) and that legislators spend far less time securing funding for projects in their districts (Powell et al., 2007) in term-limited states. Similarly, Sarbaugh-Thompson et al. (2006) find that term limits lead to a more concentrated influence and greater partisan divide.

Legislative and gubernatorial term limits are not the only institutional constraints that affect legislative behavior. Since term limits do not occur in a vacuum, it is important to consider alternative constraints placed on the public office (Mitchell and Tuszynski, 2012; Mitchell and Yakovlev, 2015). For instance, tax and expenditure limitations (TEL) can be viewed as a fiscal alternative to term limits: a constraint on the growth of government. Legislative term limits might have arisen due to the inability of TELs and other institutions to constrain government growth. Earlier studies show that TELs do not seem to affect the size of state and local governments (Joyce and Mullins, 1991; Mullins and Joyce, 1996; Skidmore, 1999; Mullins and Wallin, 2004). Theoretically, this could be due to the substitution of restricted revenue instruments with unrestricted ones.

Recent studies go beyond the mere existence of TELs measured as binary variables by quantifying the type or restrictiveness of these measures.[3] Amiel et al. (2009) argue that TELs are very heterogeneous, which makes the use of dummy variables measuring the adoption and existence of TELs rather problematic. They construct a TEL index based on the following characteristics: type of TELs in terms of specific revenue and/or expenditure coverage; whether the TEL is statutory or constitutional; growth restrictions such as population, personal income changes and inflation; approval method of the TEL; override provisions and exemptions. Studies using the Amiel et al. index typically find that TELs have a negative effect on education, welfare and transportation (Nicholson-Crotty and Theobald, 2011; Amiel et al., 2014). Consequently, we use the TEL index developed by Amiel et al. (2009) as an important control variable.

Similar to Amiel et al., we also argue that simple binary measures cannot adequately capture the vast heterogeneity of legislative term limits across the United States, necessitating a development of a more complex and theoretically rigorous measure of term limits, which we undertake in this study.

3 Data

This study utilizes a longitudinal panel of 47 American states from 1970 to 2010 to estimate the effect of binding legislative term limits on state public spending (general expenditures) and its main components such as education, transportation, welfare, heath, and state transfers (aid) to local governments. Like Erler (2007), we exclude Alaska, Hawaii, and Nebraska from our sample. Erler (2007) and Ladd (1991) argue that the fiscal structures of Alaska and Hawaii are very different from the other states, necessitating their exclusion as outliers. As in many other studies, Nebraska is excluded from the sample because there is no reliable measure of divided government for its unicameral legislative system.

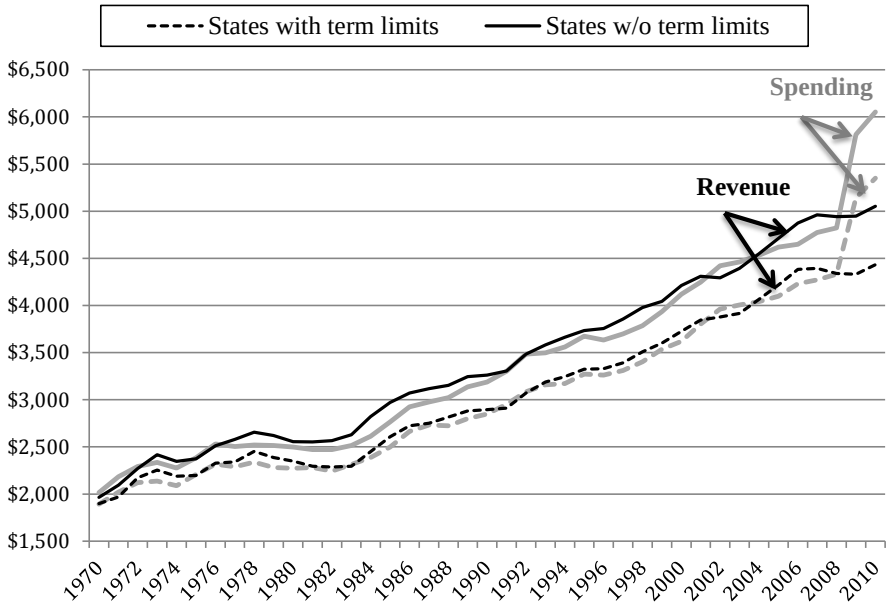
We seek to estimate the effect of binding legislative term limits on the following state fiscal measures: total revenues, general expenditures, highway, welfare, health, and education spending. We also examine a major budget category overlooked in previous studies: state aid (transfers) to local governments, much of which typically goes to local school districts. State aid can be the source of sizeable and stable revenue for local governments in the U.S. cities, towns, and counties that deliver important public services ranging from public health and safety to education. All of our monetary variables are measured in 2005 constant dollars per capita.

Before turning to an empirical analysis, we examine broad trends in state government size, legislative turnover, and state political preferences (ideology). As can be seen in Figure 1, average state government expenditures and revenues per capita are consistently lower in states with legislative term limits than without

[3]See Poulson (2005); Bae and Gais (2007); Amiel et al. (2009); Mitchell (2010); Nicholson-Crotty and Theobald (2011); Bae and Jung (2011); Stallmann and Deller (2011); Deller et al. (2012); Amiel et al. (2014).

them (the difference-in-means between the two groups of states is statistically significant at the 1 percent level). Moreover, the gap between the states has widened substantially by the end of the 1970-2010 period when many term limits went into effect.

Figure 1: Real State Government Spending and Revenue per Capita

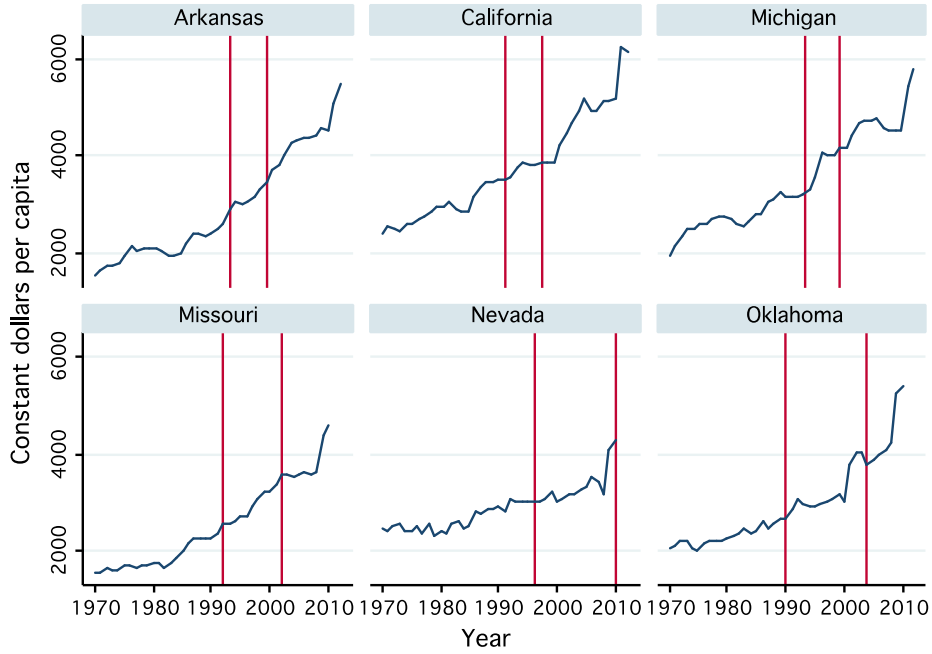


The observed lower government spending in states that enacted term limits does not support the reverse causality argument that higher government spending might have caused the adoption of term limits. The evidence presented in Figure 1 is also consistent with previous studies, which have concluded that term limits are likely to be exogenous to the level of state government spending. For example, Erler (2007) observes that lower levels of public spending precede the adoption of legislative term limits. Knight (2000) and Matsusaka (1995) argue that term limits are likely to be exogenous because term limit adoption is related to citizen initiative processes rather than voters' fiscal preferences. Erler (2007) and Donovan (2010) argue that term limit adoption appears to be motivated by the desire to limit the incumbency advantage and promote a new class of "citizen-legislators" rather than voters' concerns about government size. Matsusaka (1995, 2000); Matsusaka and McCarty (2001) find that states with voter initiatives spend significantly less than other states, suggesting that states that enact term limits have smaller governments.

In Figure 2, we show the progression of government spending per capita in states with the strictest (lifetime) term limits over the years of their enactment and actual impact. The logic here is that the term-limit induced changes in government spending, if they exist, would be most visible in states with lifetime term limits. However, no systematic shifts in the trend of government spending can be clearly identified across all states in Figure 2 either before or after the enactment or impact of legislative term limits. Perhaps, regression analysis will reveal if the adoption of term limits has any statistically significant impact on spending not visible to a naked eye. If anything, Figure 2 does clearly show that there is no obvious change in the spending trend preceding the adoption of term limits, which further supports the notion that term limit adoption is likely to be exogenous.

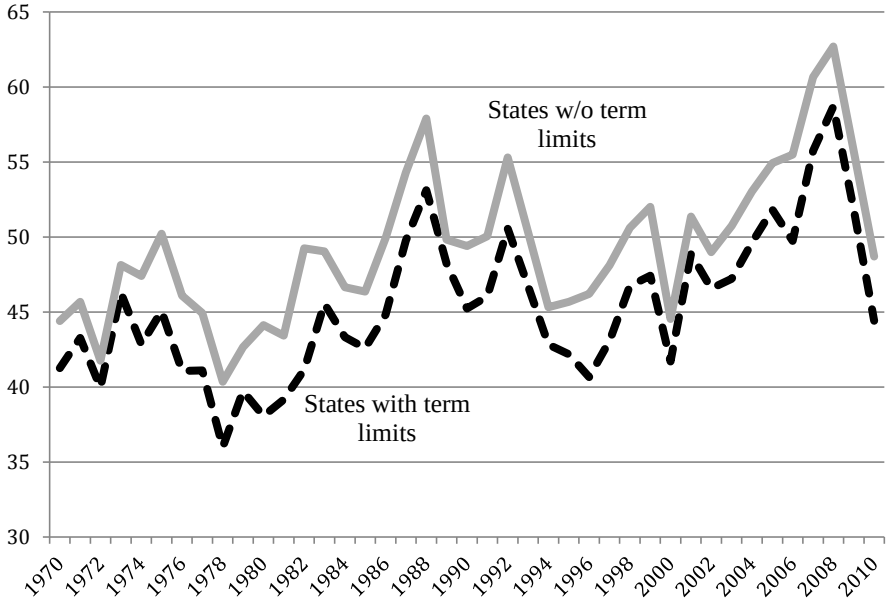
Next, we examine trends in political ideology to see if they might be connected to legislative term limits. As can be seen in Figure 3, non-term-limited states also tend to be more liberal than term-limited states as measured by the Berry et al. (2010, 2012) state citizen ideology index. This finding is consistent with Hall's 2014 estimates suggesting that term limits have caused a significant reallocation of institutional power from liberals to conservatives by forcing more senior legislators out of office. The more liberal ideology of non-term-limited states may explain, *ceteris paribus*, their higher levels of spending and taxation. However, despite the gap, the ideology index in Figure 3 fluctuates similarly in both types of states over time as if it had a common (national) trend. Therefore, it does not appear that legislative term limits have had a

Figure 2: State Government Spending in States with Lifetime Term Limits



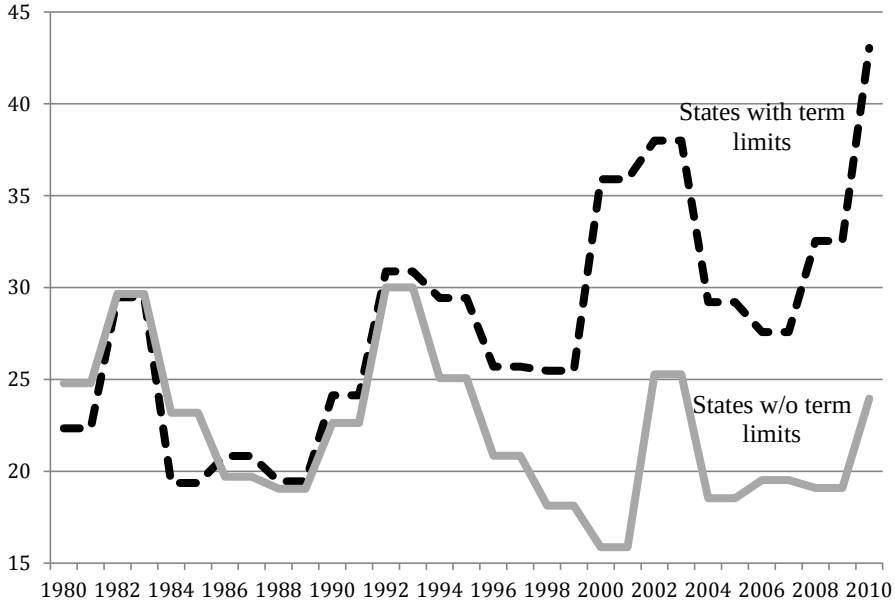
Note: The first vertical line, from left to right, marks the year of term limit enactment, while the second vertical line marks the year of impact.

Figure 3: State Ideology Index (Higher Values = More Liberal)



significant effect on state political ideology.

Figure 4: Legislative Turnover Rate



The only variable that shows a clearly noticeable change with the enactment of term limits is the legislative turnover rate. As can be seen in Figure 4, the legislative turnover rates in both term-limited and non-term-limited states used to move closely together until the two series began to diverge in the 1990s, when many states enacted term limits. The enactment of term limits has led to a more pronounced rise in the legislative turnover rate in term-limited states, which is not surprising given that the main stated goal of term limits is to increase legislative turnover. Despite the growing gap between the two groups of states, the legislative turnover rate still exhibits close co-movement or cyclicality over time in both term-limited and non-term-limited states.

To analyze the fiscal consequence of state term limit adoptions in the United States, we employ two alternative measures of legislative term limits as our main variables of interest: 1) an original term limit index developed in this paper and 2) legislative turnover rate taken from Moncrief et al. (2004, 2008). While each one has its strengths and weaknesses, as will be described later, both of these measures should yield similar results since the intended goal of term limits is to increase legislative turnover.

As can be seen in Table 1, states differ significantly in term limits stringency. For example, in Arizona, Florida, Louisiana, Maine, Nebraska, Ohio, and South Dakota, term limits do not bar legislators from cycling back and forth between house and senate at the end of their terms. However, in Colorado and Montana term limits are a bit more stringent because legislators must take a time-out for at least four years before they can return to the legislature. Finally, in Arkansas, California, Michigan, Missouri, Nevada, and Oklahoma, legislators face a lifetime ban on re-election at the end of their terms in each chamber. Out of the 14 states with term limits in our dataset (7.5 percent of observations), 6 have lifetime bans on re-election (3 percent of observations).[4]

In order to capture this heterogeneity in legislative term limit stringency across states in a more theoretically rigorous fashion, we develop a novel term limit index (TLI). Besides controlling for term limit stringency, the benefit of this TLI is its ability to capture broad institutional change that may alter either the type of legislators seeking office or their behavior, both of which may affect state fiscal policies. For instance, Leguizamon and Crowley's 2016 finding of a statistically observable "lame duck" effect for politicians with longer expected careers highlights the importance of properly modeling the effect of term limit

[4]Nebraska, which has legislative term limits, is excluded from our sample as discussed earlier. The following 14 states are coded as having binding term-limits in this study: Arizona, Arkansas, California, Colorado, Florida, Louisiana, Maine, Michigan, Missouri, Montana, Nevada, Ohio, Oklahoma, and South Dakota.

Table 1: Distribution and Characteristics of State Legislative Term Limits

	Year Passed	Year of Impact	Term Length (House/Senate)	Lifetime Ban	Term Limit Index (TLI)
Arizona	1992	2000	8/8	No	0.019237
Arkansas	1992	1998	6/8	Yes	0.4770728
California	1990	1996	6/8	Yes	0.4770728
Colorado	1990	1998	8/8	No	0.019237
Florida	1992	2000	8/8	No	0.019237
Idaho*	1994	-	-	-	0
Louisiana	1995	2007	12/12	No	0.0270066
Maine	1993	1996	8/8	No	0.019237
Massachusetts*	1994	-	-	-	0
Michigan	1992	1998	6/8	Yes	0.4770728
Missouri	1992	2002	8/8	Yes	0.4274603
Montana	1992	2000	8/8	No	0.019237
Nevada	1996	2010	12/12	Yes	0.2710428
Ohio	1992	2000	8/8	No	0.019237
Oklahoma	1990	2004	12/12	Yes	0.5317705
Oregon*	1992	-	-	-	0
South Dakota	1992	2000	8/8	No	0.019237
Utah*	1994	-	-	-	0
Washington*	1992	-	-	-	0
Wyoming*	1992	-	-	-	0

Source: National Conference of State Legislatures. *These states repealed term limits before they went into effect: Idaho in 2002, Massachusetts in 1997, Oregon in 2002, Utah in 2003, Washington in 1998, and Wyoming in 2004. Because of the repealed term limits, the TLI is set to zero in these states as if they had no term limits.

stringency on legislative career length. Therefore, a good measure must reflect the main quantifiable differences in term limits across states, namely their length and stringency, after they go into effect. This is not possible with the traditional binary measures of term limits, necessitating a more sophisticated modeling of term limit impacts on political careers. While we have no way of measuring the expected career lengths for state legislators, we can however quantify the effect of a given term limit on a representative state legislator. This is the essence behind our approach to developing an original TLI.

To understand how various term limits may affect legislators' behavior, consider the following annuity-like model of a representative legislator's utility (U) from holding office:

$$U = \sqrt{B}\left(\frac{1-(1+r)^{b-t}}{r}\right) \tag{1}$$

Where B is the periodic tangible and intangible benefit (rent) that a legislator receives from holding office, r is the interest rate (discount factor), and t is the duration of a legislative career in years that can be significantly shortened by term limits (especially lifetime bans), and b represents mandatory breaks that termed-out legislators must take before they can return to their chamber (usually two years) in states with sequential term limits. The square root of B is used to model the possibility of diminishing marginal returns from holding office. This simple formula reveals that term limits can lower the present value of a representative legislator's utility by shortening career length (t) in the case of lifetime bans on re-election and through periodic time outs or mandatory breaks (b) from holding office in the case of sequential bans on re-election. If a representative legislator chooses to move to another chamber instead of taking mandatory time outs, we can capture the decrease in utility from inter-chamber cycling using the same variable (b). In states with lifetime term limits, b is zero because legislators cannot cycle back and forth between chambers after both terms end, thereby making t equal to the maximum number of years legislators are allowed to serve in both chambers (combined). In states with sequential term limits, we set the value of t equal to

60 years as a reasonable upper limit for a political career.[5] Then, we reduce t by subtracting from it the maximum number of mandatory breaks (b) in years that a representative legislator would have to take during that time in office.

Now, the TLI can be defined as one minus the ratio of a representative legislator's utility in a term-limited case (U_{tl}) over utility in a non-term-limited (U_{nt}) case:

$$TLI = \frac{1 - U_{tl}}{U_{nt}} = 1 - \left(\frac{\sqrt{B}\left(\frac{1-(1+r)^{b-t}}{r}\right)}{\sqrt{B}\left(\frac{1-(1+r)^{-t}}{r}\right)}\right) \in [0, 1) \tag{2}$$

In order to calculate the value of this TLI, we have to make some simplifying assumptions only about r since the two Bs in equation (2) cancel each other out. We set the discount rate r equal to the commonly assumed value of 5 percent under the assumption that the opportunity cost of financial and human capital is on par in both political and commercial sectors.[6] For states with term limits, the numerator captures the present discounted value of the restricted stream of benefits from holding office, while the denominator shows the present discounted value of the unrestricted (i.e. benchmark) stream of benefits from holding office by a representative legislator. For states without term limits, the numerator is identical to the denominator, making TLI equal to zero. The index's theoretical range is [0, 1), where 0 indicates a state without term limits, while a number closer to 1 indicates a more restricted career length (i.e. stricter term limits).

In our dataset, the TLI ranges from the lowest value of 0 (no term limits) to the highest value of 0.53 for the strictest term limit in Oklahoma. Given that only one-fourth of the states have term limits, the majority of TLI values in our sample cluster at 0 (33 states in our sample had not term limits in 2010), followed by much smaller frequencies at the following values: 0.019, 0.027, 0.27, 0.43, 0.48, and 0.53. When states adopt term limits, their TLI value changes from zero to some positive number between zero and one (see Table 1) and stays the same for the duration of the sample. Still, this gives us sufficient variation over time for utilizing the fixed effects estimator.

Since the main stated objective of term limits is to increase legislative turnover, more scholars are beginning to use the turnover rate in their empirical models instead of relying on the binary measures of term limits. For example, Sarbaugh-Thompson's 2010 analysis reveals the importance of controlling for term-limit heterogeneity across states using adjusted turnover rates instead of a dichotomous measure, which increases the risk of false negatives and confounds the effects of term limits with those of the citizen initiative. While this makes sense, deriving the proper turnover rate is more difficult than it may seem (see Moncrief et al. (2004) for a description of complications). For example, the turnover rate can be misleading due to "interchamber" cycling of legislators over time. Furthermore, legislative turnover can change due to other factors such as professionalization levels, redistricting, multi-member districts, and partisan swings affect turnover rates (Moncrief et al., 2004). The turnover rate also comes in intervals due to election cycles, which reduces the number of available observations. Finally, Uppal and Glazer (2015) show that the turn over rate is likely to be endogenous in state government spending. However, they are able to successfully instrument for it using redistricting and term limit dummies.

These complications may diminish the benefits of the turnover rate as a relevant measure of term limits' effects on state fiscal variables. Nevertheless, we use the election-to-election turnover rate proposed by Moncrief et al. (2004) and updated by Moncrief et al. (2008) as a benchmark measure. Moncrief's derives the turnover rate by comparing the membership at the beginning of the session immediately after election at time t to the membership immediately after the election at time $t + 1$. We take the average of Moncrief's house and senate turnover rates and obtain an unbalanced panel of 1,252 observations for 47 states from 1980 to 2010.

Like Uppal and Glazer (2015), we instrument for the likely endogenous turnover rate using a redistricting dummy (equals one in year when redistricting happened, zero otherwise). Unlike Uppal and Glazer though, we replace their simple binary measure of term limits as an instrument for turnover with our original term

[5] As of this writing, John Dingell with tenure of 59 years holds the record for the longest service in the U.S. Congress.

[6] The value of r does not really matter because it is simply a scalar used to derive the relative value of term limit stringency across states.

limit index (TLI) because of its better ability to capture term limit heterogeneity and better performance on the over-identification tests (reported in the IV regressions in Table 4). Our tests confirm a positive and statistically significant relationship (p-value of less than 5 percent) between the average turnover rate and our TLI measure.

Table 2: Variable Descriptions and Summary Statistics

Variable	Variable Description	Mean (Std. Dev.)
General expenditures	Total state expenditures (minus utility, liquor store, employee retirement, and insurance trust expenditures) in constant dollars per capita.	3,296 (1,157)
Total revenues	Total state revenues (minus utilities, liquor stores, and insurance trust revenues) in constant dollars per capita.	3,318 (1,126)
Highways	Infrastructure & highway expenditures in constant dollars per capita.	292 (133)
Welfare	Public welfare expenditures in constant dollars per capita.	631 (372)
Education	Public education expenditures in constant dollars per capita.	537 (185)
Health	Public health expenditures in constant dollars per capita.	210 (95)
State aid	State government transfers (aid) to local governments in constant dollars per capita.	975 (390)
Term length	Total number of years state legislators can serve in office before being forced out by term limits (sum for house and senate).	1.15 (4.09)
Term limit index	Range: [0, 1), where 0 means no term limit and higher values mean more restrictive legislative term limits.	0.015 (0.08)
Turnover rate	Mean house and senate legislative turnover rate, election to election, from Moncrief et al. (2004, 2008).	24 (9.86)
Tax & expenditure limits	Equals 0 if no term limit, otherwise = 1/(square root of term years (3 2 lifetime limit dummy consecutive limit dummy)).	5.64 (7.41)
GSP per capita	Gross state product in constant dollars per capita.	32,835 (8,158)
Federal aid	Federal government transfers to states in constant dollars per capita.	933 (424)
Unemployment rate	Percent unemployed.	5.96 (2.03)
Log of population	Natural log of state population.	15 (1)
Old population	Percentage of state population 65 years old and over.	12 (2)
White population	Percentage of state population that is Caucasian.	87 (9.21)
Severance taxes	Severance tax revenue as a percentage of total revenue.	1.43 (3.43)
Divided government	Dummy variable indicating divided political control of legislative and executive branches (1 = divided, 0 = otherwise).	0.53 (0.5)
Governor lame duck	Dummy variable for governor in last term (1 = lame duck, 0 = otherwise).	0.28 (0.45)
Liberal ideology	Citizen ideology score from Berry et al. (2010, 2012), ranges from 0 to 100, higher score indicates more liberal views.	48 (15.75)

Notes: All variables vary across states and time. All monetary variables are in 2005 dollars.

In Table 2, we summarize the variables used in this study. Much of our data is collected from publicly available sources such as the *U.S. Census Bureau*, *Statistical Abstract of the United States*, *Fiscal Survey of the States*, *State Government Tax Collections*, *Bureau of Economic Analysis*, *National Conference of State Legislatures*, and the *Book of the States*. All monetary variables have been adjusted for inflation and expressed in per capita terms.

4 Empirical Model and Estimates

To understand how term limits may affect legislators' behavior, consider an annuity-like model of a legislator's utility (U) from holding office as described in the previous section of this paper. According to this simple model, term limits can significantly lower a representative legislator's utility from holding office by reducing the length of political career in the case of lifetime term limits or through periodic time outs and inter-chamber cycling costs as is the case with sequential term limits. Term limits may also limit legislators' abilities to logroll (i.e. trade votes) due to higher turnover, which makes it difficult for legislators to develop and maintain reputations, effectively amounting to higher transaction costs. That is, by increasing turnover, term limits can make it difficult for legislators to develop reputations, which are critical for logrolling (i.e. vote trading between legislators).

The aforementioned term limit effects may change not only the type of policies that legislators choose but also the type of legislators seeking office. For example, by reducing the present value of benefits from holding office due to shorter career length, term limits may push higher quality candidates out of state and local politics. Furthermore, shorter career terms can make legislators more impatient or myopic in their preferences for spending and taxation. As evident from our literature review, the net effect of multiple and often contradictory incentives due to term limits is hard to predict theoretically, making a strong case for an empirical analysis of this institutional arrangement.

To test the effect of legislative term limits on state fiscal variables, we develop an original term limit index (TLI) that ranges from 0 to 1, where a value of zero indicates a state without term limits and a value closer to one indicates a state with a rather restricted legislative career (i.e. more stringent term limits). As described in detail in the previous section, the index is calculated as 1 minus the ratio of a representative legislator's utility in a term-limited (U_{tl}) case relative to a non-term-limited (U_{nt}) case. In addition to TLI, we also estimate the effect of legislative turnover on the same seven state fiscal variables (total revenue, total spending and its five subcomponents). The proposed panel data model is:

$$G_{it} = \alpha = \gamma T_{it} + \sum_{j=1}^{11} \beta_j X_{it} + u_i + v_t + \epsilon_{it} \tag{3}$$

Where G_{it} is a given state fiscal indicator measured in constant dollars per capita, α is a constant, T_{it} is either our original TLI or the average legislative turnover rate from Moncrief et al. (2004, 2008), $X_i t$ is a vector of the commonly used control variables in this type of models (see previous section for variable descriptions), u_i is state fixed effects (dummies), v_t is year fixed effects (dummies), and ϵ_{it} is the error term. Following previous studies[7] on the determinants of state government spending, we include the following control variables in our model: gross state product, federal aid to states, log of population size, unemployment rate, elderly and Caucasian population shares, severance tax revenue share, divided government dummy, governor's last term in office dummy, state tax and expenditure limits (TEL), and state ideology index. The TEL index is taken from Amiel et al. (2009) and ranges from 0 to 30, where higher values indicate more restrictive fiscal rules. The state ideology index is taken from Berry et al. (2010, 2012). It measures state citizens' political ideology on the liberal-conservative scale from 0 to 100, where higher values imply more liberal or less conservative views.

We estimate the model using OLS with Driscoll and Kraay (1998) robust standard errors and two-way fixed-effects.[8] Besides robustness to heteroscedasticity and autocorrelation (i.e. clustering), the Driscoll-Kraay estimator also corrects for contemporaneous correlation in the error term.[9]

[7] Joyce and Mullins (1991); Poterba (1994); Crain and Muris (1995); Matsusaka (1995); Knight (2000, 2002); Besley and Case (2003); Mullins and Wallin (2004); Reed (2006); Erler (2007); Cummins (2013); Yakovlev et al. (2012); Mitchell and Yakovlev (2015).

[8] We perform the Hausman test for random effects and reject its null hypothesis. State fixed effects (dummies) control for unobserved, time-invariant state characteristics, while year fixed effects (dummies) control for unobserved temporal effects.

[9] Driscoll and Kraay (1998) propose a nonparametric covariance matrix estimator that produces standard errors robust to general forms of heteroscedasticity, cross-sectional and temporal dependence, all of which were detected in our data.

Table 3: State Government Finances and Legislative Term Limits (1970-2010)

	General Expenditures		Total Revenues		Health		Education		Highways		Welfare		State Aid	
Term limit index	241.5	**	172.8	**	49.85	***	29.02		14.04		-261.9	***	434.3	***
	(111.90)		(60.48)		(10.71)		(16.78)		(14.30)		(48.58)		(95.72)	
Governor lame duck	-5.243		-2.442		-8.551	**	-5.729		-4.296		-15.57		17.23	
	(15.65)		(11.31)		(3.03)		(5.96)		(4.23)		(9.31)		(12.62)	
Tax & expenditure limits	-1.201		2.714		1.104	**	0.496		0.277		-3.61	***	-3.273	*
	(1.79)		(1.48)		(0.34)		(0.47)		(0.27)		(1.01)		(1.44)	
Log of population	-399.1	***	-514.8	***	19.74		-193.6	***	-62.86	**	-109.5	*	178	***
	(90.59)		(65.94)		(19.42)		(20.24)		(18.54)		(53.39)		(39.84)	
White population	-4.697		7.891		5.502	**	6.429	***	-2.924		-12.54	**	7.556	*
	(7.21)		(7.35)		(1.73)		(0.73)		(1.94)		(3.70)		(3.06)	
Old population	63.07	**	60.55	***	15.01	**	18.51	***	-1.35		-11.18		0.21	
	(22.09)		(16.45)		(4.30)		(4.88)		(4.32)		(7.02)		(11.68)	
GSP per capita	0.0334	***	0.0415	***	0.00356	***	0.00263	**	0.00389	**	0.00143		0.00114	
	(0.00)		(0.00)		(0.00)		(0.00)		(0.00)		(0.00)		(0.00)	
Unemployment rate	9.128		-8.752		0.751		-2.875		0.551		-0.492		-0.393	
	(11.24)		(10.83)		(0.78)		(2.28)		(2.71)		(4.26)		(4.24)	
Federal aid	1.015	***	1.237	***	0.0452	**	-0.0248		0.056	***	0.41	***	0.298	***
	(0.09)		(0.06)		(0.02)		(0.02)		(0.02)		(0.05)		(0.04)	
Severance taxes	22.55	**	44.71	***	-2.153		0.344		0.692		1.806		20.48	***
	(7.81)		(5.83)		(1.49)		(0.96)		(1.55)		(2.33)		(3.81)	
Liberal ideology	0.399		-2.026		0.291	*	0.641	*	-0.212		1.549	*	-0.205	
	(1.88)		(1.16)		(0.14)		(0.29)		(0.23)		(0.72)		(0.88)	
Divided government	38.88	**	36.42	**	6.152		2.694		7.982	*	6.977		21.54	
	(14.11)		(12.87)		(3.50)		(3.08)		(3.15)		(5.69)		(12.90)	

Notes: Estimator: two-way fixed effects OLS with Driscoll-Kraay robust standard errors (in parentheses). Constant, state and year fixed-effect coefficients are not shown in this table. *** Indicates significance at 1%, ** indicates significance at 5%, * indicates significance at 10%. Observations: 1,927.

In Table 3, we report the estimates for the TLI's impact on state revenue per capita, general expenditure per capita and its subcomponents per capita (welfare, highways, education, health, and state aid to local governments). The estimates in the first two columns of Table 3 indicate that the adoption of stricter legislative term limits (i.e. higher TLI values) increases state revenue and spending per capita, which is consistent with many previous findings. However, as first documented by Erler (2007), term limits may have a heterogeneous effect on the various components of state government spending, which we explore next. We find that average state healthcare spending and aid to local governments appear to rise significantly with stricter term limits, but state welfare spending tends to fall. These seemingly conflicting results are difficult to reconcile with any single theory on term limits. More theoretical work is needed on how term limits might affect legislators' preferences towards different government programs.

A variety of control variables also have significant effects on some spending categories (see Table 3). One of the more relevant regressors for this study is governor's last term in office, which appears to be negatively and significantly associated only with state healthcare spending. Interestingly, Leguizamon and Crowley (2016) observe a significant "lame duck" effect only when controlling for governors' age. Also noteworthy is the tax and expenditure limits (TEL) index, which appears to be positively and significantly associated with state healthcare spending, but negatively and significantly associated with welfare spending and aid to local governments. Not surprisingly, most categories of state spending appear to rise with GDP and federal aid, suggesting that these expenditure components behave like normal goods. The negative and significant coefficient for the log of population in most models might be indicative of the economies of scale in government provision of public services. A greater percentage of Caucasians in state populations is associated with significantly lower state welfare expenditures and higher health, education, and local aid spending. A higher percentage of older people in state population is associated with significantly higher state health and education expenditures. Our estimates also show that government spending on education, healthcare, and welfare rises as state populations become more liberal over time. A divided government appears to increase only transportation (highway) expenditures and the overall size of government.

In the next set of regressions, we examine the impact of the average legislative turnover rate (across two chambers) on the same fiscal variables. These estimates (available from the authors upon request) are not always in agreement with our TLI estimates shown in Table 3. While legislative turnover has a significant positive effect on state aid to local governments and a significant negative effect on welfare spending, which is similar to our TLI estimates, it has no significant effect on per capita state revenues or general expenditures and appears to significantly reduce state education spending, contrary to our TLI estimates. Like Uppal and Glazer (2015), we have good reasons to believe that the legislative turnover rate is endogenous in state economic and fiscal performance, which would make the aforementioned estimates biased and inconsistent.

To correct for these problems, in the next set of regressions we instrument the endogenous turnover rate with redistricting dummy (as in Uppal and Glazer) and our original term limit index (TLI). We use TLI as an instrument instead of Uppal and Glazer's term limit dummy because of TLI's better ability to capture term limit heterogeneity than a simple binary measure and its markedly better performance on the over-identification tests, which imply that TLI is a statistically valid instrument (i.e. exogenous and strongly correlated with turnover). As can be seen in Table 4, the Wu-Hausman endogeneity tests indicate that the average legislative turnover rate is indeed endogenous (except for highway spending[10] model), while Sargan over-identification tests show that the chosen instruments are valid.

[10]It is likely that legislative turnover can be completely unrelated to state transportation spending given this budget categorys long-term dynamics and significant dependence on federal aid. In this case, the apparent exogeneity and lack of statistical significance for legislative turnover in the transportation regression model makes intuitive sense.

Table 4: State Government Finances and Endogenous Legislative Turnover (1980-2010)

	General Expenditures		Total Revenues		Health		Education		Highways		Welfare		State Aid	
Turnover rate	7.49	***	5.254	***	0.804		0.0868		-0.0464		-4.698	***	10.43	***
	(2.10)		(1.66)		(0.50)		(0.44)		(0.33)		(1.00)		(2.01)	
Governor lame duck	10.47		12.42		-2.071		0.98		-8.491	**	-20.6	***	37.39	***
	(14.55)		(11.89)		(3.16)		(3.47)		(3.44)		(6.86)		(10.54)	
Tax & expenditure limits	2.286		6.595	***	1.582	***	1.281	***	0.0699		-1.395	*	-3.209	***
	(1.44)		(1.12)		(0.40)		(0.38)		(0.37)		(0.76)		(0.96)	
Log of population	-609.6	***	-675.8	***	52.27	**	-239.3	***	-80.71	***	-80.13		-49.21	
	(95.75)		(72.58)		(20.96)		(22.02)		(25.31)		(48.74)		(58.25)	
White population	7.506		14.1	**	3.773	**	6.152	***	3.256		-4.025		2.138	
	(8.51)		(7.14)		(1.80)		(1.96)		(2.03)		(4.63)		(5.26)	
Old population	55.26	***	37.33	**	15.25	***	17.55	***	-9.065	*	-27.8	***	23.17	**
	(21.27)		(18.42)		(4.04)		(3.77)		(4.66)		(9.86)		(11.52)	
GSP per capita	0.0299	***	0.0373	***	0.00228	***	0.00335	***	0.00228	**	0.00128		0.0045	*
	(0.00)		(0.00)		(0.00)		(0.00)		(0.00)		(0.00)		(0.00)	
Unemployment rate	27.9	***	4.753		0.554		-0.34		4.195	***	13.21	***	-9.949	**
	(6.60)		(5.61)		(1.45)		(1.35)		(1.41)		(3.02)		(4.66)	
Federal aid	0.825	***	1.104	***	0.0376	**	-0.0405	***	0.0526	***	0.442	***	0.170	***
	(0.09)		(0.04)		(0.02)		(0.01)		(0.02)		(0.06)		(0.04)	
Severance taxes	23.38	***	35.76	***	-0.879		1.459		2.664	*	9.055	***	9.203	***
	(5.72)		(6.42)		(1.07)		(1.03)		(1.54)		(2.36)		(3.35)	
Liberal ideology	1.974		-0.0308		-0.105		-0.0592		-0.301		1.549	***	2.545	***
	(1.37)		(1.07)		(0.25)		(0.25)		(0.28)		(0.57)		(0.81)	
Divided government	54.14	***	42.78	***	5.784	**	0.14		6.63	**	14.73	**	29.71	***
	(12.29)		(10.23)		(2.78)		(2.90)		(2.80)		(6.01)		(8.64)	
Sargan over-identification test, p-value	0.8097		0.76		0.9872		0.4558		0.67		0.2735		0.3121	
Hausman exogeneity test, p-	0.0001		0.001		0.0391		0.0252		0.817		0.0001		0.0001	

Notes: Estimator: two-way fixed effects OLS with Driscoll-Kraay robust standard errors (in parentheses). Turnover rate is instrumented with redistricting dummy and TLI. Constant, state and year fixed-effect coefficients are not shown in this table. *** Indicates significance at 1%, ** indicates significance at 5%, * indicates significance at 10%. Observations: 1,252.

The IV treatment of the turnover rate has produced estimates that are generally comparable to our TLI estimates. Namely, both TLI and turnover rate models indicate that state tax revenue, overall spending, and state aid to local governments tend to rise and welfare spending tends to fall with stricter term limits (i.e. greater legislative turnover). There is one noteworthy difference between the two sets of results though: the turnover rate in the IV model of state healthcare spending lacks significance in comparison to TLI, but its coefficient sign is still positive. The overall similarity of the estimates for the two different measures of legislative term limits suggest that stricter term limits tend to affect state budgets via increased legislative turnover.

However, there appear to be more differences between the TLI and turnover rate models in control variable estimates. As can be seen in Table 4, the "lame duck" governor now has a negative and significant effect on state highways and welfare expenditures, but a positive and significant effect on state aid to local governments. Thus, the gubernatorial term limit effects are more consistent with the legislative term limit effects in the IV model of legislative turnover. Interestingly, TEL limits appear to significantly increase state health and education expenditures, while lowering state welfare and local aid spending. Liberal ideology seems to significantly increase only state welfare and local aid spending. On the other hand, divided government appears to significantly increase every state fiscal measure except for education spending.

5 Summary and Discussion

Past research shows that states with legislative term limits tend to exhibit higher levels of state government spending, holding everything else constant. We analyze the latest available data and find that two different measures of term limits (our original TLI index and legislative turnover rate) have similar effects on state fiscal policies after correcting for endogeneity in legislative turnover. Namely, legislative term limits tend to increase state spending per capita, primarily due to higher healthcare expenditures and aid to local government, but tend to decrease state welfare spending per capita. The estimated impacts are both statistically and economically significant. For example, our estimates indicate that if a state adopts the strictest (lifetime) term limit, like the one in Oklahoma, its overall spending might increase on average by about 127 dollars per capita. Therefore, proponents of term limits may consider alternative solutions if they want to constrain government growth.

The similarity of our term limit index (TLI) and legislative turnover estimates reinforces our conclusion that stricter term limits affect state budgets through higher legislative turnover. The fact that similar estimates are obtained for two very different measures of term limits is very encouraging, especially since the main innovation of this paper is the development of an original index that seeks to capture the vast heterogeneity in legislative term limits using an annuity-like formula. We also find that our TLI scores higher on the Sargan over-identification test than the binary measures of term limits, which implies that TLI is exogenous to government spending and correlates strongly with the legislative turnover rate. For these reasons, we are confident that our estimates capture a causal impact of term limits on state budgets. Our IV estimates for legislative turnover rate, and by extension legislative term limits, are also consistent with our gubernatorial term limit estimates: both types of limits appear to reduce state highways and welfare expenditures, but tend to increase state aid to local governments.

Another novelty in our study is the analysis of how term limits may impact state aid to local governments, a previously overlooked budget category in this line of research. State aid is often a sizeable and dependable revenue source for local governments, which deliver important public services ranging from public health and safety to education. One of the interesting implications from our findings is that term limits may eventually lead to an increase in the net amount of public spending on education through higher transfers to local governments, about half of which goes to school districts in our sample. The literature on the intergenerational conflict suggests that in the area of school financing, retirees may reduce K-12 education spending particularly through their strong influence on the political process (Poterba, 1997; Tosun et al., 2012; Tosun, 2015).[11] Ponzetto and Troiano (2012) also argue that re-election incentives may force politicians

[11]The positive coefficient estimates for elderly population in the education regression models do not necessarily contradict the intergenerational conflict argument since the conflict is found to be more associated with retiree migrants. Some of the studies in the literature point to significant heterogeneity within the elderly age groups regarding attitude towards education

to underinvest in less visible but very important sources of long-term economic growth such as education. Our estimates indicate that stricter term limits are associated with a significant increase in state aid to local governments, while having no significant effect on state-level education spending.

State aid to local governments could also be viewed as a typical case of pork-barrel spending: local representatives in state legislature have all the incentives to lobby for more transfers to their home districts from the common state budget. Herron and Shotts' 2006 theoretical model predicts that term limits increase pork-barrel spending when it is very socially inefficient. Asako et al.'s 2011 theoretical model also predicts a rise in pork-barrel spending due to term limits reducing legislative seniority and they find evidence consistent with this prediction. Gamm and Kousser (2010) also argue that a higher legislative turnover induced by term limits should lead to more district-oriented bills, although they are unable to corroborate this hypothesis empirically. But it is logical to expect more aid spending in states with legislative term limits because legislators will likely come back to their home districts after their terms end (Sarbaugh-Thompson et al., 2004; Carey, 1996; Carey et al., 1998). In analyzing the determinants of state aid to local governments, Ladd (1991) finds that state policymakers do not appear to be sensitive to changes in local revenues when making state aid decisions. For these reasons, we think that it is term limits and not some other confounding factor that causes legislators to vote for more transfers to local governments.

More research is still needed in order to understand the behavior of local governments in response to term limits. For example, not much is known about how term limits might impact the distribution of state aid among local governments and school districts. There is also a need for more theoretical and empirical research on the relative effectiveness of term limits compared to tax and expenditure limitations. Future research should also examine the effect of term limits on state and local tax policies, which is an under-researched area in our opinion.

References

Acemoglu, D., Egorov, G., and Sonin, K. (2011). A political theory of populism. NBER Working Paper 17306.

Alt, J., Bueno de Mesquita, E., and Rose, S. (2011). Disentangling accountability and competence in elections: Evidence from US term limits. *Journal of Politics*, 73(1):171–186.

Amiel, L., Deller, S., and Stallmann, J. (2009). *The construction of a tax and expenditure limitation index for the US*. University of Wisconsin, Agricultural and Applied Economics Staff Paper Series No. 536, 33p.

Amiel, L., Deller, S., Stallmann, J., and Maher, C. (2014). Does the restrictiveness of state tax and expenditure limitations affect state revenues and expenditures? *International Journal of Public Administration*, 37(4):237–248.

Asako, Y., Matsubayashi, T., and Ueda, M. (2011). *Term Limits, Seniority, and Government Spending: Theory and Evidence from the US States*. Working Paper.

Bae, S. and Gais, T. (2007). The effects of state-level tax and expenditure limitations on revenues and expenditures. *Rockefeller Institute Policy Brief*.

Bae, S. and Jung, C. (2011). The effects of tax and expenditure limitation (TEL) stringency on the level of state expenditure and revenue. *International Review of Administrative Sciences*, 77(4):647–669.

Bails, D. and Tieslau, M. A. (2000). The impact of fiscal constitutions on state and local expenditures. *Cato Journal*, 20(2):255–277.

Berman, D. R. (2004). *The Effects of Legislative Term Limits in Arizona*. Morrison Institute for Public Policy, School of Public Affairs, College of Public Programs, Arizona State University.

Bernhardt, D., Dubey, S., and Hughson, E. (2004). Term limits and pork barrel politics. *Journal of Public Economics*, 88(12):2383–2422.

Berry, W. D., Berkman, M. B., and Schneiderman, S. (2000). Legislative professionalism and incumbent reelection: The development of institutional boundaries. *American Political Science Review*, 94(4):859–874.

Berry, W. D., Fording, R. C., Ringquist, E. J., Hanson, R. L., and Klarner, C. E. (2010). Measuring

spending (Tosun et al., 2012; Tosun, 2015).

citizen and government ideology in the US states: A re-appraisal. *State Politics & Policy Quarterly*, 10(2):117–135.

Berry, W. D., Fording, R. C., Ringquist, E. J., Hanson, R. L., and Klarner, C. E. (2012). State ideology data. https://rcfording.wordpress.com/state- ideology-data/.

Besley, T. and Case, A. (1995). Does electoral accountability affect economic policy choices? Evidence from gubernatorial term limits. *Quarterly Journal of Economics*, 110(3):769–798.

Besley, T. and Case, A. (2003). Political institutions and policy choices: Evidence from the United States. *Journal of Economic Literature*, 41(1):7–73.

Biglaiser, G. and Mezzetti, C. (1997). Politicians' decision making with re-election concerns. *Journal of Public Economics*, 66(3):425–447.

Cain, B. E. and Kousser, T. (2004). *Adapting to Term Limits: Recent Experiences and New Directions*. Public Policy Institute of California San Francisco, CA.

Carey, J. M. (1996). *Term Limits and Legislative Representation*. Cambridge University Press, Cambridge.

Carey, J. M., Niemi, R. G., and Powell, L. W. (1998). The effects of term limits on state legislatures. *Legislative Studies Quarterly*, 23(2):271–300.

Carey, J. M., Niemi, R. G., Powell, L. W., and Moncrief, G. F. (2006). The effects of term limits on state legislatures: A new survey of the 50 states. *Legislative Studies Quarterly*, 31(1):105–134.

Crain, W. M. and Muris, T. J. (1995). Legislative organization of fiscal policy. *Journal of Law and Economics*, 38(2):311–333.

Cummins, J. (2013). The effects of legislative term limits on state fiscal conditions. *American Politics Research*, 41(3):417–442.

Day, J. and Boeckelman, K. (2012). The impact of legislative term limits on state debt: Increased spending, flat revenue. *Politics & Policy*, 40(2):320–338.

Deller, S., Stallmann, J. I., and Amiel, L. (2012). The impact of state and local tax and expenditure limitations on state economic growth. *Growth and Change*, 43(1):56–84.

Dick, A. R. and Lott, J. R. (1993). Reconciling voters behavior with legislative term limits. *Journal of Public Economics*, 50(1):1–14.

Donovan, C. (2010). Direct democracy, term limits, and fiscal decisions in US municipalities. *Paper presented at the 49th Annual Meeting of the Western Regional Science Association, Sedona, AZ.*

Driscoll, J. C. and Kraay, A. C. (1998). Consistent covariance matrix estimation with spatially dependent panel data. *Review of Economics and Statistics*, 80(4):549–560.

Erler, H. A. (2007). Legislative term limits and state spending. *Public Choice*, 133(3-4):479–494.

Ferraz, C. and Finan, F. (2011). Electoral accountability and corruption: Evidence from the audits of local governments. *American Economic Review*, 101(4):1274–1311.

Friedman, D. and Wittman, D. (1995). Why voters vote for incumbents but against incumbency: A rational choice explanation. *Journal of Public Economics*, 57(1):67–83.

Gamm, G. and Kousser, T. (2010). Broad bills or particularistic policy? Historical patterns in American state legislatures. *American Political Science Review*, 104(1):151–170.

Gamm, G. and Kousser, T. (2011). Parties and pork: Historical evidence from the American states. APSA Annual Meeting Paper.

Garrì, I. (2010). Political short-termism: A possible explanation. *Public Choice*, 145(1-2):197–211.

Hall, A. B. (2014). Partisan effects of legislative term limits. *Legislative Studies Quarterly*, 39(3):407–429.

Hefner, F. L. and Burson, T. E. (1992). The determinants of regional infrastructure spending. *Regional Science Perspectives*, 22(2):19–29.

Herron, M. C. and Shotts, K. W. (2006). Term limits and pork. *Legislative Studies Quarterly*, 31(3):383–403.

Johnson, J. M. and Crain, W. M. (2004). Effects of term limits on fiscal performance: Evidence from democratic nations. *Public Choice*, 119(1-2):73–90.

Joyce, P. G. and Mullins, D. R. (1991). The changing fiscal structure of the state and local public sector: The impact of tax and expenditure limitations. *Public Administration Review*, 51(3):240–253.

Kalt, J. P. and Zupan, M. A. (1984). Capture and ideology in the economic theory of politics. *American Economic Review*, 74(3):279–300.

Kalt, J. P. and Zupan, M. A. (1990). The apparent ideological behavior of legislators: Testing for principal-agent slack in political institutions. *Journal of Law and Economics*, 33(1):103–131.

Keele, L., Malhotra, N., and McCubbins, C. H. (2013). Do term limits restrain state fiscal policy? Ap-

proaches for causal inference in assessing the effects of legislative institutions. *Legislative Studies Quarterly*, 38(3):291–326.

Knight, B. (2002). Endogenous federal grants and crowd-out of state government spending: Theory and evidence from the federal highway aid program. *American Economic Review*, 92(1):71–92.

Knight, B. G. (2000). Supermajority voting requirements for tax increases: Evidence from the states. *Journal of Public Economics*, 76(1):41–67.

Kousser, T. (2005). *Term Limits and the Dismantling of State Legislative Professionalism*. Cambridge University Press, Cambridge.

Krueger, A. O. (1974). The political economy of the rent-seeking society. *American Economic Review*, 64(3):291–303.

Ladd, H. F. (1991). The state aid decision: Changes in state aid to local governments, 1982-87. *National Tax Journal*, 44(4):477–496.

Leguizamon, J. S. and Crowley, G. R. (2016). Term limits, time horizons and electoral accountability. *Public Choice*, 168(1-2):23–42.

Lewis, D. C. (2012). Legislative term limits and fiscal policy performance. *Legislative Studies Quarterly*, 37(3):305–328.

Lopez, E. J. (2003). Term limits: Causes and consequences. *Public Choice*, 114(1-2):1–56.

Lott, J. R. and Bronars, S. G. (1993). Time series evidence on shirking in the US House of Representatives. *Public Choice*, 76(1-2):125–149.

Matsusaka, J. G. (1992). Economics of direct legislation. *Quarterly Journal of Economics*, 107(2):541–571.

Matsusaka, J. G. (1995). Fiscal effects of the voter initiative: Evidence from the last 30 years. *Journal of Political Economy*, 103(3):587–623.

Matsusaka, J. G. (2000). Fiscal effects of the voter initiative in the first half of the twentieth century. *Journal of Law and Economics*, 43(2):619–650.

Matsusaka, J. G. and McCarty, N. M. (2001). Political resource allocation: Benefits and costs of voter initiatives. *Journal of Law, Economics, and Organization*, 17(2):413–448.

Mitchell, M. and Tuszynski, N. (2012). Institutions and state spending: An overview. *Independent Review*, 17(1):35–49.

Mitchell, M. and Yakovlev, P. (2015). A house divided against itself cannot spend (as much): The fiscal effect of separate taxing and spending committees in state legislatures. Mercatus Working Paper.

Mitchell, M. D. (2010). T.E.L. it like it is: Do state tax and expenditure limits actually limit spending? Mercatus Working Paper.

Moncrief, G., Niemi, R. G., and Powell, L. W. (2008). Turnover in state legislatures: An update. Western Political Science Association Annual Meeting. San Diego, CA.

Moncrief, G., Powell, L., and Story, T. (2007). Composition of legislatures. In Kurtz, K., Cain, B., and Niemi, R., editors, *Institutional Change in American Politics: The Case of Term Limits*. University of Michigan Press, Ann Arbor.

Moncrief, G. and Thompson, J. A. (2001). Lobbyists' views on term limits. *Spectrum: Journal of State Government*, 74(4):13–15.

Moncrief, G. F., Niemi, R. G., and Powell, L. W. (2004). Time, term limits, and turnover: Trends in membership stability in us state legislatures. *Legislative Studies Quarterly*, 29(3):357–381.

Mooney, C. Z. (2007). Lobbyists and interest groups. In Kurtz, T., Cain, B., and Niemi, R., editors, *Institutional change in American politics: The case of term limits*, pages 119–133. University of Michigan Press, Ann Arbor.

Mooney, C. Z. (2009). Term limits as a boon to legislative scholarship: A review. *State Politics & Policy Quarterly*, 9(2):204–228.

Mullins, D. R. and Joyce, P. G. (1996). Tax and expenditure limitations and state and local fiscal structure: An empirical assessment. *Public Budgeting & Finance*, 16(1):75–101.

Mullins, D. R. and Wallin, B. A. (2004). Tax and expenditure limitations: Introduction and overview. *Public Budgeting & Finance*, 24(4):2–15.

Nicholson-Crotty, S. and Theobald, N. (2011). Claiming credit in the US federal system: Testing a model of competitive federalism. *Publius: The Journal of Federalism*, 41(2):232–256.

Payne, J. L. (1992). *The Culture of Spending: Why Congress Lives Beyond Our Means*. ICS Press, San Fransisco.

Peery, G. and Little, T. H. (2002). Leading when the bell tolls: Perceptions of power among termed and untermed leaders. In *Test of Time: Coping with Legislative Term Limits*. Lexington Books, Lanham.

Ponzetto, G. and Troiano, U. (2012). Social capital, government expenditures, and growth. Working Paper.

Poterba, J. M. (1994). State responses to fiscal crises: The effects of budgetary institutions and politics. *Journal of Political Economy*, 102(4):799–821.

Poterba, J. M. (1997). Demographic structure and the political economy of public education. *Journal of Policy Analysis and Management*, 16(1):48–66.

Poulson, B. (2005). *Grading the states tax and expenditure limits*. Americans for Prosperity Foundation, Washington DC.

Powell, L. W., Niemi, R., and Smith, M. (2007). Constituent attention and interest representation. In *Institutional Change in American Politics: The Case of Term Limits*, pages 38–54. University of Michigan Press, Ann Arbor.

Reed, W. R. (1994). A retrospective voting model with heterogeneous politicians. *Economics & Politics*, 6(1):39–58.

Reed, W. R. (2006). Democrats, republicans, and taxes: Evidence that political parties matter. *Journal of Public Economics*, 90(4-5):725–750.

Rothenberg, L. S. and Sanders, M. S. (2000). Severing the electoral connection: Shirking in the contemporary congress. *American Journal of Political Science*, 44(2):316–325.

Sarbaugh-Thompson, M. (2010). Measuring "term limitedness" in US multi-state research. *State Politics & Policy Quarterly*, 10(2):199–217.

Sarbaugh-Thompson, M., Thompson, L., Elder, C., Strate, J., and Elling, R. (2004). *The Political and Institutional Effects of Term Limits*. Palgrave Macmillan, New York.

Sarbaugh-Thompson, M., Thompson, L., Elder, C. D., Comins, M., Elling, R. C., and Strate, J. (2006). Democracy among strangers: Term limits' effects on relationships between state legislators in Michigan. *State Politics & Policy Quarterly*, 6(4):384–409.

Skidmore, M. (1999). Tax and expenditure limitations and the fiscal relationships between state and local governments. *Public Choice*, 99(1-2):77–102.

Smart, M. and Sturm, D. M. (2013). Term limits and electoral accountability. *Journal of Public Economics*, 107:93–102.

Stallmann, J. I. and Deller, S. (2011). State tax and expenditure limitations, business climate, and economic performance. *Public Budgeting & Finance*, 31(4):109–135.

Tien, C. (2001). Representation, voluntary retirement, and shirking in the last term. *Public Choice*, 106(1-2):117–130.

Tosun, M. S. (2015). Retiree migration and intergenerational conflict. *IZA World of Labor*. DOI 10.15185/iza-wol.118.

Tosun, M. S., Williamson, C. R., and Yakovlev, P. (2012). Elderly migration and education spending: Intergenerational conflict revisited. *Public Budgeting & Finance*, 32(2):25–39.

Uppal, Y. and Glazer, A. (2015). Legislative turnover, fiscal policy, and economic growth: Evidence from US state legislatures. *Economic Inquiry*, 53(1):91–107.

Will, G. F. (1992). *Restoration: Congress, Term Limits and the Recovery of Deliberative Democracy.* Free Press, New York.

Wright, G. C. (2007). Do term limits affect legislative roll call voting? Representation, polarization, and participation. *State Politics & Policy Quarterly*, 7(3):256–280.

Yakovlev, P. (2007). Ideology, shirking, and the incumbency advantage in the US House of Representatives. *Economics Bulletin*, 4(33):1–6.

Yakovlev, P. A. (2011). In uncertainty we trust: A median voter model with risk aversion. *Financial Theory and Practice*, 35(4):465–477.

Yakovlev, P. A., Tosun, M. S., and Lewis, W. P. (2012). Legislative term limits and state aid to local governments. IZA Discussion Paper No. 6456.