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Federal Spending and the Revolution of '94*

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Abstract

In 1994, the Republican party gained control of both houses of the U.S. Congress for the first time since 1954. We use panel data over the years 1983-2004 to analyze whether this change in party control affected the determinants of federal spending at the state level. There is little evidence that a presence in the house or senate majority yields a positive spending effect prior to the election of 1994, but a positive spending effect emerges after the Republican takeover. Surprisingly, there is evidence that spending became more redistributive (measured at the state level) in the later period.

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1. Introduction

The election of 1994 was a watershed in U.S. politics. With this election, the Republican party took control of both houses of Congress for the first time since 1954. The ramifications of the Republican takeover of Congress were far reaching, but in this paper we will focus on how this change affected the political determinants of federal spending. As such, we are writing in a long line of papers which have analyzed issues such as how the overrepresentation of small states in the senate or the way a state voted in the previous presidential election affects federal spending at the state level. We find some evidence that being in either the house or senate majority has a greater positive effect on spending after the Republican takeover. Another issue we address concerns the redistributionist nature of federal spending. We find that a state's income affects the level of spending it receives, even in categories which are not explicitly redistributionist. Perhaps surprisingly, there is fairly consistent evidence that spending became more redistributionist in the post 1994 period, when measured at the state level.

To conduct our analysis, we use panel data on federal spending at the state level over the period 1983-2004. We use data on aggregate spending as well as data on five separate spending categories. Many variables in our data set are trending over time, so we normalize variables where appropriate in order to remove the trends in the data.[1] This is important, because some political variables (like senators per capita) contain a trend, while political power itself does not trend over time. Also, it is not possible to accurately estimate the effects of income on state spending without accounting for the fact that income and spending are both trending upward over time.

[1] In doing this, we are following the work of Kawaura (2003).

2. Previous Literature

There is a large literature on the state level determinants of federal spending.[2] One strand of this literature concerns the determinants of New Deal spending. This literature starts with Wright (1974). Later work in this line includes Wallis (1998) and Fleck (2001, 2008). A major focus of the Wright paper is the influence of the president on federal spending. Wright finds evidence that the president targeted marginal states with federal spending. One other variable in this literature that has been found to be both significant and positively related to spending is senators per capita.[3] There has been a controversy over how to interpret the positive sign on this variable. Senators per capita is simply 2/population and there is reason to believe that the coefficient on this variable may reflect missing variables from the spending equation.[4]

As in Wright's work and the ensuing literature, we also include presidential variables in our empirical analysis. The President's veto allows him to bargain with Congress over spending allocations, and the executive branch has some discretion in allocating expenditure. Arnold (1990: 88) notes that members of the executive branch often serve as key players in the formation of legislative coalitions. Thus, there are multiple mechanisms by which the executive branch can influence the distribution of federal spending.

The literature emanating from Wright (1974) has focused on the New Deal, but a second strand of the literature has focused on more recent spending data. While there are some predecessors, much of this recent work stems from Atlas et al. (1995). This paper drew attention to the small state effect whereby smaller states obtain a higher level of spending due to their overrepresentation in the senate. Atlas et al. identify this effect by using senators per capita as an

[2] There is also a literature on district level spending which we will not review here. See, among others, Levitt and Snyder (1995).
[3] Wright used electoral votes per capita, which is simply senators per capita plus house representatives per capita.
[4] See the exchange between Fleck (2001) and Wallis (2001) and the discussion in Hoover and Pecorino (2005:96-98).

explanatory variable. They analyze spending in three categories (defense, entitlement and all other) and find a large spending bias towards small states. Hoover and Pecorino (2005) conduct a similar analysis with spending divided into five categories (retirement, wages and salaries, grants, procurement and other). They find that senators per capita has more explanatory power in categories where one would expect political influence to be more important. In particular, there is a large estimated effect on procurement spending. This suggests that the coefficient on senators per capita is picking up something other than just missing variables (as per the discussion above).

Lee (1998, 2000) has found that senate representation has positive effects on formula grant expenditure. Here political influence is felt through the writing of the formulas which determines the states that will benefit most from a given program.

There have been several analyses of the effects of representation on spending for bodies other than the U.S. Senate. For example, Ansolabehere, Gerber and Snyder (2002) provide evidence the reapportionment associated with the Baker v. Carr Supreme Court decision affected spending at the county level. In particular, formerly overrepresented counties received a smaller share of funds once representation was equalized. Other work has provided evidence that overrepresentation leads to greater district level spending in Japan (Horiuchi and Sato 2003, Kawaura, 2003), Germany (Pitlik, Schneider and Strotmann, 2006), and Canada (Evans, 2005).

Bickers and Stein (2000) analyze the effect of the Republican takeover of Congress after 1994. They compare spending between the 103rd and 104th Congresses. Their main finding is that the Republican takeover led to a large increase in contingent liabilities such as loan guarantees.

Larcinese, Rizzo and Testa (2006) analyze state level spending and like several papers discussed above, include senators per capita as an explanatory variable, but the focus of their

paper is on presidential variables. They find several of these to be significant including the party alignment between the president and the governor and the vote share for the president in the last election. Their results suggest that the president rewards states in which he won by a large margin. Hoover and Pecorino (2005) also include a wide range of variables, including presidential variables in their analysis. They also find some evidence that the governor's party alignment with the president results in more spending for the state. In contrast with Larcinese, Rizzo and Testa (2006), they find that states which the president lost narrowly receive more funds than either a state which either the president won or lost by a wide margin.

Our paper is most closely related to the work by Larcinese, Rizzo and Testa (2006), Hoover and Pecorino (2005) and Bickers and Stein (2000). As in Larcinese, Rizzo and Testa (2006) and Hoover and Pecorino (2005) we include presidential variables in our analysis. As in Bickers and Stein (2000), we are analyzing the effects of the Republican takeover of 1994. In particular, we use interactive dummies to determine whether our key political variables affected spending differently after the Republican takeover of Congress.

While the discussion above concerns the empirical literature on federal spending, it is also worth discussing some of the theoretical underpinnings of this literature. Ansolabehere, Snyder and Ting (2003) analyze a bicameral legislature in order to understand the circumstances under which a small state bias in spending could emerge. One chamber (the House) has equal representation, while the other (the Senate) does not. If the House is the agenda setter on spending bills, then we may not observe a small state bias in spending despite the malapportionment in the Senate. However, if the Senate has proposal power, if there is a

supermajority rule in the Senate or if spending is lumpy, then we may observe a bias towards small states.[5]

Mayhew (1974: 52-59) argues that congressional representatives will direct benefits towards their districts in order to enhance their reelection prospects.[6] This provides the motivation for focusing on membership in the house and senate majority in our empirical analysis. Mayhew's work suggests that both Republicans and Democrats will attempt to direct spending towards their districts. If this is so, then a presence in the house or senate majority should generate positive spending effects both before and after the Republican takeover, and there is no reason to expect differences in the magnitude of these affects across the two periods.

By contrast, the work of Sellers (1997) indicates that the benefit of directing federal funds to a district depends upon the consistency between the representatives voting record and the level of federal spending in the district. Fiscal liberals tend to be rewarded in districts with high levels of federal spending, while fiscal conservatives are rewarded in districts with low levels of federal spending. Sellers work suggests that we should be more likely to observe positive spending effects from being in the majority when the Democrats control Congress.[7] The theory of universalism (Weingast 1979) suggests that benefits of federal spending are widely spread to ensure overwhelming support for spending legislation. If this theory holds, then we should not expect to find strong effects of majority membership on state level spending.[8]

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[5] Other theoretical support for a small state effect may be found in Atlas, Hendershott, and Zupan. (1997).
[6] Also, see the work of Arnold (1990).
[7] We cannot provide a tight test of the fiscal consistency hypothesis as does Seller. He has district level data, while we have state level data. He also controls for the ideology using National Taxpayer's Union ratings. However, Republicans are much more likely to be rated as fiscal conservatives than Democrats. Thus, under the fiscal consistency hypothesis, Republicans would have less to gain from directing funds to their district.
[8] However, a later version of universalism (Weingast et al. 1981) suggests (under certain conditions) that universalism holds within, but not across parties. If this is so, majority status will matter for spending, but the predictions are no different than those derived from Mayhew (1974).

3. The Empirical Model

We have a panel of the 50 U.S. states with data on per capita federal expenditure from 1983-2004. We will describe the variables below in detail. A key aspect of the study is that we allow for a break in the relationship between spending and the political variables where the break coincides with the Republican takeover in 1994. We allow for this break through the use of an interactive dummy variable. Much of the analysis follows from Hoover and Pecorino (2005). Allowing for the break in the sample at the time of the Republican takeover is the key difference with this work though there are others.[9] Table 1 contains a description of our variables, while Table 2 provides descriptive statistics.

3.1. Normalization of the Data

Almost all of the papers in the literature have utilized regressions with the level of per capita spending on the left-hand side. However there are some potential problems with this analysis. Our panel is fairly long and several key independent variables contain trends. These include income, senators per capita, and land area per capita. In addition, the dependent variables are also trending over time.

To see why this may be a problem, consider the income variable. The very same income may make you a relatively rich state at the beginning of the sample, but a relatively poor state at the end. To the extent that redistribution takes place over the course of the entire sample, what matters is relative income at a point in time rather than the absolute level of income. There is a similar problem with the senators per capita variable. Suppose that this variable is indeed significant in explaining expenditure. The downward trend in the variable implies that the entire

[9] These include the following: Our sample extends to 2004, while the sample in their paper extends to 1999. In this paper we include a tenure variable, while their paper did not. To address the presence of trends, we normalize the data, a transformation which was not performed in the Hoover and Pecorino paper.

Senate has become less influential in the distribution of funds over time, if we use a level equation.

Political power is essentially zero sum in the sense that more power for one actor in the process means that some other actor now has less power. Moreover, the total amount of political power is not trending over time. Thus, a reasonable approach to the presence of trends in the data is to normalize the data to create shares which (in the aggregate) are stationary over time. In doing so, we are following the work of Kawaura (2003).[10]

For each spending category, the normalization involves dividing by the average level of spending in the category that prevailed in the year in question. The average level of spending in a category is computed as the unweighted average of spending in that category across the 50 states for the year in question. Thus, in the year 2000, per capita expenditure averaged $5591.42 country wide, while Mississippi received $6121.67 (both in 1998 dollars). Thus, Mississippi's normalized spending for 2000 is $6121.67/$5591.42 = 1.094.

Other variables are normalized in a similar fashion, where the level of the variable is divided by the unweighted average of the fifty states in the year in question. We have normalized all the variables which are trending over time. These include all the spending variables, income, percent elderly, senators per capita and land per capita. We have also normalized our tenure variables, because the importance of a given amount of service inherently depends upon how it compares to the tenure of others in your branch of the legislature.[11] Next, we will discuss our variables in more detail. Summary statistics for all our variables are provided in Table 2.

3.2. Dependent Variables

[10] Also see Pitlik, Schneider and Strotmann (2006).
[11] In using normalized tenure, we are following Mathews, Shughart and Stevenson (2006).

Our dependent variable is per capita federal expenditure by state measured in 1998 dollars. This data is from the Bureau of the Census and is divided into five categories: Procurement (PROCURE), wages and salaries (WAGES), retirement and disability (RETIRE), grants (GRANTS), and other direct payments (OTHER). A brief description of the contents of each category is provided in Table 1. These data cover virtually all federal outlays with the exception of interest payments on the debt.[12] We will run regressions using the total expenditure data (TOTAL) as well as the data broken down by category. This allows us to estimate the overall effect of a political variable, but also obtain a clearer idea of exactly which types of spending are being affected by these variables. These variables will be normalized so that each state's per capita level of spending in a category will be divided by the average level which prevailed in that category in the year in question. Table 3 shows spending by category for the year 2004, and gives the share of each category in total expenditure.

All of the spending categories above are "political" in the sense that they are determined in the political process. However, on a priori grounds, we should expect that the categories differ in the extent to which representatives are able to direct such spending to their district. If we use the term "political" in this more narrow sense, then RETIRE should be the least political category, while GRANTS and PROCURE should be the most political. Spending in WAGES depends upon the location of federal facilities and these decisions can be quite political. However, the location of facilities today may reflect, in part, political decisions taken in the fairly distant past. This may hamper uncovering the true relationships in this category. Spending in OTHER includes transfer programs which may not be highly susceptible to political influence,

[12] In addition, the location of certain defense procurements is classified, procurements under $25,000 are not allocated by location in the data set, and judicial and legislative branch procurements are not included.

but also includes categories such as agricultural subsidies, which are highly political in the sense used here.

3.3. Independent Political Variables

We include a large number of political variables in an attempt to capture both congressional and presidential influence over federal spending. As in much of the literature cited above, we include variables which reflect per capita representation in the senate (SENATE). This variable is normalized so that senators per capita in a state is divided by the average across all states for the year in question.[13] The tenure variable measures the average tenure of the delegation divided by the average of all delegations. This is done separately for the house (HTEN) and senate (STEN).[14] Other congressional variables include the percentage of the house delegation in the House majority party (HMAJOR) and the number of senators in the senate majority party (SMAJOR). The presidential variables include the number of senators in the party of the president (SENATEP), the percentage of the house delegation in the party of the president (HOUSEP), and a dummy variable indicating whether the state's governor shares party affiliation with the president (GOVP = 1 if governor is the same party as the president). All the independent variables listed thus far are lagged by one year to account for lag in the budget cycle. (The 1984 Congress sets the 1985 budget, etc.)

All the variables above are interacted with a time dummy in order to determine if their relationship with spending changed after the Republican takeover. This interactive dummy variable takes on a value of 1 beginning with expenditure in the year 1996. Keep in mind that the

[13] Hoover and Pecorino (2005) find that house members per capita is not a significant explanatory variable, so we have not included it in the analysis.

[14] There is a large literature on the role of tenure in federal spending. See Crain and Tollison (1977) and Mathews, Shughart and Stevenson (2006). The latter paper provides a review of the literature. For party switchers (e.g., Senator Shelby of Alabama) we count their tenure in their current branch of Congress, not their tenure with their new party.

Congress elected in 1994 is not seated until 1995 and its first budget is for the 1996 fiscal year. If Mayhew's (1974) view is correct, then members of both parties will seek to direct spending to their districts, and the change in party control will have no effect on this behavior (other than to change the party in power). Thus under this view, HMAJOR and SMAJOR would have positive spending effects in both periods, while the interactive terms for HMAJOR and SMAJOR would both be 0. If the theory of universalism is correct, then a presence in the house or senate majority should not be an important determinant of spending in either period. If the fiscal consistency theory is correct, then we should observe greater positive spending effects of HMAJOR and SMAJOR in the pre1994 period. This implies a negative coefficient on the interaction term for these variables.

We also include the number of the state's electoral votes (ELECTORAL), the absolute value of the margin of victory in the state in the most recent presidential election (MARGIN), and a dummy variable which indicates if the sitting president won the state in the last election (VOTE =1 if sitting president won the state). The VOTE and MARGIN variables are interacted to form the MARVOTE variable. If presidents reward states which voted for them, then the VOTE dummy variable will have a positive coefficient. If the president rewards states where the last election was close, then MARGIN will have a negative coefficient. With the MARVOTE variable we can distinguish the effect of MARGIN in states the president won by a narrow margin from those the president lost by a narrow margin.

We use the electoral votes based on the 1980 census until the 1991 budget year, electoral votes based on the 1990 census until the 2001 budget year and the electoral votes based on the 2000 census thereafter. Electoral votes serve as another scale variable. If the coefficient is negative then larger states receive less spending on a per capita basis.

Because presidential elections occur only every four years and reapportionment only every ten years, we have a limited number of observations for the VOTE, MARGIN and ELECTORAL variables. Thus, we do not use a time interaction for these variables.

3.4 Independent Control Variables

We also control for some key non-political variables. Among these is real state per capita income. Some spending is explicitly redistributive and therefore depends on income. Even spending which is not explicitly redistributive may in fact be a function of income. The elderly population will be an important determinant of spending for social security and Medicare, so we include the percentage of a state's population which is 65 and over as an explanatory variable. In order to control for possible scale effects in the provision of government programs, we include land area per capita (which is the inverse of population density). Each of these variables contains a trend, and so each is normalized.

3.5. Empirical Method

We present a panel estimation with state level fixed effects. The state-level fixed effects help us to control for factors, such as proximity to Washington, D.C., which are time invariant. The results of a Hausman test indicate that fixed effects, rather than random effects, is the appropriate empirical model. An F-test indicates that time fixed effects are jointly insignificant and so are not included in the analysis. Time fixed effects generally are significant in a level regression, as they partially control for the presence of trends in spending. Once the trends are removed, time fixed effects are no longer justified.

Since much of the literature presents results on the level of spending, we present these regressions in the appendix. These regressions include both state and time fixed effects.

4. Results

In subsection 4.1, we present results for variables which are not time interacted.[15] For time interacted variables, the results for the 1983-1995 period are presented in subsection 4.2, while results for 1996-2004 are presented in subsection 4.3.

4.1. Variables which are not time interacted

In this subsection, we will discuss variables which are not time interacted and which therefore have a single estimated coefficient over the 1983-2004 period. These include VOTE, MARGIN, MARVOTE and ELECTORAL.

In the total spending equation, the VOTE variable is significant at the 10% level and suggests that states which voted for the president received 1.1% less spending relative to the average. The only individual category for which this variable is significant is PROCURE (at the 10% level) where it is implied that a state voting for the president receives 5.3% less spending than the average state. The MARGIN variable has a negative point estimate in all the regressions, but never obtains statistical significance.

MARVOTE is positive and significant at the 5% level in both the TOTAL and OTHER equations and at the 10% level in WAGES equation. The magnitude of the coefficient is not very large. The coefficients on VOTE, MARGIN and MARVOTE imply that states which the president won by a large margin receive more spending than states the president barely won.[16] For example, a 50-50 state the president won receives 1.1% less spending relative to the average, while a state the president won by 10 percentage points receives a level of spending about .6%

[15] For all of our regressions we tested for autocorrelation using the Durbin-Watson test and for heteroscedasticity using the Lagrange multiplier test. The hypotheses that the residuals are serially uncorrelated and homoscedastic are never rejected. In addition, our results are not very sensitive to the exclusion of outliers.

[16] This agrees with the findings of Larcinese, Rizzo and Testa (2006).

below average.[17] The effect is greatest in OTHER, where a state the president won by 10 percentage points is estimated to receive spending 1.3% above the average. Overall, the effect of these variables is quite modest.

ELECTORAL is negative and statistically significant in the TOTAL equation, but in the individual categories, this is true only for RETIRE. Thus, it is not clear that this variable is picking up any real political effect. In addition, the estimated effect of ELECTORAL is small.

4.2. Time Interacted Variables 1983-1995

In this section we will discuss the coefficients for time interacted variables for the period 1983-1995.

The presidential variables GOVP, HOUSEP and SENATEP are statistically and economically insignificant in the TOTAL equation. However, there is evidence that these variables explain spending in some of the individual categories. The estimate in the GRANTS regression indicates that each additional senator aligned with the president raises grants spending by 2.2% above the average. The point estimate on HOUSEP indicates that moving from a delegation where 0% share party affiliation with the president to 100% raises grant spending 4.8% relative to the average. There is some evidence from PROCURE and WAGES that a governor's alignment with the president increases spending. In particular, the point estimate indicates that states where the governor is aligned with the president receive 5.2% more in procurement spending relative to the average.

The HMAJOR variable is statistically insignificant (t-stat = 1.48) with a negative (and modestly sized) point estimate in TOTAL. It is statistically significant with a small negative coefficient in RETIRE. It is statistically significant in WAGES with a somewhat larger estimated

[17] This includes the negative coefficient on MARGIN, which is not statistically significant. If this is not included, then a state the president won by 10 percentage points would receive (approximately) an average level of spending.

coefficient. This coefficient implies that having a state move from 0% to 100% of its delegation in the house majority decreases spending in the OTHER category by 3.8% relative to the average. The coefficients in the other categories are fairly small and not statistically significant.

The estimated effect of having a senator in the majority is negative, small and not statistically significant in the TOTAL equation. The lack of statistical significance may reflect conflicting effects in the individual spending categories. Only in GRANTS is this variable estimated to have a positive effect, and this effect is statistically significant and of moderate size. In particular, it implies that moving from 0 to 2 senators in the majority raises grants spending by 2.6% relative to the average. SMAJOR is negative and significant in WAGES and OTHER. While the effect in WAGES is small, the estimated effect in OTHER indicates that moving from 0 to 2 senators in the majority reduces spending in this category by 3.2%. The estimated effect in other categories is smaller and not statistically significant.

In the total spending equation, tenure in the house (HTEN) is negative and significant, but the magnitude of the effect seems small. In particular, having a house delegation with tenure 30% above the average is estimated to reduce spending 1% below the average. The variable is negative in all categories and statistically significant in RETIRE and OTHER at the 5% level and in GRANTS at the 10% level. The estimated effects are fairly small, with the largest estimated effect coming in GRANTS.

Tenure in the senate (STEN) is positive, small in magnitude and statistically insignificant in the TOTAL equation. For two of the individual categories, the effect is estimated to be negative and one of these (RETIRE) is statistically significant (but rather small). The estimated effect is positive and statistically significant in PROCURE and WAGES. The effect in the PROCURE equation indicates that having tenure in the senate 30% above the average raises

spending by 1.9% above the average. The estimated effect in WAGES is about 1/3 of the effect estimated for procurement.

The SENATE variable reflects per capita representation in the senate. As discussed earlier, the SENATE variable may pick up the effects of missing variables. To have some confidence that the variable is reflecting political effects rather than missing variables, we would like to see larger estimated effects in categories that seem more political in nature. Thus, for example, if the estimated effect in a spending category is similar to the estimated effect of SENATE on retirement spending, then we could not have confidence that this is anything other than missing variables. When a large estimated coefficient is found in a political category (e.g., procurement) it should be kept in mind that part of the estimated effect may reflect missing variables.

The SENATE variable is positive and statistically significant in the TOTAL equation and the estimated effect is large. The coefficient implies that having 10% more senators per capita than the average raises spending by about 4.0% above the average. First note that in OTHER, the senate variable actually has a negative and significant (t-stat 1.92) estimated coefficient. The coefficient implies having senate representation 10% above the average lowers spending 1.8% relative to the average. The coefficient in the RETIRE equation is positive and statistically significant, though there is some reason to doubt that this truly picks up a representation effect. Relative to RETIRE, the estimated effect in OTHER is quite weak. On the other hand, the estimated effect of SENATE is quite strong in PROCURE and WAGES. The strongest effect of the senate variable is in the WAGES regression. The estimated effect implies that a 10% increase in senate representation results in an 9.1% increase in spending above the average. The second highest estimated effect is in PROCURE which is generally viewed as a politically sensitive

category. The estimated effect indicates that a 10% increase in senators per capita will raise procurement spending by 6.2% above the average.

Income is not statistically significant in the overall spending equation and has a positive point estimate. There is a positive effect estimated for RETIRE which is significant at the 5% level. In addition, a strong positive effect is estimated in WAGES which is not quite significant at the 10% level. Running counter to this is a strong negative effect estimated for OTHER (t-stat 1.76). This is to be expected, since this category includes several explicitly redistributionist programs. There is also a large negative point estimate for PROCURE, but the t-statistic is only 1.01. While we are measuring spending at the state and not the individual level, it is still surprising that we do not find redistribution on net during this period.

4.3. Time Interacted Variables 1996-2004

In this section, we will discuss the coefficients for the time interacted variables over the 1996-2004 period. Note that the total effect of each variable in this period is the sum of the coefficient which applies for 1983-1995 and the estimated interacted effect. When reporting the effect for the variables below, we will use the sum of the coefficients to describe the effect in the 1996-2004 period.[18]

The time interactions for GOVP, HOUSEP and SENATEP are all small and statistically insignificant in the TOTAL equation. There is a scattering of significance in the individual categories, but even when statistically significant, the estimated effects are usually quite small. An exception is SENATEP in PROCURE. For the 1996-2004 period, moving from 0 to 2

[18] We do this even if the estimated effect in the 1983-1995 period is not statistically significant. For example, the point estimate on HMAJOR is -0.017 for the 1983-1995 period, but this is not statistically significant at conventional levels. However, -0.017 remains our best estimate for the value of this parameter during this period. Even though the estimate is not statistically different from 0, it is not appropriate to treat it as if it equals 0.

senators sharing the same party as the president is estimated to increase procurement spending 6.4% above the average.

The interaction term for HMAJOR is large and statistically significant in the TOTAL equation. The estimated coefficients indicate that moving from a delegation which is 0% to 100% in the majority raises total spending 5.6% relative to the average. In the individual spending categories, the estimated coefficient is always positive and all the t-statistics are 1.2 or higher. The variable is significant at the 5% level for RETIRE and OTHER. The estimated effect in OTHER is large implying that a movement from 0% to 100% in the majority increases spending by 8.8% relative to the average. While the t-statistic is only 1.36, it should also be noted that the point estimate on the interaction term in the procurement equation is quite large. Taken together, the data suggest a spending effect related to membership in the house majority which is positive and moderately sized during the 1996-2004 period.

The SMAJOR interaction term is positive and significant in TOTAL, RETIRE and OTHER. While not statistically significant in PROCURE, the interaction term has a fairly large point estimate in this equation. In TOTAL, two senators of the majority party increases spending by about 1.2% above the average. In OTHER, the same change would result in a 2.7% increase in spending above the average. Overall, the spending effect from being in the senate majority is fairly small.

The interaction on HTEN is positive and significant in TOTAL. The coefficient is similar in magnitude to the negative coefficient for the 1983-1995 period. Thus, for 1996-2004 total spending is essentially unrelated to the tenure of the House delegation. The variable is statistically significant in all individual categories except WAGES. In OTHER and RETIRE, the positive coefficient largely offsets a negative coefficient from the 1983-1995 period. In

PROCURE and GRANTS there is a positive net effect of tenure on spending in the 1996-2004 period. The coefficients imply that having tenure 20 – 25% above the average will raise spending about 1% above the average in these categories. The interaction for the STEN variable is near 0 in the total spending equation. The interaction is positive and statistically significant in GRANTS and RETIRE, but the estimated coefficients are quite small. Overall, the effects of tenure on spending are quite modest.

The time interaction of the SENATE variable is positive and statistically significant in the TOTAL equation, but its magnitude is small. It is positive and statistically significant in WAGES, GRANTS and RETIRE and negative and statistically significant in OTHER. In each case, the magnitudes are small.

The interaction term for income is negative and significant in the TOTAL equation. In the 1996-2004 period, a 10% increase in income above the average is associated with a .6% fall in spending. The interaction term is negative in all of the individual spending categories and statistically significant at the 5% level in three of them (RETIRE, GRANTS and PROCURE) and at the 10% level in one other (OTHER). The total effect estimated for PROCURE is quite large. It implies that a 10% increase in income above average lowers procurement spending by 5%. It should be noted, however, that the point estimate for the 1983-95 period is large and negative, but also very imprecisely estimated. The results for the GRANTS equation imply that a 10% increase in income above average lowers spending by .8%. Overall, there is fairly consistent evidence that federal spending became more redistributive (when measured at the state level) in the 1996-2004 period.

4.4. Discussion

The spending effect of having members of a state's house or senate delegation in the majority is not statistically different from 0 in the 1983-1995 period and the point estimates are negative. These effects become positive on net in the 1996-2004 period. In the later period, the total spending effects of being in the senate majority are fairly small, but the effects in the house are moderately large.

For both the house and senate, the effect is particularly large in OTHER. To try and gain some insight into the underpinnings of these results, Table 5 ranks states by their gain in normalized spending in this category. For each state, we calculated average normalized OTHER spending over the 1997-2004 period and subtracted average over the 1987-1994 period. The net gainers are on the left-hand side of the table and the net losers on the right. The states are arranged so that the magnitude of either the gain or loss is higher at the top of the table and lower at the bottom. A striking aspect of the table is that the gainers are dominated by the southern states, while the losers are dominated by plains and midwestern states. Nine of the ten biggest gainers are southern states (counting Kentucky as a southern state). For the top ten, the gains range from 10% - 30% of average spending in this category. While Table 5 is quite suggestive, given the level of aggregation in the data, we cannot pinpoint the precise source of the changes in spending which are occurring.[19] This is an area where additional empirical work, perhaps using more disaggregated data, would be useful.

None of the theories we discussed earlier is supported by the pattern of coefficients we observe in the data. If Mayhew's (1974) view is correct, then we should observe positive coefficients on HMAJOR and SMAJOR in both periods, but we only observe positive coefficients in the later period. If the theory of fiscal consistency is correct, then we should observe positive coefficients in the 1983-1995 period and a negative coefficient on the

[19] We have examined data on agricultural spending by state, but these data are not able to explain Table 5.

interactive terms for the 1996-2004 period. This is the exact opposite of the pattern we actually find. Universalism can be supported in the earlier period, when the coefficients are not statistically different from 0, but not in the later period, when the coefficients on HMAJOR and SMAJOR are positive and statistically significant. The pattern of coefficients we observe is consistent with the idea that the post 1994 era has been more partisan than the preceding period. However, this case should not be overstated since the positive spending effects estimated in the later period are small to moderate in size.

The other striking effect picked up by a time interaction is that spending appears to be more redistributive (when measured at the state level) in the 1996-2004 period than it was during the 1983-1995 period. The magnitude of the change is moderately sized. The point estimate (which is rather imprecise) indicates that a great deal of redistribution takes place within the procurement category.

There is scattered significance for other interaction terms. Overall these affects appear to be rather minor, but there are some exceptions. For example, for the 1996-2004 period, it is estimated that moving from 0 to 2 senators aligned with the president raises procurement spending by 6.4% above the average.

5. Conclusion

Our results suggest that the political determinants of federal spending did change after the Republican takeover in 1994. The single most dramatic effect relates to membership in the house majority. In the 1983-1995 period, the percentage of a house delegations membership in the majority does not seem to be related to federal spending at the state level. While statistically insignificant, the point estimates for membership in the majority are in fact negative for the

1983-1995 period. In the 1996-2004 period, however, a significant positive effect is estimated under which moving from 0% to 100% in the majority raises total spending 5.6% relative to the average. Bear in mind that since small states may have only one representative in the house, we do observe states within the entire 0 – 100% range for membership in the majority. The strongest effect is found in the category OTHER, which includes direct payments to individuals other than disability and retirement. It remains for future work to pin down more precisely the spending within the OTHER category which is being influenced by membership in the house majority.

The other key finding is something of a surprise: When measured at the state level, we estimate that federal spending is more redistributive after the Republican takeover than before. We find a very strong redistributive effect in procurement, a spending category which is not explicitly redistributive. Again, more disaggregated studies would be useful in better understanding the nature of this redistribution.

One interpretation of the results is that they represent a breakdown of universalism; after 1995, party identification becomes more important to the distribution of funds than in the prior period. This may not have much to do with the Republicans per se, but rather may reflect the increased polarization across the two parties as has been documented by Poole and Rosenthal (1997). (Also see McCarty, Poole and Rosenthal, 2006.) This will become clearer in the future as additional data on the period of renewed Democratic control of Congress becomes available.

Changes in the political determinants of federal spending are just one of many significant changes which resulted from the Republican takeover of Congress in 1994. Based on our results, the effect of the takeover appears to be both real and large enough in magnitude to be of importance.

References

Ansolabehere, Stephen, Alan Gerber, and James M. Snyder Jr. 2002. “Equal Votes, Equal Money: Court-Ordered Redistricting and Public Expenditure in the American States.” *American Political Science Review* 96: 767-777.

Ansolabehere, Stephen, James M. Snyder Jr., and Michael M. Ting. 2003. “Bargaining in Bicameral Legislatures: When and Why Does Malapportionment Matter? *American Political Science Review* 97: 471-481.

Arnold, R. Douglas. 1990. *The Logic of Congressional Action*. New Haven: Yale University Press.

Atlas, Cary M., Thomas A. Gilligan, Robert J. Hendershott and Mark A. Zupan. 1995. "Slicing the Federal Government Net Spending Pie: Who Wins, Who Loses, and Why." *American Economic Review* 85: 624-9.

Atlas, Cary M., Robert J. Hendershott and Mark A. Zupan. 1997. "Optimal Effort Allocation by U.S. Senators: The Role of Constituency Size." *Public Choice* 92: 221-9.

Bickers, Kenneth N. and Robert M. Stein. 2000. “The Congressional Pork Barrel in a Republican Era.” *Journal of Politics* 62: 1070-1086.

Crain, W. Mark, and Robert Tollison. 1977. “The Influence of Representation on Public Policy.” *Journal of Legal Studies* 6: 355-361.

Evans, Tom A. 2005. “The Impact of Representation Per Capita on the Distribution of Federal Spending and Income Taxes.” *Canadian Journal of Political Science* 38: 263-285.

Fleck, Robert K. 2001. "Population, Land, Economic Conditions, and the Allocation of New Deal Spending." *Explorations in Economic History* 38: 296-304.

Fleck, Robert K. 2008. “Voter Influence and Big Policy Change: The Positive Political Economy

of the New Deal." *Journal of Political Economy* 116: 1-37.

Hoover, Gary A. and Paul Pecorino. 2005. "The Political Determinants of Federal Expenditure at the State Level." *Public Choice* 123: 95-113.

Horiuchi, Yusaku and Jun Saito. 2003. "Reapportionment and Redistribution: Consequences of Electoral Reform in Japan." *American Journal of Political Science* 47: 669-682.

Kawaura, Akihiko. 2003. "Public Resource Allocation and electoral Systems in the U.S. and Japan." *Public Choice* 115: 63-81.

Larcinese, Valentino, Leonzio Rizzo, and Cecilia Testa. 2006. "Allocating the U.S. Federal Budget to the States: The Impact of the President." *Journal of Politics* 68: 447-456.

Lee, Frances E. 1998. "Representation and Public Policy: The Consequences of Senate Apportionment for the Geographic Distribution of Federal Funds." *Journal of Politics* 60: 34-62.

Lee, Frances E. 2000. "Senate Representation and Coalition Building in Distributive Politics." *American Political Science Review*.

Levitt, Steven D. and James M. Snyder, Jr. 1995. "Political Parties and the Distribution of Outlays." *American Journal of Political Science* 39: 958-80.

Mathews, Michelle, B., William F. Shughart, and Taylor P. Stevenson. 2006. "New Evidence on the "Small-State Bias" in Federal Spending." Manuscript, University of Mississippi.

Mayhew, David R. 1974. *Congress: The Electoral Connection*. New Haven: Yale University Press.

McCarty, Nolan, Keith T. Poole, and Howard Rosenthal. 2006. *Polarized America: The Dance of Ideology and Unequal Riches*. Cambridge MA: MIT Press.

McGillivray, Alice V., Richard M. Scammon and Rhodes Cook. 2001. America at the Polls 1960 – 2000. Washington D.C.: CQ Press.

Moore, John L., Jon P. Preimesberger and David R. Tarr. 2001. *Congressional Quarterly's Guide to U.S. Elections*. Washington D.C.: CQ Press.

Pitlik, Hans, Friedrich Schneider and Harold Strotmann. 2006. "Legislative Malapportionment and the Politicization of Germany's Intergovernmental Transfer System." *Public Finance Review* 34: 637-662.

Poole, Keith T. and Howard Rosenthal. 1997. *Congress: A Political-Economic History of Roll Call Voting*. New York: Oxford University Press.

Sellers, Patrick, J. "Fiscal Consistency and Federal District Level Spending in Congressional Elections." *American Journal of Political Science* 41: 1024-41.

Wallis, John J. 1998. "The Political Economy of New Deal Spending Revisited, Again: With and without Nevada." *Explorations in Economic History* 35: 140-70.

Wallis, John J. 2001. "The Political Economy of New Deal Spending, Yet Again: A Reply to Fleck." *Explorations in Economic History* 38: 305-14.

Weingast, Barry R. 1979. "A Rational Choice Perspective on Congressional Norms." *American Journal of Political Science* 23: 245-262.

Weingast, Barry R., Kenneth A. Shepsle, and Christopher Johnsen. 1981. "The Political Economy of Benefits and Costs: A Neoclassical Approach to Distributive Politics." *Journal of Political Economy* 89: 642-664.

Wright, Gavin. 1974. "The Political Economy of New Deal Spending: An Econometric Analysis." *Review of Economics and Statistics* 59: 30-8.

TABLE 1 -Definition of Variables

Independent Variables

Demographic

INCOME	State personal income estimates. In 1998 dollars.[a]
ELDERLY	Percent of population 65 years old and over.[b]
LANDAREA	Square miles of land area in state per million of population.

Political

ELECTORAL	State electoral vote counts from 1980, 1990, and 2000 census.[b]
SENATE	Senators per million of population.[c]
GOVP	Governor in same party of sitting president (1 = same party, 0 otherwise).
HOUSEP	Percentage of house delegation in same party as sitting president.
SENATEP	Number of Senators in same party as president.
HMAJOR	Percentage of House delegation in majority party.
SMAJOR	Number of Senators in majority party.
VOTE	Sitting president won state in last election (1 = sitting president won state, 0 otherwise).[d]
MARGIN	Absolute value of margin of victory in most recent presidential election.
HTEN	Average tenure of state congressional delegation (in years).[e]
STEN	Average tenure (in years) of senators.

Dependent Variables

TOTAL	Federal per capita expenditure by state from 1983 through 2004. In 1998 dollars.[f]
Sub Categories	
RETIRE	Federal employee retirement and disability benefits, social security payments, selected veterans programs.
OTHER	Direct payments to individuals other than for retirement and disability.
WAGES	Salaries to Department of Defense, Office of Personnel Management, Postal Service, and the Coast Guard.
GRANTS	Fellowships, scholarships, research grants, training grants, evaluations grants, survey grants, and others.
PROCURE	All federal government procurement contracts excluding amounts for procurement in foreign countries.

Sources: [a.] U.S. Department of Commerce Department of Economic Analysis Regional Accounts Data. [b.] U.S. Census Bureau. [c.] *Congressional Quarterly's Guide to U.S. Elections*. [d.] *America at the Polls 1960 -2000*. [e.] Data from Inter University Consortium for Political and Social Research (ICPSR) [f.] U.S. Census Consolidated Federal Funds Report.

TABLE 2
Summary Descriptive Statistics for years 1983 through 2004

	Mean	Standard Deviation	Minimum	Maximum
INCOME	24,100.82	4,197.47	14098.84	39,512.09
ELECTORAL	10.699	9.241	3.000	55.000
ELDERLY	12.381	2.065	2.868	18.556
SENATE	1.014	1.028	0.056	4.918
LANDAREA	70,747.54	85,161.50	1044.90	571,951.30
GOVP	0.427	0.494	0.000	1.000
HOUSEP	0.466	0.290	0.000	1.000
SENATEP	0.995	0.777	0.000	2.000
HMAJOR	0.566	0.284	0.000	1.000
SMAJOR	1.059	0.773	0.000	2.000
VOTE	0.732	0.442	0.000	1.000
MARGIN	0.140	0.105	0.000	0.522
HTEN	8.491	3.959	1.000	32.000
STEN	12.020	6.625	1.000	42.000
TOTAL	5,372.50	1,147.25	3,471.94	11,263.20
RETIRE	1,786.00	262.63	777.75	2,777.90
OTHER	1,047.73	377.30	244.08	3,779.65
WAGES	731.45	454.36	261.01	3,126.67
GRANTS	984.69	414.46	401.04	4,422.66
PROCURE	808.71	601.85	154.72	4,074.37

TABLE 3

Federal Expenditures by Category for year 2004

	TOTAL	RETIRE	OTHER	WAGES	GRANTS	PROCURE
2004 Federal Expenditures[a]	$1,829	$570	$402	$189	$391	$276
Per Capita	$6,231.95	$1,941.92	$1,370.10	$646.81	$1,333.31	$939.80
% of Total Spending	100%	31.16%	21.97%	10.33%	21.38%	15.09%

[a]For year 2004 expressed in billions of 1998 dollars.

TABLE 4a

Normalized Partial Regression Results for Per Capita Federal Expenditures by Category[a]

	TOTAL	RETIRE	OTHER	WAGES	GRANTS	PROCURE
Intercept	0.626***	0.451***	0.292	1.172***	0.877***	-0.461
	(7.32)	(13.53)	(1.35)	(9.55)	(6.91)	(-1.09)
INCOME	0.057	0.073***	-0.246*	0.152*	0.029	-0.275
	(1.05)	(3.42)	(-1.76)	(1.92)	(0.36)	(-1.01)
ELECTORAL	-0.001**	-0.001***	0.001	-0.001	0.0002	0.001
	(-2.24)	(-3.72)	(0.85)	(-1.41)	(0.25)	(0.44)
ELDERLY	0.264***	0.568***	0.959***	-0.494***	-0.046	1.534***
	(4.66)	(25.72)	(6.66)	(-6.07)	(-0.56)	(5.48)
SENATE	0.401***	0.176***	-0.185*	0.914***	0.098*	0.619***
	(10.57)	(11.91)	(-1.92)	(16.74)	(1.75)	(3.30)
LANDAREA	-0.133***	-0.065***	0.043	-0.533***	-0.028	-0.100
	(-4.61)	(-5.83)	(0.59)	(-12.84)	(-0.66)	(-0.70)
GOVP	0.002	0.001	0.010	0.012*	-0.009	0.052**
	(0.55)	(0.88)	(0.93)	(1.84)	(-1.43)	(2.29)
HOUSEP	0.101	-0.003	0.009	-0.005	0.048***	0.004
	(0.97)	(-0.82)	(0.34)	(-0.33)	(2.96)	(0.09)
SENATEP	0.002	-0.0007	0.001	-0.001	0.021***	-0.024
	(0.76)	(-0.60)	(0.17)	(-0.42)	(4.55)	(-1.52)
HMAJOR	-0.017	-0.014***	-0.004	-0.038**	-0.018	0.021
	(-1.48)	(-3.09)	(-0.15)	(-2.27)	(-1.06)	(0.38)
SMAJOR	-0.004	-0.0009	-0.015**	-0.008**	0.013***	-0.016
	(-1.40)	(-0.82)	(-2.15)	(-1.99)	(3.04)	(-1.15)
VOTE	-0.011*	-0.002	-0.009	-0.002	-0.008	-0.052*
	(-1.74)	(-0.84)	(-0.58)	(-0.28)	(-0.91)	(-1.66)
MARGIN	-0.059	-0.017	-0.033	-0.043	-0.070	-0.138
	(-1.19)	(-0.92)	(-0.26)	(-0.61)	(-0.96)	(-0.57)
MARVOTE	0.107**	0.002	0.261**	0.122*	0.087	0.155
	(2.11)	(0.13)	(2.02)	(1.67)	(1.16)	(0.62)
HTEN	-0.032***	-0.005**	-0.050***	-0.001	-0.018*	-0.047
	(-4.89)	(-2.21)	(-3.05)	(-0.19)	(-1.91)	(-1.45)
STEN	0.003	-0.005**	0.010	0.022***	-0.008	0.064**
	(0.68)	(-2.40)	(0.71)	(2.71)	(-1.00)	(2.29)

[a]The *t*-statistics are presented in parentheses. All regressions include state. The complete estimation results are available from the authors. *,**,*** denote significance at the 10, 5, and 1 percent levels, respectively.

TABLE 4b

(Interacted with time) Normalized Partial Regression Results for Per Capita Federal Expenditures by Category[a]

	TOTAL	RETIRE	OTHER	WAGES	GRANTS	PROCURE
INCOME	-0.113***	-0.067***	-0.066*	-0.016	-0.110***	-0.222***
	(-7.95)	(-12.23)	(-1.85)	(-0.78)	(-5.24)	(-3.17)
SENATE	0.010***	0.005***	-0.045***	0.030***	0.014***	-0.014
	(2.90)	(4.09)	(-4.88)	(5.72)	(2.67)	(-0.79)
GOVP	0.0006	-0.004*	-0.002	-0.017*	0.008	-0.017
	(0.09)	(-1.81)	(-0.15)	(-1.74)	(0.80)	(-0.52)
HOUSEP	0.013	0.008	-0.009	0.020	-0.011	0.020
	(0.97)	(1.58)	(-0.26)	(1.02)	(0.54)	(0.29)
SENATEP	0.0004	0.004**	-0.018	-0.009	-0.009	0.056**
	(0.08)	(2.49)	(-1.43)	(-1.23)	(-1.31)	(2.24)
HMAJOR	0.073***	0.041***	0.092**	0.026	0.033	0.104
	(7.75)	(6.79)	(2.35)	(1.20)	(1.44)	(1.36)
SMAJOR	0.009**	0.005***	0.029**	0.0008	-0.003	0.035
	(2.05)	(2.87)	(2.39)	(0.12)	(-0.51)	(1.51)
HTEN	0.038***	0.019***	0.043**	0.001	0.060***	0.095**
	(4.92)	(6.16)	(2.16)	(0.17)	(5.14)	(2.44)
STEN	0.001	0.005**	0.014	-0.022**	0.027***	-0.032
	(0.19)	(2.18)	(0.83)	(-2.31)	(2.69)	(-0.95)
Adjusted R^2	0.9229	0.9733	0.8053	0.9846	0.9412	0.8707

[a]The *t*-statistics are presented in parentheses. All regressions include state. The complete estimation results are available from the authors. *,**,*** denote significance at the 10, 5, and 1 percent levels, respectively.

TABLE 5

Averaged Normalized Differences in Spending Category "OTHER"
Average 1997 – 2004 minus Average 1987 to 1994

Net Gainers			Net Losers		
Rank	**State**	**Difference**	**Rank**	**State**	**Difference**
1	LA	0.302	50	IA	-0.317
2	AL	0.203	49	MN	-0.290
3	NC	0.162	48	NE	-0.284
4	SC	0.151	47	ND	-0.211
5	MS	0.135	46	MT	-0.207
6	TN	0.135	45	KS	-0.196
7	FL	0.127	44	ID	-0.107
8	IN	0.125	43	WI	-0.099
9	KY	0.124	42	SD	-0.091
10	GA	0.103	41	ME	-0.086
11	WV	0.103	40	CO	-0.083
12	AK	0.101	39	MI	-0.078
13	PA	0.097	38	OR	-0.077
14	HI	0.093	37	M0	-0.073
15	DE	0.090	36	MD	-0.073
16	AZ	0.050	35	IL	-0.061
17	AR	0.041	34	VT	-0.022
18	NV	0.022	33	NY	-0.022
19	OK	0.021	32	NJ	-0.020
20	OH	0.015	31	CA	-0.017
21	UT	0.013	30	NH	-0.004
22	WY	0.007	29	RI	-0.003
23	VA	0.007	28	CT	-0.002
24	NM	0.006	27	TX	-0.001
25	WA	0.005			
26	MA	0.001			

Appendix – Level Regressions

As noted in the main text, several of the variables in the data set are trending, and this makes use of the data in levels somewhat problematic. However, since many analyses have been conducted with the level data, we present level regressions here for the purpose of comparison with earlier works and for comparison with the normalized regressions presented in the main body of the paper. The results are presented on Tables A.1a and A.1b which follow the format Tables 4a and 4b from the main body of the paper. Except for income, all coefficients have been rounded to the nearest whole number. These regressions were run with time and state fixed effects. Note that the senate variable measures senators per million population.

TABLE A.1.a

Partial Regression Results for Per Capita Federal Expenditures by Category[a]

	TOTAL	RETIRE	OTHER	WAGES	GRANTS	PROCURE
Intercept	1869***	798***	479**	1105***	-153	-279
	(4.11)	(12.58)	(2.42)	(9.68)	(-1.00)	(-0.80)
INCOME	0.0006	0.002	-0.019***	0.012***	0.016***	-0.016
	(0.04)	(1.34)	(-3.26)	(3.67)	(3.47)	(-1.58)
ELECTORAL	-8*	-2***	0	-3***	-2	-1
	(-1.75)	(-3.65)	(0.12)	(-2.63)	(1.15)	(-0.26)
ELDERLY	21791***	8214***	3862***	-4984***	4108***	10970***
	(7.90)	(21.36)	(3.21)	(-7.20)	(4.42)	(5.18)
SENATE	1016***	108***	86*	181***	277***	330***
	(9.37)	(7.12)	(1.82)	(6.66)	(7.60)	(3.96)
LANDAREA	-4198***	-49	1325**	-1185***	-4488***	762
	(-3.45)	(-0.29)	(2.50)	(-3.87)	(-10.92)	(0.81)
GOVP	35	4	6	-5	-3	33
	(1.31)	(0.97)	(0.52)	(-0.76)	(-0.37)	(1.59)
HOUSEP	121*	6	44	11	14	52
	(1.79)	(0.61)	(1.50)	(0.65)	(0.62)	(1.01)
SENATEP	6	0	6	1	16***	-18
	(0.33)	(0.09)	(0.75)	(0.22)	(2.60)	(-1.24)
HMAJOR	-12	-19*	-37	1	-37	69
	(-0.16)	(-1.89)	(-1.16)	(0.07)	(-1.49)	(1.24)
SMAJOR	-28*	-3	-11	-12***	8	-11
	(-1.69)	(-1.09)	(-1.47)	(-2.83)	(1.41)	(-0.89)
VOTE	-39	-16	-7	2	-7	-24
	(-1.06)	(-0.29)	(-0.44)	(0.25)	(-0.60)	(-0.87)
MARGIN	274	-30	92	-60	203**	74
	(0.93)	(-0.72)	(0.71)	(-0.81)	(2.03)	(0.33)
MARVOTE	425	9	260*	190**	44	-770
	(1.40)	(0.21)	(1.96)	(2.49)	(0.42)	(-0.33)
HTEN	-15***	-1**	-4*	0	-4**	-6*
	(-3.24)	(-1.96)	(-1.89)	(0.25)	(-2.42)	(-1.82)
STEN	8**	0	2	1*	-1	7**
	(2.56)	(-0.69)	(1.35)	(1.71)	(-1.21)	(3.00)

[a]The *t*-statistics are presented in parentheses. All regressions include state and time fixed effects. The complete estimation results are available from the authors. *,**,*** denote significance at the 10, 5, and 1 percent levels, respectively.

TABLE A.1.b
Time Interactions

	TOTAL	RETIRE	OTHER	WAGES	GRANTS	PROCURE
INCOME	-0.043***	-0.008***	-0.003	-0.006***	-0.006***	-0.017***
	(-7.27)	(-9.87)	(-1.38)	(-4.26)	(-3.34)	(-3.89)
SENATE	129***	19***	-19**	24***	77***	32*
	(5.79)	(6.20)	(-1.99)	(4.32)	(10.33)	(1.85)
GOVP	-7	-11**	13	-6	2	-2
	(-0.16)	(-1.97)	(0.75)	(-0.58)	(0.16)	(-0.06)
HOUSEP	-35	-1	-13	-18	14	-31
	(-0.41)	(-0.10)	(-0.35)	(-0.84)	(0.48)	(-0.46)
SENATEP	-8	5	-37***	-19**	-8	46**
	(-0.28)	(1.33)	(-2.91)	(-2.57)	(-0.83)	(2.03)
HMAJOR	180*	39***	181***	-67***	46	-15
	(1.85)	(2.86)	(4.28)	(-2.75)	(1.41)	(-0.20)
SMAJOR	38	8**	11	-2	-3	20
	(1.34)	(2.09)	(0.88)	(-0.32)	(-0.33)	(0.92)
HTEN	21***	3***	5**	-4***	12***	7
	(3.67)	(3.61)	(1.98)	(-3.13)	(6.20)	(1.48)
STEN	-4	1*	0	-3***	3**	-6**
	(-1.18)	(1.87)	(0.09)	(-2.99)	(2.41)	(-2.27)
Adjusted R^2	0.9330	0.9752	0.8824	0.9731	0.9416	0.8564

[a]The *t*-statistics are presented in parentheses. All regressions include state and time fixed effects. The complete estimation results are available from the authors. *,**,*** denote significance at the 10, 5, and 1 percent levels, respectively.