Public Choice **99:** 185–216, 1999.

Congressional distributive politics and state economic performance *

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Accepted 26 March 1997

Abstract. States that were represented by very senior Democratic congressmen grew more quickly during the 1953–1990 period than states that were represented by more junior congressional delegations. States with a large fraction of politically competitive House districts also grew faster than average. The first finding is consistent with traditional legislator-based models of distributive politics, the second with partisan models. We cannot detect any substantively important association between seniority, state political competition, and the geographic distribution of federal funds, so higher district-specific federal spending does not appear to be the source of the link between state economic growth and congressional representation.

When Senator Henry "Scoop" Jackson, the ranking Democrat on the Senate Armed Services Committee, died unexpectedly in September 1983, Roberts (1990) reports, the stock market values of defense contractors based in his home state of Washington declined. The share prices of contractors based in Georgia, the home state of the next-most-senior Democratic Senator on the committee, Sam Nunn, increased. When Senator George Mitchell of Maine announced his plan to retire from the Senate at the end of his current term, the *New York Times* reported that "the most agonizing part of his decision . . . was recognizing that his position enabled him to help his home state in ways that a freshman taking his place could not" (March 6, 1994, p. 11).

A vast empirical literature has examined the link between Congressional representation and the distribution of government-controlled economic benefits. Anecdotal evidence suggests that districts represented by some senior congressmen have received disproportionate shares of some types of federal spending. Pearson and Anderson (1968) provide a particularly compelling account of former congressman Mendel Rivers ("Rivers Delivers"), chair of the House Armed Services Committee, and his efforts to channel military

* We are grateful to Julie Berry Cullen for outstanding research assistance, to Steve Ansolabehere, Mark Crain, Alan Gerber, John Lott, Jeff Milyo, Sam Peltzman, Kim Rueben, Andrei Shleifer, James Snyder, Charles Stewart, seminar participants at Chicago, Harvard, the NBER, and Stanford, three anonymous referees, and especially to Keith Krehbiel and Barry Weingast for helpful discussions, and to the Center for Advanced Study in Behavioral Sciences and National Science Foundation for research support.

spending to his district. Yet systematic empirical studies of committee membership, congressional seniority and representation, and the distribution of spending, including Atlas et al. (1995), Crain and Tollison (1977, 1981), Goss (1972), Greene and Munley (1980), Kiel and McKenzie (1983), Ray (1980, 1981), Ritt (1976), Rundquist (1978), and Rundquist and Griffiths (1976), yield weak evidence on the link between representation and expenditures.

This paper re-examines the effect of congressional representation on the distribution of economic benefits from federal government actions. It differs from earlier empirical studies of distributive politics in two important ways. First, we analyze the effects of representation on an economic *outcome*, state per capita income growth, as well as on the geographic allocation of federal spending. Our approach recognizes the possibility that legislators affect constituent welfare in many ways besides the direct allocation of federal spending, for example by promoting regulatory and tax policies that are favorable to district interests.

Second, we develop empirical tests of recent theories, such as those developed by Kiewiet and McCubbins (1991) and Cox and McCubbins (1993), that highlight the role of congressional political parties as well as individual legislator interests in affecting distributive politics. Partisan models of legislative behavior suggest that the self-interest of legislators may be served by furthering the party's fortunes, even if that comes at some expense to their own district. This may require channelling resources to districts where the majority party holds a thin electoral majority so as to preserve the party's majority status. To test these models, we identify politically competitive districts and compare their economic performance with that of "safe" one-party districts.

Our results provide support for both non-partisan and partisan models of congressional distributive politics. States with a higher fraction of very senior Democratic members of the House of Representatives experience faster per capita income growth than states with less senior delegations, although we find no evidence of parallel effects for senior Senators. States with members on particularly influential House committees experience more rapid growth than other states. We also find that states in which the two major political parties are competitive, measured either based on congressional or presidential vote shares, also grow faster than less competitive states. These effects are not simply an artifact of one group of states growing faster than another; they are robust to our allowance for state-specific growth rates in our regression models. In spite of these effects of political variables on economic growth rates, we find no consistent association between political variables and the allocation of federal spending, leaving us without a convincing explanation of the correlation between political variables and economic growth.

The paper is organized as follows. The first section summarizes the models of congressional distributive politics that we attempt to test. Section two describes the data that form the basis for our analysis of congressional delegation composition, state political competitiveness, and economic growth in the 1953–1990 period. The third section presents our empirical results. The fourth section explores potential interpretations of these findings, focusing on whether seniority is a plausible cause of differential state growth rates, or whether causality is likely to run from economic growth to delegation seniority. Section five tests the hypothesis that seniority, committee membership, and the degree of political competition affect state growth through the geographic distribution of federal spending. Section six concludes.

1. Distributive politics and congressional institutions

Formulating and testing models of Congressional institutions and their effects on the geographical distribution of benefits from government programs has been an active subject of research in positive political economy during the last two decades. There are two broad categories of distributive models: nonpartisan models that emphasize incentives of individual legislators, and partisan models that focus on the incentives of congressional political parties. Shepsle and Weingast (1994) survey much of the work in both categories.

Nonpartisan distributive politics models maintain that legislators attempt to maximize their chances of re-election by maximizing the policy benefits accruing to their constituents. While recognizing that legislators have different amounts of influence over federal policies as a result of committee position and seniority rank, these models typically do not try to explain the origins of such differential influence. These models have spawned a substantial empirical literature studying geographic patterns in federal spending, in particular the effect of congressional committee assignments on these patterns.

These empirical studies suffer from two key limitations. First, representatives from districts with particular interests will be attracted to committees with control over policies that affect these interests. Farm state legislators are likely to serve on the Agriculture Committee, and their districts are likely to receive above-average levels farm support spending. This does not necessarily show that committee membership affects the allocation of spending. Second, the complex institutional structure of Congress, and the possibility of log-rolling and other types of coalition formation, make it difficult to identify influential members based solely on committee assignments.

Nonpartisan distributive politics models also have a conceptual limitation. They typically fail to explain how small legislative majorities can pursue programs that benefit their constituents at the expense of others. Weingast (1979)

formalized a model of "universalism" to explain how legislation with highly localized benefits might pass with near-unanimity. He identified conditions under which it would be in the rational self-interest of all legislators to participate in a unanimous coalition, rather than in a smaller majority coalition with more narrowly distributed benefits. Recent work, notably Baron (1991), has questioned the theoretical presumption that universal coalitions should emerge in legislatures and shown that particular structures of agenda control are likely to result in majoritarian rather than universalistic coalitions.[1]

Building on previous studies, we test two versions of the nonpartisan distributive politics model. One predicts that more senior legislators should be able to channel greater economic benefits to their constituents, while the second predicts that influential committee members, and not senior members *per se*, should capture benefits for their constituents. The two variants differ because the seniority hypothesis allows senior members to achieve favorable policy outcomes even if they do not serve on the committee with jurisdiction over a given program, as a result of bargaining as described in Fiorina (1981).[2]

Partisan distributive politics models, developed for example by Coker and Crain (1994), Cox and McCubbins (1993), Rohde (1991), and Snyder (1994), have called attention to the potential importance of political parties, rather than individual legislators, as key decision makers. A party's influence on policy rises discontinuously when it wins a majority in a legislative chamber. This can affect the career prospects of individual party members, who are more likely to win re-election if their party has greater control over policy outcomes. If legislators in a party are concerned with obtaining a legislative majority, and if resources (including the allocation of benefits from government programs) have a higher effect on the expected number of party members elected when they are allocated to highly-competitive political jurisdictions rather than "safe" districts, then legislators may vote to allocate resources to competitive districts.[3] Partisan distributive politics models therefore predict a different allocation of economic rewards than nonpartisan models.

2. Empirical framework and data construction

We explore the correlations between state economic growth, congressional delegation seniority, committee membership, and political competition. To motivate our analysis, assume that Y^0_{jt} denotes per capita personal income in jurisdiction j in year t in the absence of any economic effects of government activity. Let B_{jt} denote the per capita benefits of government activities, and model $B_{jt} = X_{jt} * \beta$, where X_{jt} is a vector of variables measuring legislator influence. B_{jt} includes any effects on jurisdiction income associated with

federal spending in the district, as well as the effects of regulations or other policies.[4]

Actual personal income is $Y_{jt} = Y^0_{jt} + B_{jt}$.

One could test for the effect of legislator attributes on personal income by estimating regression models of the form

$$Y_{jt} = X_{jt} * \beta + Z_{jt} * \gamma + \epsilon_{jt}. \tag{2.1}$$

The variables in Z_{jt} are controls for cross-sectional and time-series variation in the level of personal income absent government involvement, Y^0_{jt}, such as human capital, natural resources, and the physical capital stock. Because these factors are likely to be highly correlated over time and are difficult to measure, we assume that the lagged value of income in the jurisdiction, Y_{jt-1}, can be used as a proxy for $Z_{jt}*\gamma$. We therefore write

$$Y_{jt} - Y_{jt-1} = X_{jt} * \beta + \epsilon_{jt}. \tag{2.2}$$

If personal income per capita is measured in logarithms, this specification relates the growth rate of personal income per capita to variables that measure legislative influence. This equation forms the basis of our empirical work.[5]

Equation (2.2) implies that a state represented by a senior delegation grows more quickly in every year during which that delegation is in office. This can be contrasted with an alternative specification, $\Delta Y_{jt} = \Delta X_{jt}*\beta + \kappa_{jt}$, which would allow a one time increase in the income growth rate when the senior delegation took office, and a one time drop when it left office, but no effects in intervening periods. We have also investigated this alternative model, and discuss the results below.

We measure the growth rate of state real per capita personal income using data from the national income and product accounts, along with census data on state population. We obtain similar results using disposable income, rather than personal income, in defining the dependent variable. The growth rate of state per capita personal income averaged 2.1% between 1949 and 1990, with a standard deviation computed across all states and years of 3.7%. States in the South and the Northeast grew most quickly during this period, while states in the Midwest and North Central regions grew slowest. States in the South experienced the most rapid growth early in the sample period, while those in the Northeast grew quickly in the later years.

We focus on changes in state personal income, rather than congressional district income, for several reasons. First, data are reported more frequently on economic conditions at the state than at the district level. For congressional districts, data are only available from the decennial census, and analyzing these data is complicated by redistricting between census years.[6] Second,

state data may be better for capturing "spillover" benefits from a powerful legislator that accrue to residents outside his district. Finally, testing distributive politics models in the Senate requires use of state-level data.

We measure congressional delegation seniority using a semi-parametric estimation approach that imposes minimal restrictions on the relationship between our seniority variables and economic growth. We assign each member of the House (Senate) to one of eleven (seven) seniority categories. For the House, we define six categories for Democrats and five for Republicans since Democrats outnumbered Republicans in the House by an average of 81 over our sample period. Our categories correspond to the most senior 20 members of each party, then the next 40, then those with seniority ranks 61 to 100, etc. We construct eleven summary statistics for each state's congressional delegation seniority in each year, corresponding to the fraction of the state's representatives in each category.[7]

We follow an analogous procedure for the Senate with four Democratic and three Republican categories.

Figure 1 shows the average distribution of the 20 most senior House Democrats across state congressional delegations. The states with the highest average seniority concentrated in the South. Mississippi's delegation is the most senior on average, with over one quarter of its members in the most senior twenty. The next highest state, Texas, averages 17% of its congressmen in the top 20. The disparities between Southern and other states were most dramatic early in our sample period. Six states, Alabama, Arkansas, Georgia, Louisiana, Mississippi, and Texas, held 38% of the top 20 positions in the first half of our sample, compared with 22% in the second half.

The average growth rate of state per capita income over the 1953–1990 period is strongly positively correlated with the average fraction of the state's House delegation among the twenty most senior Democrats ($\rho = .42$). While suggestive, this correlation is *not* the basis for our subsequent empirical findings. We include state effects in most of our estimating equations, and therefore identify the relationship between seniority and growth solely using *over time, within state* variation in seniority.

We construct measures of committee-based influence by computing the fraction of delegation members on each of five particularly influential House committees: Agriculture, Appropriations, Armed Services, Public Works, and Ways and Means. We also calculate the fraction of the delegation members who are chairs or ranking minority members on these five committees. The correlation between DEM 1–20 and committee chairs is .59; that between DEM 1–20 and membership on the key committees is .30.

Unlike our nonparametric seniority measures, our measures of committee influence suffer from two limitations that have also plagued previous studies.

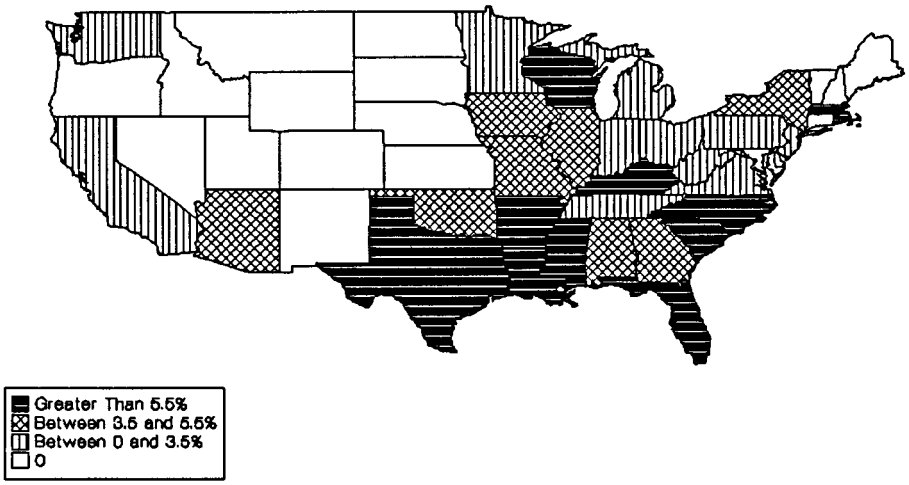

Figure 1. Average percentage of state House delegation among the twenty most senior Democratic representatives, 1953–1990

First, they focus on a somewhat arbitrary set of committees.[8] In addition, as noted above, it is possible that congressmen with particular constituent needs will gravitate to committees that oversee programs that affect those needs.[9] If districts with particular sources of economic activity, such as farm districts, have experienced above-average economic growth during our sample, this could lead to a spurious relationship between our growth rate measures and committee assignments.

We measure the degree of political competition in each state, our proxy for the partisan incentive to channel resources to the state, in two ways. First, we construct the absolute value of the difference between the state vote for the Democratic presidential candidate and the national average vote for that candidate in the last election.[10] States with vote outcomes equal to (far from) the national vote are highly (not very) competitive. Second, we count the share of congressional districts in the state in which the winning party received less than 60 percent of the votes cast. We construct separate variables for the fraction of a state's districts with Democratic vote shares between 40 and 49 percent, and the fraction with vote shares between 50 and 59 percent. The correlation between the 50–59 percent Democratic variable, and the competition measure based on presidential vote shares, is –.17, suggesting that these two variables capture distinct aspects of political competition. The negative sign on this correlation reflects the measurement convention for the two competition variables: the deviation from average presidential vote is large when competition is low, while the fraction of competitive districts is small in this case.

3. Distributive politics and state economic growth rates

Our basic regression model relates the growth rate in per capita personal income in state i in year t (Δ ln Y_{it}) to a set of state and time effects as well as variables for congressional delegation seniority, congressional committee influence, and state political competition:

$$\begin{aligned}\Delta \ln Y_{it} &= \delta_i + \eta_t + \beta * \ln Y_{i,t-1} + \Sigma_j \alpha_j * \text{SENIORITY}_{jit} \\ &+ \Sigma_j \gamma_j * \text{COMMITTEE}_{jit} + \Sigma_j \theta_j * \text{COMPETITION}_{jit} + \epsilon_{it}.\end{aligned} \tag{3.1}$$

The year effects (η_t) capture the national business cycle, and contribute to the relatively high explanatory power of the reported equations. We frequently include the lagged value of state per capita income, following the recent "convergence" literature summarized in Barro and Sala-i-Martin (1995). Because year-to-year variation in real income growth differs dramatically across states (the variance of North Dakota's annual growth rate is 25 times greater than New York's), we use a feasible generalized least squares procedure allowing for heteroscedasticity of the form $V(\epsilon_{it}) = \sigma_i^2$. We limit our sample to the 48 continental states.

3.1. *Full sample results*

We first study the relationship between income growth and seniority, and then we introduce measures of committee membership and state political competition. Table 1 reports estimates of equation (3.1), excluding the COMMITTEE and COMPETITION variables. The estimating equation in the first column excludes the lagged state income term and state fixed effects. The second column includes lagged state income, while the third column includes both the lagged income variable and state fixed effects.

The coefficient estimates in the first column show that states with a higher share of very senior Democratic congressmen grew faster during our sample than other states. The difference between the growth rate of a state with *only* top 20 Democrats in its delegation, and a state with a House delegation that is comprised entirely of Republicans with seniority below 140 (the "excluded group" in our regression specification), is 2.5% per year. Shifting one representative in a delegation of ten from the junior Republican to the senior Democrat group, slightly more than a one standard deviation change in the DEM 1-20 variable, would be correlated with a 0.25 percentage point increase in the state's income growth rate. The estimated effect of representation by senior Democrats is attenuated, but remains statistically significantly different from zero, when we include lagged state income in the growth rate specification (column 2).[11]

Table 1. Congressional seniority and state economic growth, 1953–1990

Explanatory variable (standard deviation)	Model 1	Model 2	Model 3
House			
Democrats 1–20	0.025	0.018	0.013
(0.084)	(0.006)	(0.006)	(0.008)
Democrats 21–60	0.016	0.013	0.002
(0.135)	(0.004)	(0.004)	(0.006)
Democrats 61–100	0.005	0.005	–0.005
(0.134)	(0.004)	(0.004)	(0.005)
Democrats 101–140	0.007	0.007	–0.001
(0.130)	(0.004)	(0.004)	(.005)
Democrats 141–180	0.004	0.004	0.000
(0.150)	(0.004)	(0.004)	(0.005)
Democrats 181+	0.010	0.010	0.007
(0.189)	(0.004)	(0.004)	(0.004)
Republicans 1–20	0.005	0.007	0.001
(0.084)	(0.006)	(0.006)	(0.008)
Republicans 21–60	0.005	0.005	–0.002
(0.158)	(0.004)	(0.004)	(0.005)
Republicans 61–100	0.003	0.003	–0.007
(0.166)	(0.004)	(0.004)	(0.004)
Republicans 101–140	0.005	0.004	0.000
(0.200)	(0.004)	(0.004)	(0.004)
Senate			
Democrats 1–10	0.000	–0.002	–0.002
(0.232)	(0.003)	(0.003)	(0.004)
Democrats 11–20	–0.002	–0.004	–0.005
(0.219)	(0.003)	(0.003)	(0.003)
Democrats 21–30	0.002	–0.000	0.001
(0.212)	(0.003)	(0.003)	(0.003)
Democrats 31+	–0.001	–0.001	–0.002
(0.312)	(0.002)	(0.002)	(0.002)
Republicans 1–10	–0.000	–0.001	–0.002
(0.221)	(0.003)	(0.003)	(0.003)
Republicans 11–20	–0.002	–0.002	–0.001
(0.226)	(0.003)	(0.003)	(0.003)
Republicans 21–30	–0.001	–0.002	–0.000
(0.227)	(0.003)	(0.003)	(0.003)

Table 1. continued.

Explanatory variable (standard deviation)	Model 1	Model 2	Model 3
$\ln Y_{i,t-1}$		0.017	–0.069
		(0.003)	(0.009)
State effects?	No	No	Yes
F-test: House Democrats	<.01	<.05	<.05
F-test: House Republicans	>.65	>.50	>.45
F-test: Senate	>.95	>.95	>.70
R^2	0.572	0.585	0.576

Notes: Estimates are based on data for 48 states, 1953–1990, N = 1824. All specifications include exhaustive year effects (so no constant term) and are estimated by a feasible GLS procedure described in the text. Standard errors are shown in parentheses. The standard deviation is the average of the annual standard deviations for the seniority variables. F-test values are significance bounds.

The results from estimating equations that do not include state fixed effects are subject to a spurious "South effect." During our sample period, Southern states were on average represented by more senior delegations in Congress, and these states grew faster than the nation as a whole, possibly for reasons unrelated to distributive politics. By allowing separate intercept terms for each state (Table 1, column 3), we control for the possibility that some states have faster-than-average growth rates during this period, and thus identify the coefficients only from *within state, over time* variation.[12] The point estimate of the effect of very senior Democrats on state personal income growth is smaller when state effects are included than when they are not, but it remains positive and marginally statistically significant.[13]

Figure 2 plots the estimated coefficients on the seniority variables from the model in the third column in Table 1, along with their one standard error bands. The left hand graph, for seniority of Democrats, shows that States represented by very senior Democrats have the highest growth rates. Through the middle ranks of seniority for Democrats, growth declines steadily. The most *junior* Democrats, however, fare better than some of their more senior colleagues, providing support for partisan models, which predict that resources will flow to marginal districts.

There is no evidence that states with senior, or junior, Republican representatives grow faster than other states. An F-test for the joint statistical significance of all of the coefficients for Republican representatives does not allow us to reject the null hypothesis that all of these coefficients are zero.

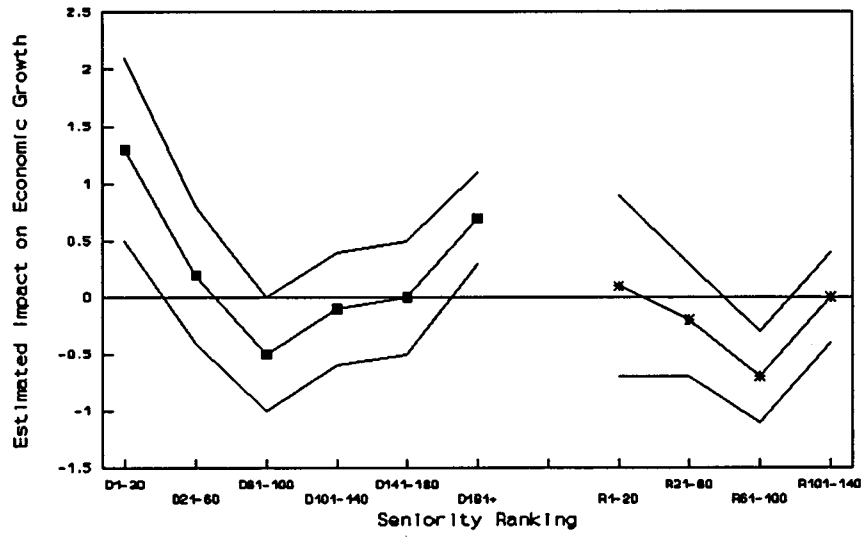

Figure 2. Effect of congressional seniority variables on state economic growth: Point estimate and one standard error bands

Similarly, we cannot reject the hypothesis that all of the coefficients on the Senate seniority variables are jointly zero. We also explored interaction variables that identified states with very senior House and Senate delegations; we found no effect beyond that of the House variables. We therefore limit our set of SENIORITY variables to those for House Democrats when we add COMMITTEE and COMPETITION variables; including the full set of seniority variables does not change the results.

Table 2 reports the results of adding the COMMITTEE and COMPETITION variables to the basic specification. The equation in column one provides mixed evidence of committee effects. The null hypothesis that all committee variables have zero coefficients can be rejected at the .10, but not the .05, confidence level. Public Works is the only committee membership that exhibits a strong positive correlation with personal income growth. The estimated coefficient, .011, implies that switching one House member's committee assignment from a non-influential committee to Public Works in a ten-member delegation will lead to an increase of 0.1% in annual state economic growth. This finding is consistent with Ferejohn's (1974) result that there is some geographical bias in public infrastructure spending toward the districts of Public Works committee members.

Table 2 column two includes the reduced set of SENIORITY variables as well as the two variables that measure a state's political competitiveness on the basis of its share of close-contest House seats. The COMPETITION

Table 2. Congressional seniority, committees, and state economic growth

Explanatory variable (standard deviation)	Model 1	Model 2	Model 3	Model 4
House seniority				
Democrats 1–20	0.012	0.014	0.015	0.012
(0.084)	(0.007)	(0.007)	(0.007)	(0.008)
Democrats 21–60	0.004	0.003	0.002	0.002
(0.135)	(0.004)	(0.004)	(0.005)	(0.005)
Democrats 181+	0.008	0.007	0.009	0.005
(0.189)	(0.002)	(0.003)	(0.003)	(0.003)
House committees				
Agriculture	0.002	…	…	0.003
(0.161)	(0.004)			(0.004)
Appropriations	–0.004	…	…	–0.006
(0.155)	(0.003)			(0.004)
Armed Services	0.004	…	…	0.007
(0.129)	(0.004)			(0.005)
Public Works	0.011	…	…	0.011
(0.123)	(0.004)			(0.005)
Ways & Means	0.005	…	…	0.001
(0.098)	(0.006)			(0.007)
Chairman	0.009	…	…	0.013
(0.042)	(0.012)			(0.013)
Ranking Member	0.020	…	…	0.018
(0.029)	(0.016)			(0.017)
Political competitiveness				
House vote 50–59%	…	0.006	…	0.007
Democrat (0.244)		(0.003)		(0.003)
House vote 40–49%	…	0.004	…	0.003
Democrat (0.256)		(0.002)		(0.003)
|PresVote-NatlAvg|	…	…	–0.024	–0.020
(% Democrat) (0.053)			(0.012)	(0.012)
ln $Y_{i,t-1}$	–0.078	–0.080	–0.078	–0.084
	(0.009)	(0.009)	(0.009)	(0.009)

Table 2. continued.

Explanatory variable (standard deviation)	Model 1	Model 2	Model 3	Model 4
F-tests:				
Seniority	<.01	<.05	<.01	<.20
Committees	<.10	...	...	<.10
Competitiveness	...	<.05	<.05	<.05
All political variables	<.01	<.01	<.01	<.01
R^2	0.610	0.608	0.608	0.614

Notes: Dependent variable is annual percent change in state per capita personal income. Estimates are based on data for 48 states 1953–1990, excluding 1969–1972 (due to Wallace presidential campaign) when the presidential political competitiveness is included in regressions. All specifications include exhaustive year and state effects (so no constant term) and are estimated by a feasible GLS procedure described in the text. Standard errors are shown in parentheses. The standard deviation is the average of the annual standard deviations for the seniority variables. Chair and ranking member variable reflect chairs and ranking members of only the five committees included in the regression. F-test value is the significance bound.

variables, particularly the fraction of House seats that were won by a Democrat with between 50 and 59% of the vote, are positively correlated with state growth rates. For a state with ten representatives, the estimates imply that switching one seat from a safe Democratic or Republican seat to a marginal Democratic seat is correlated with a 0.06% per year increase in the state's income growth rate. The point estimates suggest a larger positive growth effect in "politically marginal" districts that are controlled by Democrats than in those controlled by Republicans.

Table 2 column three reports estimates of an equation that includes the COMPETITION variable based on the Democratic share of the votes in the last presidential election.[14]

This variable also exhibits a statistically significant coefficient in the state growth equation. The estimated coefficient, –0.24, indicates that each five percentage points by which the Democratic candidate's vote share in the state deviates from the national average, roughly a one standard deviation change in this variable, is correlated with a decline of 0.01% per year in the state's growth rate.

Finally, the last column of Table 2 shows the effect of including the limited set of SENIORITY variables, the COMMITTEE variables, and both sets of COMPETITION variables in a single equation. The estimated coefficients are very similar to those in the earlier equations that focus on only subsets of

these variables. Including the COMPETITION and COMMITTEE variables has very little effect on the estimated SENIORITY effects.

To explore the robustness of our findings, we also estimate several regression models relating per capita personal income growth to other summary statistics on delegation structure. Including two indicator variables, set equal to one for states represented by the chairs or ranking minority members on our five key committees, in a specification otherwise like that in the third column of Table 1, yielded positive estimated growth effects. The point estimates (standard errors) are .017 (.011) and .017 (.016), respectively. We also tried including the percent of the state's House delegation that is Democratic; this variable has a substantial positive effect, with a coefficient of .0044 (.0022). The fraction of Democratic senators in the state delegation had a near-zero, and statistically insignificantly different from zero, effect on state growth. The percent of the state's House delegates on the five key committees we consider has a positive but statistically insignificant effect on state growth (coefficient of .0022, standard error .0021). These results generally support the findings in our preferred specifications, and suggest that there is an association between the structure of representation and economic growth rates.

3.2. *Caveats and objections*

One potential objection to our analysis concerns our focus on per capita rather than total income growth. If individuals can migrate costlessly in response to income differentials, then any policy that raises a jurisdiction's total income would lead to immigration, with no net effect on per capita income. Our coefficients might therefore under-estimate the effect of congressional representation on income growth.

Two factors lead us to doubt this interpretation. First, available evidence on migration elasticities, such as that presented in Blanchard and Katz (1992), suggests that income differentials are equilibrated by migration over a period of between five and fifteen years. In contrast, we are considering immediate effects of representation on economic growth. Second, we have estimated the regression equations in Table 2 with total rather than per capita income as the dependent variable. The point estimates on the SENIORITY and COMPETITION variables are smaller in this case, while the coefficients on the Agriculture, Armed Services, and Public Works committees are larger and more statistically significant than in the per capita income equations. These results do not correspond to the pattern one would expect in the case of systematic bias.

A second potential objection, and an issue we noted above, concerns our modelling growth rates as a function of the level of delegation variables, rather than their *changes*. We estimated, but do not report, models in which

current as well as lagged seniority and similar variables are included in the regression model; this specification is an unrestricted form of the difference model. These results suggest that the greatest effect of seniority on growth occurs when a congressman first becomes senior, and that a state that *was*, but is no longer, represented by a senior delegation grows slower than the average state. The net effect of a senior delegation, adding together both current and future growth rate effects, is similar to that in our equations with only the level of seniority and other delegation variables.

3.3. *Subsample results*

Congress has evolved during our sample period in ways that could alter the link between congressional representation and growth. First, relative party strengths in the Congress have varied. There was relative balance between the parties early in our sample, but the Democratic party held a comfortable majority in the House for most of the second half of our sample. Our sample ends in 1990, well before the shift to Republican control in the House that occurred in November 1994. Second, civil rights, a divisive issue within the Democratic party, became less important in the latter half of our sample, leading to increased concentration of power in the hands of Democrats vis-a-vis Republicans as the sample evolves. Third, as Reiselbach (1986) describes, the congressional reforms of the early 1970s reduced the importance of committee chairs, increased the influence of junior members, and shifted power toward members of the Steering and Policy Committee. Finally, the federal government's growing economic role over the last four decades has expanded the potential for political factors to affect state growth rates.

Table 3 tests sub-sample stability using the specification reported in Table 2 column four. The sample is divided in 1974, which coincides with substantial Congressional reforms as well as the first OPEC oil shock. We allow the coefficients on all of the political variables to differ between the first and second sample periods, but we constrain the coefficient on the lagged income variable, and the state effect coefficients, to be equal in the two periods.

The results in Table 3 suggest that states represented by senior Democratic delegations enjoyed faster-than-average economic growth in both sample periods, but especially in the period *since* 1974. This result is consistent with increased Democratic control of the House and growth in the scope of government, but surprising in light of the congressional reforms.[15] With respect to committee membership, there are several changes across sub-samples. Membership on the House Agriculture Committee was more strongly correlated with state growth in the early than in the later part of the sample period, and the value of members on the House Public Works and Armed Services Committees was larger for the post-1974 than earlier period. The coefficients

Table 3. Subsample estimates: Seniority, committees, and state economic growth

Explanatory variable	1953–1973	1974–1990
House seniority		
Democrats 1–20	0.003	0.022
	(0.011)	(0.010)
Democrats 21–60	0.004	0.001
	(0.006)	(0.008)
Democrats 181+	0.005	0.003
	(0.004)	(0.005)
House committees		
Agriculture	0.010	0.001
	(0.007)	(0.005)
Appropriations	–0.004	–0.011
	(0.004)	(0.007)
Armed Services	–0.005	0.021
	(0.006)	(0.007)
Public Works	0.005	0.015
	(0.006)	(0.006)
Ways & Means	–0.005	0.009
	(0.010)	(0.009)
Chairman	0.016	0.013
	(0.018)	(0.019)
Ranking Member	0.018	0.009
	(0.027)	(0.024)
Political competitiveness		
House vote 50–59%	0.007	0.009
Democrat	(0.003)	(0.005)
House vote 40–49%	0.007	–0.003
Democrat	(0.003)	(0.004)
|PresVote-NatlAvg|	–0.016	–0.016
(% Democrat)	(0.014)	(0.020)
$\ln Y_{i,t-1}$	–0.094	–0.094
	(0.010)	(0.010)

Table 3. continued.

Explanatory variable	1953–1973	1974–1990
F-test: Sub-sample stability		
Seniority	...	>.50
Committees	...	<.10
Competitiveness	...	<.25
All political variables	...	<.10

Notes: Dependent variable is annual percent change in state per capita personal income. Estimates are based on data for 48 states, excluding 1969–1972 (due to Wallace presidential campaign) when the presidential political competitiveness is included in regressions. Specification includes exhaustive year and state effects (so no constant term) and is estimated by a feasible GLS procedure described in the text. State fixed-effects are constrained to be constant across the two time periods. Standard errors are shown in parentheses. Chair and ranking member variable reflect chairs and ranking members of only the five committees included in the regression. F-test value is the significance bound.

on the political competitiveness variables are relatively stable across sample periods.

3.4. *Evaluating the association between representation and state economic growth*

To explore the substantive importance of the various political factors considered above, we develop several "what if" scenarios using the regression coefficients in the last column of Table 2. We first consider the effect of congressional seniority on state economic growth. For each state, we compute the difference in its predicted growth rate between the case in which DEM1–20, DEM21–60, and DEM181+ have their sample average values for that state, and the case in which these variables have their sample average values for all states. The first column of Table 4 presents the actual average state growth rates over the 1953–1990 period, and the second column shows the component of this growth that we attribute to deviations from average congressional seniority. Although we do not show standard errors, in most cases the predictions are accompanied by large confidence intervals. The effect of congressional seniority on economic growth is estimated to be less than 0.1% per year in all but five states. The states that appear to have benefitted the most from the House seniority system are Mississippi (+.30 percent per year), Texas (+0.18% per year), and Arkansas (0.18% per year).[16]

Table 4. The impact of political variables on state economic growth

State	Average growth	Impact of seniority	Impact of committees	Impact of marginality	Impact of all politics
Alabama	2.59%	0.01%	0.10%	–0.19%	–0.07%
Arizona	1.81	–0.03	–0.13	–0.00	–0.16
Arkansas	2.81	0.18	0.20	–0.16	0.22
California	1.75	–0.02	0.01	0.01	0.00
Colorado	1.93	–0.06	–0.04	0.15	0.04
Connecticut	2.16	–0.01	–0.11	0.21	0.09
Delaware	1.51	–0.02	–0.10	0.25	0.13
Florida	2.53	0.04	–0.02	–0.07	–0.05
Georgia	2.68	0.07	0.14	–0.27	–0.06
Idaho	1.74	–0.05	0.00	0.03	–0.02
Illinois	1.80	–0.02	0.05	0.03	0.06
Indiana	1.74	–0.02	–0.05	0.15	0.08
Iowa	1.97	–0.02	–0.00	0.10	0.08
Kansas	1.88	–0.09	–0.01	–0.06	–0.16
Kentucky	2.37	0.09	–0.02	0.01	0.08
Louisiana	2.17	0.09	0.07	–0.16	–0.01
Maine	2.38	–0.03	–0.03	0.08	0.02
Maryland	2.25	–0.00	0.06	0.04	0.10
Massachusetts	2.37	0.07	–0.07	–0.14	–0.14
Michigan	1.68	–0.05	–0.07	0.03	–0.09
Minnesota	2.29	–0.08	0.08	0.01	0.01
Mississippi	2.82	0.30	0.09	–0.31	0.08
Missouri	2.00	0.01	0.14	0.09	0.24
Montana	1.42	–0.02	0.04	0.06	0.08
Nebraska	1.94	–0.11	–0.11	–0.10	–0.31
Nevada	1.27	0.01	–0.17	0.04	–0.12
New Hampshire	2.62	–0.13	0.10	–0.01	–0.04
New Jersey	2.27	–0.04	–0.00	0.06	0.02
New Mexico	1.97	–0.01	–0.08	0.19	0.10
New York	2.02	–0.01	–0.01	–0.01	–0.03
North Carolina	2.69	0.07	0.05	0.03	0.16
North Dakota	2.45	–0.06	–0.23	–0.03	–0.32
Ohio	1.60	–0.05	–0.02	0.02	–0.06
Oklahoma	2.14	0.01	0.06	–0.03	0.03
Oregon	1.63	–0.04	–0.04	0.06	–0.03
Pennsylvania	2.00	–0.04	–0.02	0.04	–0.01
Rhode Island	1.98	0.08	–0.28	–0.06	–0.26
South Carolina	2.56	0.08	0.16	–0.14	0.10
South Dakota	2.44	–0.00	0.03	0.10	0.13
Tennessee	2.73	0.00	0.11	–0.09	0.02
Texas	2.08	0.18	0.04	–0.05	0.17

Table 4. continued.

State	Average growth	Impact of seniority	Impact of committees	Impact of marginality	Impact of all politics
Utah	1.62	–0.03	–0.15	0.03	–0.15
Vermont	2.58	–0.13	0.17	–0.11	–0.06
Virginia	2.64	–0.03	0.05	0.01	0.03
Washington	1.81	–0.06	–0.06	0.10	–0.02
West Virginia	2.09	0.03	0.12	0.02	0.16
Wisconsin	1.85	0.00	0.03	0.00	0.03
Wyoming	1.52	–0.07	–0.08	0.05	–0.10

Notes: Growth rate is the average state growth rate in real per capita personal income over the period 1953–1990. The impact of the political variables is computed by comparing the predicted growth rates given the actual values of the political variables in question to a scenario where all states are assigned the sample average of the variables in question. All computations are based on the coefficient estimates in the last column of Table 3.

We also calculate the effect of congressional committee assignments on state growth rates using a methodology similar to that for seniority. The resulting growth rate differences are shown in the third column of Table 4. There are more large estimated effects for the committee variables than for the seniority variables above. For example, Vermont is estimated to have grown 0.17% per year *faster*, and Arkansas 0.20% faster, as a result of having members on key House committees. Vermont's lone representative sat on either the Agriculture or Armed Services committee for most of the period. Arkansas has had an average of 9.6 percent of its delegation holding key committee chairmanships, the highest of any state. Finally, we consider the effect of political competition on state growth rates in the fourth column of Table 4. The substantive importance of the political competition variables is greater than that of the SENIORITY and COMMITTEE variables. Single-party states are estimated to have substantially lower growth rates than more competitive states. For example, our estimates imply that Alabama would have grown 0.19%, Georgia 0.27% and Louisiana 0.16% per year faster, if they exhibited the average degree of inter-party competition. At the other extreme, states that we classify as highly competitive, such as Colorado or Delaware, are estimated to experience large growth gains (0.15% and 0.25% per year, respectively).

3.5. *Changes in the house majority party*

The Democratic Party was the majority party in the House of Representatives

from 1954 until 1994. Our variables for senior congressmen from the majority party are therefore highly correlated with variables measuring strong Democratic party support. This is a potential problem if there are attributes of Democratic strongholds that also make them high-growth regions. Political events of the early 1950s provide a limited opportunity to investigate this problem, just as the events of the mid-1990s will ultimately provide another test.

The Democrats were the majority party in the 82nd Congress, elected in 1950, but the Republicans won control of the House in the 1952 election. The Democrats regained control of the House in the 1954 election. We investigate the effect of this change in party control by creating an indicator variable for 1953 and 1954 and interacting this variable and DEM 1–20 and REP 1–20 in our estimating equations. In an equation like that in the third column of Table 1, the interaction term for DEM 1–20 is –.051 (.036), while that for REP 1–20 is .037 (.031). On average, states represented by delegations with many senior Republicans experienced much faster growth during the 1953–4 period than during the rest of the sample period, while states with senior Democrats grew more slowly. The standard errors on the estimated coefficients are too large to support a definitive conclusion, but the results support the general findings above.

We have used our coefficient estimates to compute the predicted effect of the 1994 change in party control for various states. States with many senior Democratic representatives are predicted to experience lower growth rates prospectively, while those with many senior Republicans are predicted to gain. Using our estimated coefficients on the SENIORITY variables, we calculated the predicted impact on various states. If the correlation between SENIORITY and economic growth is a causal one, then the states that we predict will experience slower growth rates include Mississippi (–0.58 percent change in the annual growth rate of per capita income), Massachusetts (–0.28 percent), and Michigan (–0.31 percent). States that are predicted to gain include Alaska (+1.2 percent), Wisconsin (+0.18 percent), and Nebraska (+0.40 percent). Evaluating the effect of this change in party control several years hence should provide a strong post-sample test of the results presented in this paper.

4. Does politics affect growth, or growth affect politics?

A positive correlation between seniority or membership on a powerful committee and state economic growth is consistent with nonpartisan distributive politics models. The correlation between politically competitive states and growth rates is consistent with partisan distributive politics models. Such

correlations do not uniquely support these models of congressional decision-making, however. In particular, there are several alternative explanations for these findings that involve a "reverse causality" between economic growth and political variables. With respect to the association between legislator seniority and economic growth, it is possible that voters in states that experience more rapid economic growth are more likely to re-elect incumbent legislators, thereby inducing a positive correlation between growth rates and seniority. If district economic performance was *not* related to the vote for the incumbent, it is hard to understand why elected officials would exert effort to affect their district economy.[17] Yet this effect does not appear to explain our findings, which relate economic growth during the current year to the seniority of legislators who were elected one or two years ago.

The seniority of incumbents is, therefore, related to the past history of economic growth in the district, not the current growth rate. If there is serial correlation in state economic growth rates, and we fail to control for lagged growth, our coefficients may nonetheless be biased.[18] We can control for such effects directly by including lagged values of the state growth rate in our equations. We illustrate the findings by reference to the equation in the fourth column of Table 2; other specifications confirm the results. Without lagged growth rate terms, the coefficients on DEM1–20, DEM21–60, and DEM181+ are .012 (.007), .002 (.005), and .005 (.003), respectively. Adding six lagged values of annual state economic growth to this specification changes the House Democratic seniority variables to .013 (.008), .002 (.005), and .005 (.003), respectively. The lagged growth variables have statistically significant effects in predicting the current growth rate, but adding them to the model does not alter our estimated relationship between legislative influence and current economic growth.[19]

Another potential explanation for the correlation between legislator seniority and state growth is that states with more senior congressmen are more homogeneous than states with more junior delegations. A solid majority for a single party in a congressional district is a prerequisite for continued reelection of the same congressman, hence for seniority. If homogeneity is good for growth, a spurious correlation between seniority and growth could arise.

There are three reasons to doubt this explanation of our results. First, if homogeneity *per se* is the source of growth, then the coefficient on senior Republicans should also be significantly positive, yet we find no evidence for this. Second, our estimates that allow for state fixed effects in the rate of economic growth should capture factors such as state homogeneity. Finally, this alternative hypothesis conflicts with our finding that states with extreme values of either Democratic or Republican votes for presidential candidates,

or unusually high shares of safe districts, grow more slowly than politically competitive states.

It is also possible to construct alternative explanations of the relationship between state political competition and economic growth. Growth may affect a jurisdiction's political complexion, including the degree of competition between political parties. Districts and states that have been historic Democratic strongholds may experience an increase in their share of Republican voters if they undergo rapid economic growth. However, if the political marginality variables are simply picking up an increase in Republicans, then there would be no reason for the coefficient on Democrat controlled marginal seats to be greater than that of Republican controlled marginal seats, as we find that it is.

5. Seniority, political competition, and the allocation of federal spending

So far we have focused on state economic growth, a potential *outcome* of the political distribution of government benefits, rather than on potential *inputs* such as direct federal spending, regulations, and other federal policies that benefit some locations more than others. This section, following many previous studies, explores the hypothesis that geographical distribution of federal outlays is the mechanism linking congressional representation to economic growth. As we noted in the introduction, previous work has generated mixed conclusions on the links between political variables and spending outcomes.[20]

Different categories of federal spending are subject to different degrees of geographic control by politicians. At one extreme, federal payments to individuals and the transfer-related component of intergovernmental grants are determined by benefit formulae and the characteristics of a state's population such as the number of elderly or poor individuals. While legislators from districts that will receive substantial benefits from particular programs may be more likely to support these programs, it is extremely difficult to alter the geographical distribution of spending once the terms of the program have been set. At the other extreme, spending on military bases and some public works projects is more easily re-allocated across districts.

In fiscal year 1990, according to the Advisory Council on Intergovernmental Relations (1992), 50.8% of federal spending was direct payments to individuals. This includes Social Security, Medicare, food stamps, retirement benefits for federal employees, and a variety of other programs. The other components of total federal spending include procurement contracts (17.1%), salaries and wages for federal employees (14.9%), and intergovernmental grants (13.5%). Forty-two percent of the latter category consists of grants for AFDC and Medicaid.

Data on the state-by-state allocation of various components of federal spending are available for different sample periods. For direct payments to individuals, federal wages and salaries, and intergovernmental grants, we have data for the 1958–1990 period. Overall procurement spending data is only available beginning in 1982, so we instead use Department of Defense prime contract awards, which account for approximately 75 percent of overall procurement, and for which data are available since 1959. We also consider total federal outlays, but data for this aggregate are only available for the 1970–1990 period, with data missing in 1971 and 1977.

We estimate equations similar to those in the last section, substituting per capita federal spending (or a sub-category of spending) for economic growth rates as the dependent variable, maintaining the same independent variables. Table 5 presents estimates of these equations, with mixed results. For total federal outlays (column 1), the indicator variables for senior Democratic congressmen enter positively, but the estimated coefficients are not statistically significant. The point estimates for individual spending categories show both positive and negative effects, but the null hypothesis of zero effect is rarely rejected. Similarly, the coefficients on committee membership and committee rank do not exhibit any clear pattern. The variables measuring political competition based on congressional vote percentages do not suggest higher spending in more competitive states, while the analogous variable based on presidential vote share does suggest such an effect. For total spending and several spending categories, this effect is statistically significant.

The equations reported in Table 5 focus on the contemporaneous relationship between political factors and state economic growth. We also considered the possibility that *past* political variables could affect current spending, since there may be lags between authorizations, appropriations, and expenditures. Moreover, the geographic pattern in some spending may be the result of previous decisions, such as the location of military bases. We did not, however, find any systematic patterns when we added lagged political variables to our spending equations. We also estimated equations relating *changes* in spending to our SENIORITY, COMMITTEE, and COMPETITION variables, to recognize the possibility that current representatives might be unable to affect the history-based level of spending, but could affect increments to it. Virtually none of the political variables were statistically significant at standard significance levels in the spending change equations.

These results are puzzling in light of our earlier findings, for two reasons. First, since the political variables that are correlated with growth rates do not appear to be correlated with federal spending, these results raise the question of what explains the link between political factors and economic growth. Second, even when the estimated coefficients in the spending equations are

Table 5. The influence of political variables on state-specific federal spending

Explanatory variable	Total (1970–90)	Transfers (1959–90)	Federal wages (1958–90)	Federal grants (1958–90)	DOD contracts (1959–90)
House seniority					
Democrats 1–20	92	61	–55	13	–49
	(111)	(29)	(18)	(16)	(49)
Democrats 21–60	89	–29	21	–17	–7
	(87)	(19)	(12)	(11)	(31)
Democrats 181+	65	17	15	3	4
	(43)	(11)	(7)	(7)	(20)
House committees					
Agriculture	–11	–65	40	16	–62
	(68)	(16)	(10)	(9)	(28)
Appropriations	170	–27	48	6	–2
	(72)	(16)	(10)	(9)	(23)
Armed Services	–49	41	–4	7	46
	(82)	(17)	(12)	(11)	(33)
Public Works	185	8	66	–3	–26
	(71)	(19)	(11)	(10)	(29)
Ways & Means	203	–38	31	51	–139
	(88)	(21)	(15)	(13)	(39)
Chairman	93	77	44	68	–111
	(171)	(50)	(30)	(27)	(85)
Ranking Member	–274	104	10	12	–38
	(206)	(59)	(38)	(33)	(107)
Political competitiveness					
House vote 50–59%	–12	6	5	–10	–12
Democrat	(47)	(10)	(7)	(6)	(18)
House vote 40–49%	–69	11	11	–11	–25
Democrat	(39)	(9)	(6)	(6)	(17)
|PresVote-NatlAvg|	–772	–299	–28	–90	–14
(% Democrat)	(238)	(47)	(28)	(26)	(80)
$\ln Y_{i,t-1}$	9	–346	178	–101	290
	(168)	(37)	(23)	(21)	(57)

Table 5. continued.

Explanatory variable	Total (1970–90)	Transfers (1959–90)	Federal wages (1958–90)	Federal grants (1958–90)	DOD contracts (1959–90)
F-Tests:					
Seniority	>.35	<.01	<.01	<.20	>.75
Committees	<.05	<.01	<.01	<.01	<.01
Competitiveness	<.01	<.01	<.20	<.01	>.50
All political variables	<.01	<.01	<.01	<.01	<.05
R^2	0.885	0.988	0.953	0.910	0.728

Notes: Dependent variable is annual percent change in state per capita personal income. Estimates are based on data for 48 states, excluding 1969–1972 (due to Wallace presidential campaign). All specifications include exhaustive year and state effects (so no constant term) and are estimated by a feasible GLS procedure described in the text. Standard errors are shown in parentheses. Chair and ranking member variable reflect chairs and ranking members of only the five committees included in the regression. F-test value is the significance bound.

consistent with the growth effects in the last section, the magnitudes of the spending effects do not appear large enough to generate these growth effects. For example, using the estimates for total spending in the first column of Table 5, if ten percent of a state's House delegation consists of senior Democrats, rather than Republicans, the state is predicted to receive an extra $12 per capita in federal spending. If each dollar of federal outlays directed to a state generates an additional dollar of private income, then such a delegation shift would result in state income growth of $24 per capita. Since average per capita personal income was about $14,500 in 1990, this implies a spending-related increment to the *level* of state income of approximately 0.2%. That one-time change in the level of state income is smaller than the values implied by the growth equation coefficients in Tables 1 and 2.

6. Conclusion

This paper tests nonpartisan distributive politics models, which focus on the role of influential legislators on the benefits received by their jurisdiction, as well partisan distributive politics models that emphasize the role of congressional parties in the allocation of benefits. We find some support for both classes of models.

The critical shortcoming of our analysis is that we have not been able to trace the source of the growth-seniority relationship. In particular, we find much weaker relationships between spending and seniority than between

growth and seniority; this raises the question of whether the correlation between growth and political factors is the result of correlation with other omitted variables. Searching for such omitted factors, especially for correlates of state political competitiveness, is a natural direction for future work. Alternatively, the growth-seniority relationship may arise from factors other than spending that are under congressional control. Regulatory and trade policies, or tax rules, are potential examples. We are not aware of any quantitative measures of the impact of these policies on states or congressional districts, so we have not been able to construct appropriate empirical tests.

The findings in this paper suggest a number of directions for further research. One concerns the link between congressional institutions and the overall level of economic growth. While we focus on congressional representation and the distribution of economic growth, there may also be important interactions between congressional structure and the likelihood of enacting legislation that raises overall economic growth. There is a long-standing debate on the efficiency cost of pork-barrel type projects from the standpoint of the economy as a whole.

Another, more fundamental, question, is why voters ever elect representatives from parties that they expect will hold the minority position, or unilaterally impose term limits on their state's congressional delegation. If having senior representatives in the majority party is in fact correlated with more rapid state growth, then voters who elect representatives from the minority party are choosing lower growth. This may be explained by ideological preferences or other factors, but the interrelationships among these factors need to be formalized.

Notes

1. Universalism suggests a complex relationship between a legislator's committee assignment and policy outcomes, and in practice it has proven difficult to test such relationships. Recent attempts include Collie (1988), Krehbiel (1991), and Stein and Bickers (1995). Baron's (1989) study of congressional support for Amtrak is notable for the relatively clear evidence it provides for a majoritarian rather than universal coalition on a clear distributive politics issue.
2. Recent research, such as Weingast and Marshall (1988), Gilligan and Krehbiel (1990), and Krehbiel (1991), has focused on explaining the institutional structure of Congress. It is not clear whether data on the geographical distribution of economic benefits can differentiate among alternative theories.
3. Wright (1974) and Fleck (1994) suggest that FDR pursued such a strategy, allocating the benefits of New Deal programs toward marginal Democratic states.
4. We assume that spending raises support for the incumbent, despite Peltzman's (1992) claim that governors who spend more are penalized by the voters. His evidence is not inconsistent with the possibility that voters penalize legislators who vote for high levels

of overall government expenditure, while rewarding legislators who maximize the share of a fixed pool of federal dollars flowing toward their district.

5. Our analysis follows a voluminous literature on the determinants of economic growth rates, surveyed by Barro and Sala-i-Martin (1995).
6. If a congressman boosts economic activity, this may attract new residents to his district, and lead to a subsequent change in the district boundaries. This raises the possibility of non-randomness in the set of congressional districts with constant boundaries across redistricting years.
7. Our specification assumes that representatives in small and large states have the same ability to affect district income. To illustrate this, consider a one-representative state, with its lone representative in the most senior group of Democrats. Then DEM1–20 will equal 1.0, and the effect on state per capita income growth will be α_1. If a state has ten representatives, and one is in the most senior group, his effect on *state* per capita income growth will be $\alpha_1/10$. The value of DEM1–20 for a state with one such representative would be .10. In both cases, $d(\Delta \ln Y)/d(\text{DEM1–20}) = \alpha_1$.
8. The set of influential committees can vary over time. The House Ways and Means Committee was probably more powerful before the 1974 House reforms that shifted some of its functions to the Steering and Policy Committee.
9. Shepsle (1978) and Smith and Deering (1984) find that perceived constituent interests are the strongest determinants of committee requests by newly-elected members of the House. Krehbiel (1990, 1991) argues that the process of allocating members to committees does *not* lead those from high-demand jurisdictions to occupy committee places.
10. We omit the years 1969–1972 from all regressions involving our political competitiveness variable because of uncertainty over how to classify Wallace votes in the 1968 election.
11. We could not reject the null hypothesis of serial independence of the errors in models with lagged state per capita income.
12. The null hypothesis that the coefficients on the state fixed effects are zero is rejected at standard confidence levels. We have also estimated Model 3 excluding the Southern states. The estimated coefficients on the seniority variables are slightly larger, and differ from zero at higher levels of statistical confidence, than those for the entire sample.
13. Some might argue that the very information removed by the state effects, the state average growth rate and average seniority, should be the focus of our analysis. When we estimated our regression models on state averages, we found coefficient estimates of the same sign that we find using the within variation, but the standard errors were typically too large to permit any strong inferences.
14. These specifications assume that the effect of deviations from the national average vote for president is the same regardless of whether it is skewed toward Democrats or Republicans. We could not reject this assumption.
15. One potentially important shift between the first and second parts of our sample is a change in the composition of senior Democratic House members. The share of such members who represent urban areas in the North increased substantially during the sample period, and this could contribute to differences in their estimated growth effects across the two subsamples.
16. While these effects on growth rates may appear inconsequential, even these small differences in growth rates can compound to generate large differences in the level of state income over time. For instance, our estimates imply that per capita income would have been over $800 lower in Texas by the end of our sample if it were the case that Texas had average seniority over the period 1953–1990.

17. Existing empirical evidence suggests at best a weak link between state or district level economic performance and votes cast for incumbent legislators. Kiewiet (1983) suggests that "national assessments" of the economy play a more important role in votes for Congress than "personal experiences" based on the local economy. Erickson (1990) and Peltzman (1990) find that national economic conditions affect votes for incumbent congressmen. This effect appears to be mediated largely by party membership. When the national economy is strong, members of the President's party receive an electoral benefit. Adams and Kenny (1989), Chubb (1988), and Peltzman (1987) find very small effects of state economic performance on the re-election prospects of governors; Bennett and Wiseman (1991) find small effects for senators.
18. After removing fixed year effects from the growth rates in personal income for all states, the serial correlation coefficient for state economic growth rates is approximately .05.
19. In an earlier version of this paper, we estimated reduced form models for Congressional delegation turnover as a function of state growth rates. We found a weak positive association, consistent with the previous literature, but this link does not appear to be strong enough to explain our observed seniority-growth correlation.
20. Atlas et al. (1995) is an example of a recent study that *does* find an impact of political representation, in this case a state's degree of over-representation in Congress relative to its population, on federal outlays.

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Appendix Table A. State averages of political variables

State	Democr. 1–20	Democr. 21–60	Democr. 181+	House vote 50–59% Democr.	House vote 40–49% Democr.	| Pres Vote -Natl Avg|
Alabama	0.047	0.189	0.139	0.030	0.098	0.097
Arizona	0.042	0.039	0.133	0.221	0.239	0.074
Arkansas	0.145	0.325	0.175	0.048	0.053	0.072
California	0.030	0.091	0.147	0.136	0.159	0.023
Colorado	0.000	0.092	0.140	0.390	0.178	0.043
Connecticut	0.000	0.026	0.272	0.412	0.246	0.030
Delaware	0.000	0.000	0.263	0.368	0.421	0.019
Florida	0.075	0.153	0.140	0.113	0.078	0.045
Georgia	0.053	0.053	0.284	0.079	0.063	0.146
Idaho	0.000	0.000	0.211	0.237	0.474	0.101
Illinois	0.041	0.097	0.132	0.147	0.159	0.016
Indiana	0.029	0.084	0.157	0.322	0.336	0.042
Iowa	0.044	0.026	0.153	0.219	0.397	0.040
Kansas	0.000	0.000	0.126	0.114	0.346	0.082
Kentucky	0.129	0.155	0.107	0.180	0.111	0.032
Louisiana	0.079	0.211	0.204	0.039	0.033	0.065
Maine	0.000	0.000	0.237	0.289	0.246	0.055
Maryland	0.000	0.107	0.250	0.202	0.166	0.032
Massachusetts	0.100	0.154	0.140	0.093	0.095	0.081
Michigan	0.029	0.062	0.116	0.128	0.233	0.023
Minnesota	0.007	0.046	0.116	0.164	0.265	0.050
Mississippi	0.265	0.247	0.158	0.042	0.074	0.154
Missouri	0.050	0.113	0.150	0.261	0.143	0.024
Montana	0.000	0.000	0.263	0.289	0.289	0.073
Nebraska	0.000	0.000	0.096	0.127	0.351	0.111
Nevada	0.000	0.000	0.316	0.237	0.184	0.049
New Hampshire	0.000	0.000	0.053	0.132	0.368	0.066
New Jersey	0.033	0.083	0.123	0.198	0.207	0.027
New Mexico	0.000	0.079	0.246	0.342	0.237	0.014
New York	0.042	0.070	0.155	0.132	0.170	0.036
North Carolina	0.068	0.111	0.232	0.264	0.137	0.056
North Dakota	0.000	0.000	0.184	0.158	0.237	0.068
Ohio	0.031	0.060	0.100	0.101	0.206	0.015
Oklahoma	0.044	0.158	0.149	0.202	0.096	0.063
Oregon	0.000	0.063	0.189	0.208	0.208	0.033
Pennsylvania	0.025	0.084	0.135	0.166	0.191	0.022
Rhode Island	0.079	0.342	0.132	0.237	0.079	0.088
South Carolina	0.096	0.132	0.175	0.105	0.132	0.093
South Dakota	0.000	0.000	0.289	0.289	0.368	0.062

Appendix Table A. continued.

State	Democr. 1–20	Democr. 21–60	Democr. 181+	House vote 50–59% Democr.	House vote 40–49% Democr.	| Pres Vote -Natl Avg|
Tennessee	0.031	0.146	0.175	0.084	0.097	0.052
Texas	0.169	0.133	0.184	0.092	0.052	0.024
Utah	0.000	0.000	0.246	0.316	0.342	0.110
Vermont	0.000	0.000	0.053	0.053	0.211	0.066
Virginia	0.036	0.084	0.116	0.153	0.200	0.036
Washington	0.007	0.042	0.156	0.231	0.229	0.021
West Virginia	0.039	0.121	0.209	0.257	0.072	0.051
Wisconsin	0.070	0.109	0.100	0.138	0.194	0.035
Wyoming	0.000	0.000	0.158	0.263	0.368	0.080