

Ideology, economic interests, and congressional roll-call voting: Partisan instability and Bank of the United States legislation, 1811–1816*

JEFFERY A. JENKINS¹ & MARC WEIDENMIER²

¹*Department of Political Science, Michigan State University, East Lansing, MI 48824-0590, U.S.A.*; ²*Department of Economics, University of Illinois at Urbana-Champaign, IL 61801-3696, U.S.A.*

Accepted 22 December 1997

Abstract. We introduce a wrinkle into the study of Congressional roll-call voting by focusing on a period of partisan instability in American History: the Era of Good Feelings. During deviations from normal periods of two-party rule, the dominant model of voting behavior, the ideological model, loses precision in correctly classifying individual votes. We contend that a “pooled” voting model – comprised of both ideological and economic variables – performs better than the basic ideological model during these unstable periods. When party mechanisms no longer constrain or structure actions, we believe the “electoral connection” is especially important, and, thus, economic-based constituency factors must be included in models of vote choice. To explore this belief, we focus on a particularly contentious issue – the rechartering of the Bank of the United States (BUS) – which was dealt with before and after a partisan decomposition occurred in the House. Using measures developed by Poole and Rosenthal (1985, 1997), we find that the vote on the First BUS in 1811, during a stable partisan period, is organized along ideological lines. By 1816, the two-party system collapsed, and we do not find the vote on the Second BUS to exhibit much ideological structure. Conversely, we find that our pooled model predicts the vote on the Second BUS quite well, providing a substantial improvement in fit over the basic ideological classification.

1. Introduction

Recent studies of Congressional roll-call voting conclude that vote choice has been highly structured throughout most of American history. Members of Congress (MCs) reveal discernable voting patterns across a wide variety of issues – this bundling of issues positions is referred to as “ideology” (Poole and Rosenthal, 1985, 1991a, 1997). These findings contradict other studies, which contend that Congressional vote choice is a function of district-level

* An earlier version of this paper was presented at the Annual Meeting of the Public Choice Society, March 23, 1997, San Francisco. We thank Keith Poole and Howard Rosenthal for generously providing us with their D-NOMINATE scores. We also thank Burton Abrams, Lee Alston, Brian Gaines, Lawrence Kenney, Randy Kroszner, Larry Neal and Brian Sala for their comments and suggestions.

economic conditions. These economic-based studies view MCs as agents of their constituents, and thereby subject to district-level demands; as such, members' vote choices simply mirror constituency preferences (Peltzman, 1984, 1985; Kalt and Zupan, 1990). When ideological models have been pitted against economic models, however, a unanimous conclusion is reached: ideology, not constituency interests, is found to be the main determinant of Congressional vote choice (Kalt and Zupan, 1984; Krehbiel and Rivers, 1988; Poole and Rosenthal, 1991b, 1993, 1997; Krehbiel, 1993).

While ideologic models perform well across most of history, they are less successful in explaining vote choice during periods of partisan instability. When the partisan landscape becomes unstable, as old party lines break down, the institutional constraints that produce ideological cohesion erode – party leaders can no longer credibly provide rewards or impart sanctions – and Congressional voting becomes less structured (Poole and Rosenthal, 1991a, 1997; Cox and McCubbins, 1993; Aldrich, 1995). To a large extent, then, MCs will be left to their own devices to remain in power. More “delegate” behavior logically follows, as members become more receptive to constituency demands. Thus, we posit that a “pooled” model – one that incorporates *both* ideology and economic interests – provides the best means of explaining Congressional roll-call voting during these unstable partisan periods. When ideological constraint is weak, we contend that constituency factors pick up some of the “slack” in classifying votes.

To examine the performance of a pooled approach, we focus on one major policy issue – Bank of the United States (BUS) legislation – which was dealt with *before* and *after* a partisan decomposition, specifically the collapse of the First Party System. In 1811, the twenty-year charter of the BUS had expired, and its renewal was considered in Congress. By very narrow votes in both chambers, a recharter was defeated; Federalists voted unanimously for renewal, while a majority of Jeffersonians opposed the BUS. We find that this vote scales exceptionally well along ideological lines. By 1816, however, the Federalist Party had collapsed, single-party Jeffersonian rule (the Era of Good Feelings) was beginning, and massive inflation was gripping the nation, leading Congress to create a new BUS to induce monetary stability (Dangerfield, 1952). Unlike in 1811, a majority of Jeffersonians supported the BUS in 1816, while a majority of Federalists opposed its renewal. We find that an ideological model cannot adequately account for this partisan reversal, as nearly one-third of individual vote choices are incorrectly classified. Conversely, we find that a pooled model provides a much clearer picture of the voting dynamics. The pooled model correctly classifies an additional 10.7 percent of the membership, or 34 percent of the individual vote-choice “errors” associated with the ideological model.

2. Economic and ideological models of roll-call voting: A summary

Economic models of roll-call voting stake their foundations in the electoral connection between MCs and constituents. MCs are assumed to hold reelection as a primary goal and, therefore, to adopt strategies that they believe will maximize their probability of being reelected (Mayhew, 1974). Voters are assumed to value the particularistic, district-specific benefits that MCs can dispense through policy legislation, and accordingly, to elect those individuals who will “bring home the pork” while broadly distributing the tax burden (Peltzman, 1984, 1985). Thus, advocates of economic models hold that members’ votes are induced: they are agents of their districts and vote according to constituency preferences in the hope that it will lead to reelection (Kalt and Zupan, 1990; Krehbiel, 1993). These studies normally use geographic and demographic district attributes, such as regional dummy variables, population density measures, and commercial activity levels to serve as proxies for economic-based, constituency interests.

Ideological models of roll-call voting contend that MCs exhibit consistent tendencies in their vote choices. Legislative behavior is analyzed spatially, by creating a Euclidean representation of the policy alternatives that MCs face on a given issue dimension or dimensions. MCs are assumed to vote for the alternative that is closest to their “ideal” point, their most preferred point within the choice space.¹ Through the use of a multidimensional scaling technique – the D-NOMINATE procedure – Poole and Rosenthal (1985, 1991a, 1997) find that a predictable pattern, or ideology, is revealed in MCs’ voting patterns across a continuum of issues: a member’s stance on one or two issues is a strong predictor of his positions on other issues. Poole and Rosenthal also find that voting patterns follow a coalitional structure, i.e., like-minded individuals, often of the same party, tend to vote together across time.

How do ideological and economic models compare in their ability to predict votes? Poole and Rosenthal (1997, 145) state “that at no point in American history [can] a model of appropriately measured constituency interests outperform a simple spatial model of voting”, which follows from their extensive analysis of substantive policy issues, such as food-stamp legislation, railroad regulation, minimum-wage legislation, and strip-mining regulation. In each case, Poole and Rosenthal find that their ideological model significantly outperforms economic models in head-to-head comparisons; in addition, they find that their D-NOMINATE scores drown out the effects of economic variables when both ideology and constituent interests are represented in a “pooled” model. Comparable ideological models, which construct ideology differently and study similar policy issues, arrive at identical conclusions (Kau and Rubin, 1979; Kalt and Zupan, 1984; Krehbiel and Rivers, 1988;

Krehbiel, 1993).² Overall, Poole and Rosenthal find that a two-dimensional spatial model explains 85 percent of the variance in roll-call voting on average across Congressional history.

The D-NOMINATE procedure is successful in explaining vote choice mainly because the major ideological dimension captures partisan voting patterns. Because party often acts as a cohesive mechanism in organizing coalitional support behind legislation, as well as punishing defection, capturing these “logrolling” effects is crucial to understanding Congressional voting patterns (Cox and McCubbins, 1993). Legislation is often packaged in an omnibus bill, which is comprised of dozens of provisions and tied to multiple policy areas. While individual parts of the package may not appeal to a given member’s constituents, the package as whole is beneficial; thus, MCs often vote against constituent interests on individual parts in order to acquire the *overall* benefit. D-NOMINATE scores capture the logroll, and thus, the constituency interests, while economic models based on individual policy issues alone may not. Finally, on those occasions when party voting is less cohesive, the second-dimension comes into play, picking up divisions within parties (Poole and Rosenthal, 1997).

3. Partisan instability and the ideological model: The case for a pooled approach

While D-NOMINATE scores may always outperform economic variables in explaining Congressional vote choice, the ideological model predicts less well during periods of partisan instability. By expediting the bundling of disparate economic interests into distinct packages and organizing logrolls, parties lend stability to congressional voting. When partisan cohesion breaks down, stable outcomes become difficult to achieve and the costs of doing business soar (Aldrich, 1995).³ The Era of Good Feelings – the years of one-party Jeffersonian rule between 1816 and 1824 – was one such period in American history.⁴

To improve upon the explanatory power of the ideological model during unstable periods, we propose that a “pooled” model, composed of both economic and ideological variables, be constructed. While a pooled model does not significantly improve upon the ideological model during normal partisan periods, as Poole and Rosenthal (1991b, 1993, 1997) have shown, we posit that the addition of district-level economic variables will make an impact during periods of poor spatial fit, such as the Era of Good Feelings. Why?

Poole and Rosenthal (1991a, 1997) submit that many issues were regionally-based during the Era of Good Feelings, often pitting the Northeast versus the West and South; many of these regional effects are captured by the D-

NOMINATE variables. While we agree with this view, we hold that individual vote choice also mirrored local concerns during this period (Dangerfield, 1952; Hofstadter, 1969). After the two-party system broke down and the coalescing issue of war had passed, party leaders did not possess institutional mechanisms to structure behavior and to guarantee collective action (Gamm and Shepsle, 1989; Aldrich, 1995). Consequently, individual MCs were left with no clear recipe for advancement within the party hierarchy.⁵ Members' natural instincts in such an uncertain situation, we contend, were to maintain the status quo, i.e., solidify their positions within Congress until a strong, national party organization reemerged. As such, we expect that MCs should have been more attentive to district-level needs, especially on highly salient issues such as the BUS; accordingly, we find high levels of MC responsiveness during this period detailed in the historical literature (White, 1951; Nielsen, 1968). It was also much easier for MCs to be responsive to constituents, considering the costs and benefits involved: party could not credibly provide future job security or impart sanctions (Hofstadter, 1969).⁶

The rest of the paper proceeds as follows. First, we discuss the House vote to recharter the First BUS in 1811, and find that it scaled along a distinct partisan dimension, which is picked up by a basic ideological model. Second, we briefly discuss the economic and political factors that arose between 1811 and 1816 that led to a call for a new BUS. In analyzing the 1816 BUS vote in the House, we find the basic ideological model to be somewhat lacking, and begin building a pooled model by including those economic variables that we believe will help explain vote choice.⁷ Our results indicate that the pooled model significantly improves upon the basic fit of the ideological model, by correctly predicting a significantly greater number of individual votes.

4. The changing political-economic environment, 1811–1816

4.1. The demise of the first BUS

The First BUS, chartered in 1791, was the brainchild of Alexander Hamilton and the Federalist Party. After a twenty-year period in which it lent stability to the nation's financial system, its charter expired and Congress needed to make a decision regarding its renewal. Unlike their minority position during the BUS's inception, the Jeffersonians held a majority within Congress in 1811, and, based upon their agrarian, strict-constructionist leanings, were largely opposed to its renewal. On January 11, 1811, the House voted 65–64 to postpone the question of the BUS's recharter indefinitely, effectively killing any chances for renewal. The vote separated along party lines, as all 45 Federalists voted for renewal, while 65 of 84 Jeffersonians supported

Table 1. Probit results on house BUS vote, 1811

	Ideological model
CONSTANT	-0.122 (0.20)
PR1	-5.120*** (0.91)
PR2	-1.453 (0.79)
% Corr predicted	86.8
Chi-square	106.26
Log likelihood	-36.28

Note: Coefficients are presented for each variable, with standard errors appearing in parentheses. There are 129 observations in this model.

* $p < .05$, ** $p < .01$, *** $p < .001$

expiration. Table 1 presents probit results from an ideological voting model using the two D-NOMINATE ideology scores (PR1 and PR2) as explanatory variables. The model fits the data quite well, as nearly 87 percent of the individual votes are correctly predicted.

4.2. Structural changes

Structural changes in the American economy and political system between 1811 and 1816 led to the formation of the Second BUS. The demise of the First BUS radically changed the regulation of early American banking. Post-BUS banking policy was decentralized, as many states allowed banks to organize and to conduct business relatively unfettered. State-chartered banks could issue notes without the threat of a central bank suspending convertibility, which may have allowed them to earn arbitrage profits (Dewey, 1934; Hammond, 1957). In addition, many banks were established through the sale of stocks with promissory notes. These banks used the proceeds from these stock sales to issue bank notes, which were then used to purchase interest-bearing government debt.⁸ These types of policies encouraged the rapid growth of state banking, as the number of state banks increased from 88 to 246 between 1811 and 1816, and their capital stock rose from \$43 to \$88 million (Fenstermaker, 1965).

The development of state banking was also spurred by the sale of public lands in the West and increased credit demand from the government, which

led to an increase in bank-note circulation from \$45 million in 1811 to \$100 million in 1817 (Rufener, 1938). The rapid increase in the money supply led to higher inflation and ultimately resulted in specie inconvertibility by August, 1814 – except in New England where note redemption continued throughout the war (Dangerfield, 1952). The increase in bank-note circulation was also accompanied by an export of specie capital to Europe. As the largest shareholders of the First BUS were foreigners, their shares were liquidated following its demise, which deprived the government of capital that could have been used to fund the American war effort (Dewey, 1934).

The War of 1812 also intensified the nation's fiscal problems. Customs duties, traditionally the nation's primary source of revenues, dried up as the war curtailed commercial activity. Moreover, the government continued to collect duties in depreciated state bank notes at par, costing the U.S. Treasury an estimated \$5 million (Dewey, 1934). Albert Gallatin, the Secretary of the Treasury, tried to convince Congress to raise tariffs in order to fund the war effort and to maintain national stability, but the necessary legislation was not passed (Hofstadter, Miller and Aaron, 1959). The declining customs revenues and the absence of new taxes led the government to rely upon money financing to remain solvent. Unfortunately, debt could not be sold at par due to the absence of a central bank.⁹ In all, Dewey (1934) states that the lack of a central bank cost the government an estimated \$46 million through discounted bond sales, which led to a \$127 million deficit by the end of the war.

The changing economic climate in the United States between 1811 and 1816 was reflected in the political landscape of the time. The election of the War Hawks (a contingent of nationalists from the South and West) to Congress in November, 1811, signaled a change in ideology within the Jeffersonian coalition. The Jeffersonians were no longer composed entirely of agrarians, strict constructionists, and states' rights advocates; instead, the new coalition also contained members who supported war, greater business and commercial activity, and increased governmental influence in public affairs (Walters, 1945; Hofstadter, 1969). These changes in the Jeffersonian coalition mirrored the changing character of the nation. While manufacturing suffered during and after the war, a boom in agriculture and land speculation combined with mass settlements in the West to spur national economic growth. Hence, the Jeffersonians, by reflecting the changing needs of their constituents, assumed many of the pro-business tenets of the Federalist Party (Dangerfield, 1952; Hofstadter, Miller and Aaron, 1959).

In contrast to Jeffersonian adaptation, the Federalists closed ranks. In 1814, during the height of conflict, a group of Federalists gathered at Hartford, Connecticut, to declare their opposition to the war over the disruption of trade along the Northeast coast. This "Hartford Convention" conflicted with

the national mood, and tensions came to a head in early 1815. With news of Andrew Jackson's victory at New Orleans and the announcement of peace with Britain, the Federalist Party looked completely out of step with the nation's needs and direction (Dangerfield, 1952; Hofstadter, 1969). A year later, the Federalist Presidential candidate, Rufus King, managed only thirty-four electoral votes against James Monroe, the Jeffersonian candidate. Thus, by 1816, the Federalists were finished as a national party.

After the demise of the Federalists and the passing of the war, Jeffersonian party cohesion disintegrated and members began separating along policy dimensions based on sectional, rather than national, concerns (Gamm and Shepsle, 1989; Jenkins, 1998). The partisan structure that helped maintain ideological constraint had disappeared. Partisan logrolls were few and far between, and members were left to construct regional alliances around individual issues. Thus, the Era of Good Feelings was a period of poor spatial fit and marked by a heavy amount of negotiated settlements: issue-by-issue policy compromises and vote trades were necessary to achieve any policy outputs (Dangerfield, 1952).

4.3. *The rise of the Second BUS*

The call for a central bank was renewed during the War of 1812. The nation's financial travails during the war forced Congress to recognize the advantages a central financial institution could have on credit resources (Dangerfield, 1952). For two years, several bills were contested and debated. Finally, on March 14, 1816, a bill to establish a new BUS passed in the House by an 80 to 71 margin, thanks largely to Jeffersonian support. The Second BUS's charter was nearly identical to that of the First BUS.¹⁰ The government held one-fifth of the bank's stock and the general public controlled the remaining four-fifths (Walters, 1945). The public's subscriptions were to be paid in the ratio of one-quarter specie to three-quarters governmental bonds. Legislative provisions permitted the BUS to have branches throughout the nation, while requiring a branch in every state that held more than two thousand shares. In addition, the BUS could not suspend convertibility without incurring a 12% tax, and its total debts, not including deposits, could not exceed \$35 million in note liabilities. Thus, the specifics of the Second BUS bill restrained the issuance of central bank notes (Catterall, 1903; Walters, 1945).

5. Empirical model

The preceding analysis suggests that both political and economic factors contributed to the establishment of the Second BUS in 1816. To analyze the

validity of this conjecture, we construct a probit model that pools both ideological and economic variables and compare its results to those generated by a simple ideological model. If we can show that pooling provides a significant improvement in performance, we can assert with some validity that an ideological-economic model is the appropriate model choice during periods of partisan instability.

Probit results for the basic ideological model are presented in the first column of Table 2. As expected, the two D-NOMINATE scores, PR1 and PR2, are less successful in predicting vote choice on BUS legislation in 1816: only 68.5 percent of the vote choices are correctly predicted, relative to 86.8 percent on the 1811 BUS vote.¹¹ Thus, a large number of individual voting decisions are not explained by ideology and are, therefore, left open to alternative explanations.

Rather than depend solely upon ideology, we construct a pooled model to account for the rising importance of constituency interests. As we have stated, advancement within the party hierarchy was unreliable after the war, and thus, we expect MCs to have acted rationally amid the uncertainty by attempting to maintain their House seats. As such, they should have attempted to form regional alliances and to court particular constituencies within their districts.

We anticipate high constituency interest on the BUS legislation, as national banking policy was a highly salient, contentious issue (Dangerfield, 1952). Local banking and commercial groups, as well as financiers and manufacturers, had a vested interest in the eventual outcome (as it would directly impact the nation's monetary structure) and thus should have made their feelings known to their MCs. Besides these specialized interests, we also expect MCs to have been cognizant of district-level opinion as a whole. "John Q. Public" may not have demonstrated the level of concern exhibited by the special interests, but he would have been affected indirectly by the eventual legislative outcome. For example, the Speaker of the House, Henry Clay, cited the wishes of his constituents as a major reason for his supporting the BUS:

". . . during last Fall, when [Clay] was in his district, he conversed freely with many of his constituents upon that subject, then the most common topic of conversation, and all, without a single exception, as far as he recollected, agreed that it was desirable, if not the only efficient remedy for the alarming evils in the currency of the country. And, lastly, during the session he received many letters from his constituents ... all of which concurred, he believed, without a solitary exception, in advising the measure".¹²

BUS legislation may also have been wrapped up in other issues that were debated at the time, principally questions involving nationalism vs. states' rights. A pro-BUS decision could have foreshadowed a trend toward the

Table 2. Probit results on House BUS vote, 1816

	Ideological model	Economic model	Pooled model
CONSTANT	0.180 (0.11)	-0.257 (0.47)	-0.781 (0.52)
PR1	-1.310*** (0.31)		-1.928*** (0.51)
PR2	-1.360* (0.61)		-2.078** (0.78)
COMMERCE		-0.392 (0.30)	-0.686* (0.33)
BANK		-0.126 (0.11)	-0.076 (0.12)
BANKSQR		0.013 (0.01)	0.015 (0.01)
HBANKREV		0.090 (0.26)	0.591* (0.30)
GROWTH		1.366** (0.49)	1.029* (0.48)
SPECIE	(0.31)	0.162 (0.43)	1.175* (0.40)
SLAVE		0.527 (0.35)	1.158** (0.40)
% Corr predicted	68.5	65.1	79.2
Chi-square	23.75	18.17	46.24
Log likelihood	-91.24	-94.03	-79.99

Note: Coefficients are presented for each variable, with standard errors appearing in parentheses. Two House members who participated in the BUS vote in 1816 do not have D-NOMINATE scores for the 14th Congress, and are dropped from the analysis. Thus, the total number of observations in each model is 149.

* $p < .05$, ** $p < .01$, *** $p < .001$

Federal Government playing a larger policymaking role, relative to state-level autonomy; such a trend would have an impact on other contentious, economic issues, such as tariff policy and slavery. We hope to capture some of these economic-based effects in our empirical model.

Our pooled probit model is written as follows:

$$\begin{aligned} \text{Pr}(\text{MC}_i) = & \beta_0 + \beta_1\text{PR1} + \beta_2\text{PR2} + \beta_3\text{BANK} + \beta_4\text{BANKSQR} \\ & + \beta_5\text{SPECIE} + \beta_6\text{HBANKREV} + \beta_7\text{SLAVE} + \beta_8\text{GROWTH} \\ & + \beta_9\text{COMMERCE} + \varepsilon \end{aligned}$$

The dependent variable is dichotomous and represents vote choice; it is equal to one if a given MC votes for the bank and to zero if he votes against it.

The first two variables are the same Poole-Rosenthal D-NOMINATE scores (PR1 and PR2) used in the simple ideological model. The first dimension, PR1, is a measure of a MC's long-term, liberal-conservative preferences, which often separate along party lines.¹³ The second dimension, PR2, captures an MC's position on tariff issues.¹⁴ In the 14th House, we would expect PR2 to be negative. A pro-tariff stance indicates a preference for commercial interests and a view of the BUS as an unnecessary government regulation and a restraint on easy credit.

To capture the influence of banking interests, we divide districts into two groups, based on the concentration of state banks.¹⁵ We expect highly-concentrated banking districts to support the establishment of a BUS: a central banking institution would curb the growth of state banks and reduce competition, by limiting entry through the resumption of specie convertibility. Since many state banks were large holders of government debt, they would benefit from specie convertibility, which would increase the market price of government debt and end "wildcat" banking (see Wright, 1978, and Calomiris, 1991). In contrast, we expect less-integrated banking districts to oppose the bank bill or to exert little effect on the legislation. Less-concentrated banking districts were more often located in areas away from the seaboard, which often contained speculative public land banks and wildcat banks that were opposed to the resumption of specie convertibility. Also, districts with only a few banks might lack the constituent base to form a coalition necessary to influence their respective representative.

We create a bank (BANK) variable and a bank-squared (BANKSQR) variable, using district-level data obtained from Fenstermaker (1965). BANK is equal to the number of state bank charters established in each district prior to the 1816 vote. We recognize that some banks had branches in other districts, but we contend that a bank's largest influence was probably in the district where the "mother" bank was established. In addition, we specify a non-linear relationship, through the inclusion of BANKSQR, to test the hypothesis that highly concentrated banking areas beyond a particular threshold would support a central bank to limit competition by restricting bank entry through the resumption of convertibility.

We specify a regional variable (SPECIE) to measure the "hard" monied interests of New England, which takes on a value of one for New England states and a value of zero elsewhere. As noted earlier, thanks to its manufacturing outputs, New England was able to redeem notes for specie throughout the war (Hofstadter, Miller and Aaron, 1959). Following Dangerfield (1952), we expect that, due to their strong financial position after the war, New England banks feared the inflationary tendencies associated with wildcat banking and therefore supported a central bank and the its currency stability. Presumably,

inconvertible regions would not support specie redemption because of the inability of many note-issuers to redeem paper money for gold.

To test the influence of banking interests on state-level, governmental finances, we create a bank-revenue variable (HBANKREV). Sylla, Legler and Wallis (1987) assert that, in some states during this era, taxes on bank revenues comprised (in percentage terms) a large share of total state revenues.¹⁶ Based upon their classification scheme, we create a dummy variable that takes on a value of one if a state received at least 15 percent of its revenues from state bank taxes and a value of zero otherwise. We expect states that derived a high proportion of tax revenues from banks to oppose the establishment of the BUS, which would have caused the number of private banks in existence to decline, thereby reducing the tax income that states could generate.¹⁷

We specify a variable (SLAVE) to test for the effects of states' rights on BUS coalitions. The brewing slavery issue that would lead to the Missouri Compromise in 1820 was building by 1816, and the 14th Congress also marked the beginning of the great tariff battles that would embroil the nation in the 1830s and 1850s. The battle between states' rights and stronger Federal control would break down along regional lines: Northerners wanted to enhance industrial expansion, while Southerners were trying to protect their "peculiar institution" (Hofstadter, 1969). We suspect that the BUS legislation inspired similar divisions. We expect that slave-holding interests in the Southern and Western slave states should have opposed a central bank and its hard money tenets, while industrial and financial interests in the Northern free states should have supported the BUS with its monetary stability and prospects for growth.

We include a population-growth variable (GROWTH), which measures the percentage change in population between the 1810 and 1820 censuses, to attempt to capture the effects of the mass electorate.¹⁸ Presumably, faster-growing regions would favor unfettered expansion and oppose government regulation (passage of the BUS). In contrast, slowly expanding areas might reflect maturely-developed locales that may welcome a central bank for sound credit purposes. Thus, we expect that the GROWTH variable to be negative, indicating an inverse relationship between population expansion and support for the BUS.

Finally, we specify a variable (COMMERCE) to proxy for commercial interests. Because data constraints prohibit us from constructing a direct measure, we instead specify a dummy variable based upon a coding scheme devised by Alston et al. (1996), which categorizes the level of commercial activity in an area by its geographic distance from markets.¹⁹ Using Congressional-district data for the 14th Congress provided by Parsons et al. (1978), we classified districts on a coast or bordering a major river as com-

mercial venues and set them equal to one, while coding all other areas zero. We expect COMMERCE to be negative, which would reflect commercial opposition to government regulation and the end of easy credit.

6. Empirical analysis

The results of the pooled model support the notion that both economic and political variables contributed to the passage of BUS legislation in 1816. As the third column of Table 2 indicates, when the seven economic variables are added to the D-NOMINATE scores, five prove to be significant. As hypothesized, SPECIE and HBANKREV are significant and positive, while COMMERCE is significant and negative. GROWTH and SLAVE are also significant, but in the opposite expected directions. The positive relationship between GROWTH and vote choice can perhaps be explained by the economic effects of the era. We held that constituents in high-growth areas should have spurned the BUS and its attempts to curb easy credit; instead, the high transactions costs caused by the rapid inflation during and after the war may have led the populace to support government regulation to control credit markets. The positive relationship between SLAVE and vote choice is also counter-intuitive; we did not expect slave-holders to favor the establishment of the BUS. As this result seems substantively implausible, we suspect a logroll may have been involved. Perhaps slave-holders supported the BUS in exchange for concessions on other issues (slavery or tariffs). Additionally, we find that BANK and BANKSQR are not significant at conventional levels, which may indicate that private banks lacked political influence, relative to other groups, such as commercial interests, industrialists, and financiers.

To compare results from the pooled model to those from the basic ideological model, we employ the typical method for evaluating model fit in the voting literature: we analyze the percent of individual votes that each model correctly predicts. As Table 2 indicates, the pooled model outperforms the ideological model, correctly predicting 79.2 percent of individual vote choices; this is an 11 percent increase (or 16 additional MCs) over the simple ideological model.²⁰ Additionally, using a Likelihood Ratio Test (as shown in the Appendix), we find that including the economic variables is warranted, as they prove to be significant additions ($p < .005$).²¹

Alternatively, we can evaluate fit by focusing on the proportion reduction in error (PRE) between the two models. The PRE is a measure that controls for the margin of a roll call and can be used to determine (a) how the ideological and pooled models improve upon a simple benchmark model and (b) how the pooled model improves upon the ideological model (Poole and Rosenthal, 1997; Hildebrand, Laing and Rosenthal, 1977). Initially, we assume the null

Table 3. Proportional reduction in error between models

	Baseline model Unanimous yea model	Baseline model Ideological model
Ideological model	0.338	–
Pooled model	0.563	0.340

Note: The ideological model provides a 33.8 percent improvement in fit over the naive, unanimous-yea model. The pooled model provides a 56.3 percent improvement in fit over the naive, unanimous-yea model. Finally, the pooled model provides a 34 percent improvement in fit over the ideological model.

benchmark to be a “naive” all-yea model, in which all members vote for the BUS. Thus, the classification-error baseline for the PRE equation is the minority vote – the number of MCs voting on the losing side – which in this case is equal to 71. The PRE equation can then be written as:

$$\text{PRE} = \frac{\text{Minority vote} - \text{model classification errors}}{\text{Minority vote}}$$

The following PRE calculations are presented in Table 3. The ideological model incorrectly predicts the vote choice of 47 of 149 members. Thus, the PRE of the ideological model is $(71-47)/71 = .338$, a one-third improvement upon the naive benchmark. Our pooled model, by contrast, incorrectly predicts the vote choice of 31 of 149 members. Thus, the PRE of the pooled model is $(71-31)/71 = .563$, a substantial improvement upon the naive benchmark. Finally, to determine how much the pooled model improves upon the ideological model, we identify the ideological model as the new benchmark. The classification-error baseline is now equal to 47, the number of members incorrectly predicted by the ideological model. Thus, the PRE of the pooled model is $(47-31)/47 = .34$, a sizeable improvement in fit over the basic ideological model.

What of the 20.8 percent of votes that the pooled model could not correctly classify? We believe this “shortfall” may be attributed to several factors. First, while we have attempted to capture the effects of economic-based interests on BUS vote choice, the economic data for such an early period in American history is limited and of questionable quality. Hence, we expect some “noise” to be associated with these variables, not to mention with the ideological measures themselves. Second, there could be strategic action taking place for which we cannot account. As mentioned previously, the positive coefficient on SLAVE in the pooled model might indicate logrolling activity. If such a logroll took place, we cannot observe the other side of the

exchange simply by looking at the BUS vote. Finally, Wright (1978) suggests that a number of MCs had distinct interests in the BUS outcome: some members had strong financial stakes in private banks, while others would later serve on the executive boards of BUS branches. Unfortunately, Wright did not provide a comprehensive list of names, so we could not directly test this special-interest hypothesis. Nevertheless, errors notwithstanding, our pooled findings significantly improve upon the performance of the basic ideological model, and support our contention that both political and economic factors played an important role in the formation of the Second BUS.

7. Conclusion

We believe we have made a claim for the use of pooled voting models – comprised of both ideological and economic variables – to explain individual vote choice during periods of partisan instability. We find the BUS vote in 1811 to be organized along ideological lines, which is consistent with the Poole-Rosenthal notion that voting behavior is well-structured during normal times. During unstable periods, such as the Era of Good Feelings, however, voting is much less structured, and the simple Poole-Rosenthal spatial model performs less well. The 1816 BUS vote is one such example, as the ideological model is able to correctly predict only 68 percent of the individual votes. Based upon our beliefs about MCs' goals when party mechanisms no longer constrain or structure actions, we feel that the "electoral connection" is especially important, and thus, economic-based constituency factors must be included, in addition to ideological measures, to fully explain voting behavior. Results from our pooled model compare favorably to results generated from the basic Poole-Rosenthal ideological model: a PRE calculation indicates a 34 percent improvement in fit. Overall, using a pooled approach, we are able to predict nearly 80 percent of the votes on the Second BUS bill correctly.

In future research, we hope to explore further the consequences of applying pooled voting models to Congressional vote choice in the Era of Good Feelings. For example, aside from the BUS vote, a number of other contentious issues were considered during the period: slavery, tariffs, internal improvements, etc. Do pooled models significantly outperform ideological models on each of these issues? We could find that as issue salience increases, the effects of constituency-based, economic variables should increase as well. Additionally, for issues that are *especially* salient to segments of the nation, like slavery, we could find that ideological constraint remains strong despite the lack of strong partisan incentives in place; high salience could promote the emergence of regional logrolls that persist over time.²² Answers to these inquiries will not only provide us with a better understanding of Congress-

sional voting during the Era of Good Feelings, but will allow us also to better incorporate the dynamics of party and constituency interests into our formal models of Congressional behavior.

Notes

1. The spatial theory of voting has been prevalent within the political science literature for decades. Krehbiel (1988) offers an excellent review of the first thirty years of research.
2. With regard to future applications of strict economic models to the study of congressional roll-call voting, Krehbiel (1993, 35) remarks that they “should be accompanied with a most extraordinary defense or summarily dismissed”.
3. There is a large literature on the problems involving social choice and voting in multi-dimensional choice spaces. See Enelow (1997) for a discussion of the issues.
4. The only other unstable partisan period that Poole and Rosenthal identify is the early 1850s, after the collapse of the Whig Party.
5. While 19th Century MCs did not pursue reelection at the same rates as their 20th Century counterparts, they clearly demonstrated long-term career ambitions for political office. Such ambition usually took the form of holding various elective or appointive political positions at different levels of government (Polsby, 1968; Price, 1975).
6. Bianco, Spence and Wilkerson (1996) provide evidence of an electoral connection between MCs and constituents during this period. In the 14th Congress, MCs who voted for a pay raise (the Compensation Act of 1816) were punished disproportionately during the next election cycle.
7. We only analyze *House* votes on BUS legislation. Because we posit that constituency characteristics should be included in the Second BUS vote, we believe that the House is a more appropriate case to study than the Senate: House members were popularly elected, while Senators were chosen by state legislatures. Thus, we feel that House members would have faced stronger pressures from constituents.
8. This scheme was profitable until customers realized that they could not automatically redeem their notes; in reality, their money was “locked-in” for a given period of time (Rufener, 1938).
9. For a discussion of the motives of U.S. debt management and time consistency during the 19th century, see Calomiris (1991).
10. The only difference was that the Second BUS was established with \$35 million in capital as opposed to \$10 million for the First BUS.
11. For an explanation of what PR1 and PR2 represent in this model, please refer to the variable constructions in the pooled model.
12. From *Annals of the Congress of the United States*, 14th Congress, 1st Session, pp. 1190–1191.
13. The correlation coefficient between PR1 and party is .90 for the 14th House.
14. Poole and Rosenthal (1997) consider the second dimension to represent a substantive issue area when ten or more roll calls fall within a particular domain during a particular Congress. In the 14th House, they claim that tariff policy commanded enough of the legislative agenda to legitimately represent the second dimension.
15. We assume that the influence of the banking lobby is proportional to its degree of concentration within a district.
16. Also see Wallis, Sylla, and Legler (1993).
17. Unfortunately, Sylla, Legler and Wallis did not have a complete data series for all states in 1816. Thus, we could not operationalize HBANKREV as a continuous variable.
18. We thank Lawrence Kenny for this suggestion.

19. We thank Lee Alston for this suggestion.
20. Additionally, in Table 2, we present the results of the basic economic model, and find its performance lacking, as both the ideological model and the pooled model provide better fits.
21. We also find a large, counter-intuitive discrepancy in the magnitudes of the marginal effects of the ideological variables between the two models. After pooling the economic variables, the marginal effects of the two ideological dimensions actually *increase* in magnitude. This suggests that the parameter estimates in the ideological model may be imprecise, as the model suffers from the equivalent of omitted variable bias in OLS. Data on the marginals is available from the authors upon written request.
22. In this sense, the relationship between issue salience and the explanatory power of economic variables would be quadratic.

References

- Aldrich, J.H. (1995). *Why parties?: The origin and transformation of party politics in America*. Chicago: University of Chicago Press.
- Alston, L.J., Libecap, G.D. and Schneider, R.M. (1996). The determinants and input of property rights: Census data and survey results for land titles on the Brazilian frontier. *Journal of Law, Economics, and Organization* 12: 25–62.
- Bianco, W., Spence, D.B. and Wilkerson, J.D. (1996). The electoral connection in the early congress: The case of the Compensation Act of 1816. *American Journal of Political Science* 40: 145–171.
- Calomiris, C.W. (1991). The motives of U.S. debt management policy, 1790–1880: Efficient discrimination and time consistency. *Research in Economic History* 13: 67–105.
- Catterall, R. (1903). *The Second Bank of the United States*. Chicago: University of Chicago Press.
- Cook, R.D. and Weisberg, S. (1983). Diagnostics for heteroscedasticity in regression. *Biometrika* 70: 1–10.
- Cox, G.W. and McCubbins, M.D. (1993). *Legislative leviathan: Party government in the House*. Berkeley: University of California Press.
- Dangerfield, G. (1952). *The era of good feelings*. New York: Harcourt, Brace and Company.
- Dewey, D. (1934). *Financial history of the United States*. New York: Longman.
- Enelow, J.M. (1997). Cycling and majority rule. In Dennis C. Mueller (Ed.), *Perspectives on public choice: A handbook*. Cambridge: Cambridge University Press.
- Fenstermaker, J.V. (1965). *The development of American commercial banking, 1782–1837*. Kent, OH: Kent State University.
- Gamm, G. and Shepsle, K. (1989). Emergence of legislative institutions: Standing committees in the House and Senate, 1810–1825. *Legislative Studies Quarterly* 14: 39–66.
- Greene, W.H. (1993). *Econometric analysis*, 2nd ed. New York: Macmillan.
- Hammond, B. (1957). *Banks and politics in America from the revolution to the civil war*. Princeton: Princeton University Press.
- Hildebrand, D.K., Laing, J.D. and Rosenthal, H. (1977). *Prediction analysis of cross classifications*. New York: Wiley.
- Hofstadter, R. (1969). *The idea of a party system: The rise of legitimate opposition in the United States, 1780–1840*. Berkeley: University of California Press.
- Hofstadter, R., Miller, W. and Aaron, D. (1959). *The American republic, Volume one: to 1865*. Englewood Cliffs, NJ: Prentice-Hall, Inc.
- Jenkins, J.A. (1998). Property rights and the emergence of standing committee dominance in the 19th century House. *Legislative Studies Quarterly*, forthcoming.
- Kalt, J.P. and Zupan, M.A. (1984). Capture and ideology in the economic theory of politics. *American Economic Review* 74: 279–300.

- Kalt, J.P. and Zupan, M.A. (1990). The apparent ideological behavior of legislators: Testing for principal-agent slack in political institutions. *Journal of Law and Economics* 33: 103–131.
- Kau, J.B. and Rubin, P.H. (1979). Self-interest, ideology, and logrolling in congressional voting. *Journal of Law and Economics* 21: 365–384.
- Krehbiel, K. (1988). Spatial models of legislative choice. *Legislative Studies Quarterly* 8: 259–319.
- Krehbiel, K. (1993). Constituency characteristics and legislative preferences. *Public Choice* 76: 21–37.
- Krehbiel, K. and Rivers, D. (1988). The analysis of committee power: An application to Senate voting on the minimum wage. *American Journal of Political Science* 32: 1151–1174.
- Mayhew, D.R. (1974). *Congress: The electoral connection*. New Haven: Yale University Press.
- Nielsen, G.R. (1968). *The indispensable institution: The congressional party during the era of good feelings*. Doctoral dissertation, University of Iowa.
- Parson, S.B., Beach, W.W. and Hermann, D. (1978). *United States congressional districts 1788–1841*. London: Greenwood Press.
- Peltzman, S. (1984). Constituent interest and congressional voting. *Journal of Law and Economics* 27: 181–210.
- Peltzman, S. (1985). An economic interpretation of the history of congressional voting in the twentieth century. *American Economic Review* 75: 656–675.
- Polsby, N.W. (1968). The institutionalization of the U.S. House of Representatives. *American Political Science Review* 62: 144–168.
- Poole, K.T. and Rosenthal, H. (1985). A spatial model for legislative roll call analysis. *American Journal of Political Science* 29: 357–384.
- Poole, K.T. and Rosenthal, H. (1991a). Patterns of congressional voting. *American Journal of Political Science* 35: 228–278.
- Poole, K.T. and Rosenthal, H. (1991b). The spatial mapping of minimum wage legislation. In A. Alesina and G. Carliner (Eds.), *Politics and economics in the 1980s*. Chicago: University of Chicago Press.
- Poole, K.T. and Rosenthal, H. (1993). The enduring nineteenth century battle for railroad regulation: The Interstate Commerce Act revisited. *Journal of Law and Economics* 36: 837–860.
- Poole, K.T. and Rosenthal, H. (1997). *Congress: A political-economic history of roll call voting*. New York: Oxford University Press.
- Price, H.D. (1975). Congress and the evolution of legislative ‘professionalism’. In N. Ornstein (Ed.) *Congress in change: Evolution and reform*. New York: Praeger.
- Rufener, L.B. (1938). *Money and banking in the United States*. New York: Houghton-Mifflin.
- Sylla, R., Legler, J.B. and Wallis, J.J. (1987). Banks and state public finance in the republic: The United States, 1790–1860. *Journal of Economic History* 47: 391–403.
- Wallis, J.J., Sylla, R. and Legler, J.B. (1993). The interaction of taxation and regulation in nineteenth-century U.S. banking. In C. Goldin and G.D. Libecap (Eds.), *The regulated economy*. Chicago: University of Chicago Press.
- Walters, R. (1945). The origins of the Second Bank of the United States. *Journal of Political Economy* 53: 115–131.
- White, L.D. (1951). *The Jeffersonians: A study in administrative history 1801–1829*. New York: The Macmillan Company.
- Wright, P.M. (1978). *The public debt and the recharter of the Second Bank of the United States 1775–1836*. Doctoral dissertation, University of Wyoming.

Appendix

Likelihood ratio test

The ideological and pooled models were compared using a Likelihood-Ratio Test, which is distributed chi-squared with the degrees of freedom equal to the number of restrictions in the model. See Greene (1993) for more details.

$$LR = -2[\ln L_r - \ln L]$$

L_r = is the log likelihood function evaluated at the restricted estimates

L = is the log likelihood function evaluated at the unrestricted estimates

Comparison of pooled model vs. ideological model

$$L_r = f(\text{PR1, PR2})$$

$$L = f(\text{PR1, PR2, COMMERCE, SPECIE, BANK, BANKSQR, SLAVE, HBANKREV, GROWTH})$$

The likelihood ratio statistic is 22.50, which is greater than 20.28, the chi-squared critical value at the .995 confidence level for seven restrictions. Thus, we reject the null hypothesis at the .005 level, indicating the statistical significance of the economic variables.

Comparison of pooled model vs. economic model

$$L_r = f(\text{COMMERCE, SPECIE, BANK, BANKSQR, SLAVE, HBANKREV, GROWTH})$$

$$L = f(\text{PR1, PR2, COMMERCE, SPECIE, BANK, BANKSQR, SLAVE, HBANKREV, GROWTH})$$

The likelihood ratio statistic is 28.08, which is greater than 20.28, the chi-squared critical value at the .995 confidence level for seven restrictions. Thus, we reject the null hypothesis at the .005 level, indicating the statistical significance of the ideological variables.

Note: All models were tested for heteroskedasticity using the Cook-Weisberg test (1983).