Committee Assignments and the Cost of Party Loyalty[1]

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ABSTRACT: This paper empirically investigates the relationship between the value of a representative's committee seats and his or her loyalty in voting with party leaders in the immediate past. We further investigate whether the re-election costs of voting with party leaders—and against constituents—matters to the value of committee seats. We first construct proxies for loyalty in voting, the re-election costs of party loyalty, and the value of members' committee assignments. We then estimate both continuous and discrete dependent variable models, controlling for leadership and tenure. Our results are twofold. First, we find a strong and positive relationship between loyalty and value of committee assignments. Second, we find a weaker, though still positive relationship between our measure of the electoral costs of loyalty and value of committee assignments. These results imply that there is some degree of signaling and/or exchange between party leaders and the rank-and-file membership to allocate parliamentary rights. We discuss some implications of these findings for theories of legislative organization and the legislator shirking literature.

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Wayne A. Leighton and Edward J. López

1. Introduction

We empirically investigate committee assignments in the House of Representatives using data from the 105th and 106th Congresses. We seek to discover whether there is a relationship between how party leaders assign seats to rank-and-file members and how those members supported the party in the immediate past. More specifically, we ask whether the value of a member's committee assignments is related, and to what degree, to his or her prior voting with party leaders on important votes. We are not entirely novel in this approach, though our empirical approach is new. And we present and test an additional question: whether and to what degree the rank-and-file are constrained electorally in voting with party leaders, and the resulting impact that may have on their committee assignments. Our results suggest, first, that the relationship between committee assignment value and party-loyal voting is positive and significant. Second, members who find it more costly to vote loyal to leaders are, ceteris paribus, rewarded with better seats.

These results are second nature to economists, though still informative to areas of ongoing research. In the economic theory of regulation, our results further apply shadow price results found in models of vote-mazimization such as Denzau and Munger (1986) and Grier and Munger (1991). In voting loyally, rank-and-file members individually face their own shadow price of foregone constituent support. The greater the price, the less loyalty in voting they demonstrate, ceteris paribus. While previous studies that find legislator voting against constituent interests have drawn "shirking" or "ideological shirking" conclusions, sometimes with the suggestion of irrationality (Kalt and Zupan 1990), our inference is consistent with a rational constrained optimization framework, albeit along an expanded set of political cost and benefit margins.

For political scientists, the formation of committees is a somewhat narrow empirical question that lies at the heart of broader theoretical debates. Foremost of these debates concerns

the basic orientation of legislative organization. In the new-institutional area of the literature, legislative organization is member-serving; that is, members create institutions to enforce policy bargains. Therefore, members self select onto committees in control of policies that are most important to their constituents.[3] In the information-revealing area of the literature, legislative organization serves the legislative body, specifically its ability to create good policies in the face of uncertain policy effects. Therefore, members are assigned to committees with jurisdictional authority and thereby given incentives to develop policy expertise.[4] This division of knowledge assists the legislature because committees reveal their expertise to the chamber in guiding policy. The former theory is anchored on the view that parties are strong, especially the majority party, and suggests empirically that committees will consist of preference outliers. The latter theory takes the view that parties are relatively weak and counter predicts the preference outlier hypothesis because a representative committee is a more reliable source of information.

In investigating the process of committee assignments, we cannot elude the implications of our results for this debate. However, our empirical approach is at best tangential to previous studies that have tried to show evidence for this debate. We do not examine the preference distribution of committees relative to the chamber. But this can be viewed as a strength. Even though our data do not speak to the preference outlier question, our results reveal that there is some degree of exchange for parliamentary rights taking place. Insofar as this is an accurate reflection of the committee assignment process, it would support the new-institutional area of the literature more than the information-deficient area, albeit indirectly. Moreover, it suggests that the preference outlier question may be moot to the broader theoretical debate. This is helpful because it enables empirical researchers to avoid dealing with problematic proxies of legislator

[3] See Weingast and Marshall (1988), Cox and McCubbins (1993) and Shepsle and Weingast (1994) as representative of the new-institutional literature in this context. Briefly, committees successfully institutionalize policy bargains if they clearly divide jurisdiction, maintain influence within committee (e.g., veto power, gatekeeping power, closed rules), and members can acquire and keep seats on the committees whose policy authority is important to them (their constituents).

[4] See Krehbiel (1992) as representative of the information-revealing literature in this context.

preferences (Krehbiel 1990, Hall and Grofman 1990, Coates and Munger 1995), which has led to somewhat of an impasse in that debate. We elaborate on these and other implications at the end of the paper.

To begin, in Section 2 we discuss the committee assignment process and extant views in the literature. In Section 3 we define, within a simple theoretical equation, some notation and the components of our empirical model. In Section 4 we explain how our key variables were constructed, and then in Section 5 we present our empirical results. We discuss extensions of the empirical work and conclude with the significance of our findings for broader literatures in Section 6.

2. The Committee Assignment Process

Much has been written on the committee selection process. Early literature maintained that the leadership controlled committee membership to suit their preferences.[5] Non-quantitative work in political science has argued that seniority and geographic balance are the key determinants of committee seat allocation (e.g., Masters 1961). But why would members apply for one committee versus another, and try to transfer from one committee to another? And how might leaders decide between two members of equal tenure and geographic balance? Shepsle (1978), on the other hand, models committee assignments as a self-selection of members onto the committees of their choice, which is driven by their constituents' interests. This view led to much later work. Yet all of the contributions belie the fact that, while the party's leadership holds the rights to assign the number and composition of committee seats, it is also true that individual legislators have preference orderings over potential assignments and submit requests that are met with varying frequency. We maintain that it is neither the leaders nor the rank-and-file unilaterally, but *both* who decide committee assignments. Of course, not all scholars will maintain a similar view, which is in a basic sense the purpose of the paper. But, according to this

[5] For discussion of the early emergence of committees in the House of Representatives, and the process by which committee membership was determined through the 19th century, see Polsby (1968, 1969).

view, leaders and members must together engage in some sort of allocative process to assign committee seats. In part, this effort is assisted by the doctrine known as "property norm," by which returning members take priority over members seeking a seat on the committee for the first time (Sachs 1996). In addition, several formal rules govern the distributive properties of the allocation. The hallmark of the committee assignment process, however, is the party steering committee. After the November elections, but prior to the start of the new Congress, party leaders assemble nominating (i.e., steering) committees to choose their party's membership on all standing committees. Importantly, party leaders dominate the steering committees even though they are eclectic in membership. And since party leaders determine formal rules of their party's steering committee, such rules can be viewed as endogenous to the leaders' objectives. Leaving party leaders' objectives out of an empirical examination of the assignment process, therefore, would seem counterfactual from the outset.

An emerging area of the committee assignment literature incorporates steering committees and property rights into the empirical approach.[6] Party leaders seek to maximize the present value of their coalition strength by assigning important committee seats to legislators who are likely to work with them over an extended period of time. Member self-selection—or at least the desire to be on certain committees—remains in the analysis, but a rank-and-file legislator's request for a particular assignment does not guarantee that his or her leadership will grant it. The problem is that assigning a committee seat is a long term property rights decision, and leaders have limited information with which to evaluate a member's long term productivity (toward the party agenda). Prior to long term assignment, leaders must rely on imperfect signals of a member's productivity, one of which is their record of voting with leaders on important roll calls (Coker and Crain 1994). Committee assignments, therefore, are considered the result of exchanges to abate uncertainty, in which rank-and-file members provide loyalty to party leaders in return for favorable committee assignments. The loyalty hypothesis warrants more empirical

[6] See especially Crain (1990), Coker and Crain (1994), and Katz and Sala (1996).

testing,[7] and ought to be qualified by considering that reelection will constrain the member's ability to vote loyal to the leaders (if doing so requires voting against constituent interests). These are the goals of this paper.

2.1. Steering Committees

Before proceeding, it is useful to understand the administrative detail associated with the committee assignment process. The steering committees are composed of party leaders, plus junior members nominated on regional and seniority bases. The party leaders include the Speaker of the House[8] (for the majority party), the majority/minority leader, the party whips, the chairs and vice-chairs of important party governing bodies, the chairs of exclusive committees, and the deputy whips. All party leaders are automatically members of their party's steering committee. Additional members are elected to the steering committees by geographic region and by tenure. In the 105th Congress, for example, the Republican Steering Committee is comprised as follows:

> Chaired by the Speaker, the GOP Steering Committee is responsible to the conference for recommending the standing committee assignments for Republican Members. In addition to the Speaker, the committee is composed of one elected Member from each of nine geographic regions, the chairs of the committees on Appropriations, Budget, Rules, and Ways and Means, the Republican floor leader (majority leader), whip, conference chair, Policy Committee chair, National Republican Congressional Committee (NRCC) chair, one Member elected to represent the sophomore class (103rd Congress), and three Members elected from the freshman class (104th Congress).
> If the Members elected to represent the nine regions come from states which have four or more Republican Representatives, a small state group is formed to elect an additional member of the Steering Committee. This small state group is comprised of states with fewer than three Republican representatives.
>
> (Sachs 1996)

Slightly differently, the Democrats in the 105th Congress assembled their steering committee as follows:

> The Democratic Steering Committee, which is responsible for nominating committee leaders and committee members, consists of the Democratic leader (minority leader), the caucus chair and vice chair, whip, chairman of the Democratic Congressional Campaign

[7] Coker and Crain (1994) drew correlations between an index of loyalty in voting and a ordered, categorical variable of the value of committee seats. They found a positive and significant relationship. However, their results are limited to a small sample and relied on rough proxies. In part, our paper is aimed at conducting the same empirical test with more data.

[8] The Speaker's constitutional duty is to preside over operations of the House, but he is also the political leader of the majority party. The Speaker frequently does not register roll call votes, and most interest group ratings do not compile vote scores on the Speaker.

> Committee (DCCC), one co-chair and two vice-chairs appointed by the Democratic leader, the four chief deputy whips, a member of the freshman class, 12 Members elected from 12 equal geographic regions, 10 Members appointed by the Democratic leader, and the Democratic leaders of the Appropriations, Budget, Rules, and Ways and Means committees.
>
> (Sachs 1996)

In both parties, leadership directly controls steering committee proceedings and indirectly controls the outcomes through formal rules (Schneider 1998). Collusion within the steering committees is formalized in the House Rules, with no member being able to serve on more than two standing committees, and none serving on more than one exclusive committee.[9] Moreover, the total number of seats and the ratio of majority to minority seats are also controlled by the leadership, with the exception of fixed ratios on the Rules Committee (2:1-plus-1 in favor of majority) and Ethics (1:1). Finally, voting in steering committees is done by secret ballot (Schneider 1998).

3. Committee Assignments and the Cost of Party Loyalty

For simplicity of notation and discussion, we place our empirical work in the context of a brief theoretical model. We wish to estimate the value of a member's committee assignments as a function of how loyally the member voted with his or her party leaders in the previous Congress. In turn, we will measure the cost of voting loyally as dependent on how closely the member's constituent interests match those of the leaders. The closer the match, the less costly the member can vote along with party leaders. We then wish to estimate the impact of this cost variable on the loyalty-assignment relationship.

To state the idea more precisely, we define a few terms. Let V_i represent the i^{th} member's **committee portfolio value**, our dependent variable. We use two alternative variables to measure this, and conduct two separate tests. The first is based on Groseclose and Stewart's (1998) cardinal ranking of House committees. The second is an ordered categorical variable based on the member's number of exclusive and/or major committee seats. Both are explained in detail

[9] Waivers for the two seat maximum are evaluated on an individual member basis, and are common. See House Rule X, "Establishment and Jurisdiction of Standing Committees," Section 6.(b)(2)(A), "Election and Membership of Committees: Chairmen, Vacancies, Select and Conference Committees"

below. Next, let λ_i be defined as the i^{th} member's **index of loyal voting**. Coker and Crain (1994) provide the methodology for constructing this index, which we also discuss below. Let T_i be the i^{th} member's **tenure** to represent seniority, and let D_i be a {0,1} variable to indicate whether the i^{th} member is among the **party leaders**. With these variables defined as such, the first part of the empirical analysis can be stated as estimating the following reduced form:

1a. $V_i = f(\lambda_i, T_i, D_i)$.

We also wish to incorporate the idea that rank-and-file members have heterogeneous abilities in voting loyally. Let Υ_i be the i^{th} member's **cost of producing loyalty**, which is in the form of a more binding re-election constraint when the member goes against constituent interests to vote with party leaders. Now the reduced form is modified such that:

1b. $V_i = f(\lambda_i(\Upsilon_i), T_i, D_i)$.

Our empirical inquiry now reduces to the signs on two partial derivatives in this model: $\partial V/\partial\lambda$ and $\partial^2 V/\partial\lambda\partial\Upsilon$.

4. Empirical Application

Our sample is restricted to the House of Representatives; we leave analysis of Senate committee assignments to future work (where we use senate committee seat values from Groseclose and Stewart's other paper (1999)). Since we are comparing loyalty numbers in the 105th House with committee assignments in the 106th, we will necessarily have to omit members who did not continue in office. These number 45 in total.[10] We also necessarily eliminate freshmen members of the 106th Congress, since they have no voting record on which to measure loyalty. Delegates from Puerto Rico, the District of Columbia, etc., are also removed. Finally, Mary Bono and Lois Capps were eliminated from the sample as they were elected following their husbands' deaths

[10] Baesler, Bunning, Crapo, Dellums, Ensign, Fawell, Fazio, Flake, Foglietta, Fox, Furse, Gingrich, Hamilton, Harman, Hefner, Inglis, Johnson, J. Kennedy, Kennelly, Kim, Klug, Manton, McDade, McHale, Molinari, Pappas, Parker, Paxon, Poshard, Redmond, Richardson, Riggs, D. Schaeffer, Schumer, Shiff, Skaggs, L. Smith, R. Smith, Snowbarger, Solomon, Stokes, Tejeda, Torres, and White. In addition, Livingston resigned March 99, so we also eliminated him from the sample.

while in office.[11] This narrows the sample to 389 members. Of this number, 26 are designated as party leaders.[12]

4.1. Dependant Variables

An ideal dependent variable would measure the value to each member of his or her committee seats occupied. However, member-specific value data over committee assignments is somewhat ambiguous. For example, two members of the Agriculture committee may value their seats more than being on the Small Business committee, but they will not necessarily value their seats equally. One reason involves seniority: a vice chair or sub-committee chair will be more valued than the 15th seat. Another reason involves policy jurisdiction: any seat on Agriculture will be more valued by rural rather than urban members, ceteris paribus.

No method in the literature fully accounts for these member-specific variations. Still, our empirical approach benefits greatly from the work of Groseclose and Stewart (1998) on this question. Prior to Groseclose and Stewart (henceforth G&S), the literature on valuing committee seats has typically focused on transfer rates to a committee. By submitting more applications for seats on committee X than committee Y, members reveal a preference for X, possibly in proportion to the ratio of applications. The transfer rate method has severe weaknesses, which the G&S methodology avoids. For example, transfers that are not one-for-one moves between committees cannot be systematically evaluated. Consider a legislator who gives up a seat on *two* less-desirable committees for a seat on *one* highly preferred committee. By revealed preference the summed values of the two inferior committees is necessarily less than the value of the preferred (Munger 1988). But transfer rate methods cannot capture that. More fundamentally,

[11] They have incomplete voting records for the 105th, and the transfer of brand name capital may have had an influence (positive or negative) on their selection of committee seats.

[12] Republicans: Speaker Hastert; Majority Leader Armey, Majority Whip DeLay, Chief Deputy Whip Blunt, Chair Republican Conference Watts, Vice-Chair R. Conf. Fowler, Chair Republican Policy Committee Cox, Vice-Chair RPC Weller, Chair Nat. Rep. Cong. Comm. Davis, Chair Appropriations Young, Chair Budget Kasich, Chair Rules Dreier, Chair Ways & Means Archer. Democrats: Minority Leader Gephardt, Minority Whip Bonior, Chief Deputy Whip Edwards, Chief Deputy Whip Lewis, Chief Deputy Whip Pastor, Chief Deputy Whip Waters, Chair Dem Caucus Frost, Vice-Chair Dem. Caucus Menendez, Chair Dem. Policy Committee Gephardt, Chair DCCC Kennedy, Ranking Minority Member Appropriations Obey, RMM Budget Spratt, RMM Rules Moakley, RMM Ways and Means Rangel.

the transfers to (from) a particular committee can only be captured in isolation, thus ignoring the committee from (to) which the member transfers. Groseclose and Stewart use a clever analogy, that of ranking college football teams. Simply looking at the team's win-loss record ignores the quality of the team's opponents. A more meaningful valuation would assign a higher value to a team that wins against a strong schedule than a team that wins against patsies. Several computerized college football rankings and the composite Bowl Championship Series (BCS) rankings account for strength of schedule. The G&S scores are, in this sense, the equivalent of BCS rankings for congressional committee seats.

Specifically, the G&S scores consider each transfer as a match between one committee and one *or more* contesting committees. The committee transferred to is scored as the winner, while the committee(s) transferred from are scored as the loser(s). A movement to a committee earns that committee a score of 1, movement from that committee earns it a score of -1, and no movement earns a score of 0. An estimate is then made of the probability that the outcomes observed would in fact occur. The weights of each committee are then estimated by maximum likelihood using actual transfer data from 1947 to 1991. The result is an estimate of the average value that members place on a seat on each committee. We report the results from G&S that are relevant to our paper in Table 1.[13]

{TABLE 1 HERE}

The G&S scores have many attractive qualities. First, every pair-wise combination that legislators considered in previous Congresses is included, so the G&S scores summarize a complete picture of the revealed preferences of legislators. Second, because the model develops weights for each committee, the G&S scores are *cardinal*. We can say, as a result, that a seat on Appropriations (=5.08) is nine percent more valuable than a seat on each of the Energy, Foreign Affairs, and Natural Resources committees (2.00+1.72+0.93=4.65). Similarly, a seat on

[13] Not all the committees listed in Table 1 were still in existence in the 105th-106th Congresses. These are marked with an asterisk and not included in our data.

Appropriations (=5.08) is approximately three times the value of a seat on Budget (=1.56), which is in turn three times the value of a seat on Public Works (0.55). We take advantage of these properties in using the G&S scores to form our dependent variable. To calculate the value of the i^{th} member's committee portfolio, we sum the G&S scores for each of the committees on which a member sits. A legislator sitting on the Budget (1.56) and Commerce (.34) committees would have a net committee portfolio value of 1.90. This is an estimate of the value that the average House member would place on such a portfolio, which makes it comparable to other portfolios.

There are two minor ambiguities with this use of the G&S scores that we should address. First, if there are zero transfers from a committee, the G&S scores necessarily assign a value of infinity to that committee. Ways and Means is the only committee with zero transfers from; therefore, its score is estimated to be infinity. Members clearly do not value W&M as infinitely better than Appropriations. Through conversations with senior congressional staff and a modest dose of common sense, we reasoned that W&M is certainly more valuable, but something less than 1.5 times as valuable as a seat on Appropriations. This would place the score somewhere between 5 and 7.5. From this point, we somewhat arbitrarily assigned an even score of 6 to Ways and Means. This is not preferable, but necessary. Second, the G&S scores measure the aggregate value of a seat over a long period of time (20 years), despite short term fluctuations in the value of committee seats. It is widely known on Capitol Hill, for example, that the value of a seat on the Public Works (now Transportation) committee skyrockets when the highway spending bill is up for reauthorization (every third Congress). While the long term G&S scores do not capture the variance, they do capture the resultant changes in the long term mean. This kind of smoothing, while neither ideal nor devastating, is still a concern.

To help address the above concerns, we also conduct the estimations on an alternative dependent variable. We construct an ordered categorical variable based on the two parties' respective committee classification systems. The House Democratic Caucus and the House Republican Conference place standing committees into categories for the purposes of setting per-

capita assignment limitations. The Democrats classify Ways and Means, Appropriations and Rules in the "exclusive" category, while the Republicans would add Energy and Commerce to thier list of "exclusive" committees. Other committees are labeled "major" and "non-major" in the case of Democrats, and "non-exclusive" and "exempt" by the Republicans. These classifications appear next to the G&S scores in the two rightmost columns of Table 1. Our second dependent variable takes on the following rank values, which we will estimate using ordered probit maximum likelihood.

Dependent Variable	Republican Assignments	Democrat Assignments
0	0 Exclusive or Non-exclusive	0 Major or Exclusive
1	1 Non-exclusive	1 Major
2	2 or more Non-exclusive	2 or more Major
3	1 Exclusive and 1 or more Non-exclusive	1 Exclusive and 1 or more Major

Neither of our dependent variables is adjusted for relative rank within committees. While the average value of Agriculture might be higher than the average value of Banking, it does not follow that the Vice-Chairman's seat on Banking is less valuable than the least senior seat on Agriculture. Clearly a member is cognizant of the rank he or she would occupy when transferring to a superior committee, and incorporates this into the relative valuation of the switch. We are unaware of the extent to which this interferes with the usability of the dependent variables in our model. A potential remedy would be to identify the rank of each member on each committee and weight the G&S scores accordingly. However, that solution begs the question of determining the appropriate weights. *How much* more valuable is the second seat on Agriculture relative to the least senior slot? This is an ambiguity that has no ready solution in either the received literature or in our data set, so our obtained results must be taken with this in mind.

4.3. Measure of Party Loyalty: The Coker and Crain Loyalty Index

The proxy for λ should capture the underlying characteristics of how the leadership evaluates the loyalty of rank-and-file members. As discussed in Section 2 above, leaders wish to allocate valuable committee seats to members who will work in the party's long term interests. Many

factors simultaneously converge to form the leadership's evaluation. Certainly their record of voting with party leaders would seem to be a factor, and we emphasize loyalty on important issues and/or close votes. But party leaders also strive for geographical balance on committees. In addition, some members are sorted by their non-Congressional occupation—a former military member being selected for the Committee on Armed Services, or a biologist being selected for the Committee on Science. So called "star quality" may account for placing prominent or famous members in high profile committee seats (e.g., former professional athletes or actors). Increasingly, another signal of party loyalty has become the member's success in fundraising for the party. While these are important considerations, they are difficult to measure. Loyalty in voting, on the other hand, is readily measurable through the electronic publication of roll call votes. And loyalty in voting, we believe, will be sufficiently correlated with these less measurable factors to provide an adequate measure of the leadership's evaluation. Thus, our measure of party loyalty is more precisely a measure of loyalty in voting with party leaders on close votes. But we view it as substantial, and superior to alternative measures such as those based on watchdog vote indexes (e.g., ADA, NTU, etc.).

It is important to measure loyalty on important votes rather than on all roll calls because it is doubtful that leaders need or reward loyalty on unimportant votes. Snyder and Groseclose (2000) demonstrate evidence that party influence matters on close votes more than six times as often as on lopsided votes. To construct our index, we follow Coker and Crain (1994), whose index is based on voting with party leaders on very close votes (less than one percent).[14] Specifically, let n be the number of close votes. For each vote, the party leaders establish a preference on the issue by the way they vote. Let q be the number of times the rank-and-file member votes along with his or her leadership's position. The loyalty index will be:

3a. $$\lambda_i = \log\left[\frac{q_i + .5}{(n - q_i) + .5}\right].$$

[14] This contrasts with earlier measures that are based on all roll calls (e.g., Cox and McCubbins 1991).

Because n is finite, cases where $q=n$ or $q=0$ will cause the tails of λ to underestimate the extremity of the member's underlying preference for loyalty. Individuals on the extremes might have been even more (or less) loyal given the chance. But a finite number of votes constrained them from expressing the full intensity of their preferences. To correct for the censored cases, we follow the method of Coker and Crain and adjust the tails as such:

3b. $\lambda_i = \log[\bullet] + .05$ if $q=n$ and

3c. $\lambda_i = \log[\bullet] + .05$ if $q=0.00$.

The resulting λ series is an unbounded log-odds ratio that increases monotonically with the frequency of voting loyal to the leadership. We depict this property in Figure 1A below.

{FIGURE 1A AND 1B HERE}

To calculate the λ values for the 105th Congress, we obtained the U.S. Congressional Roll Call Voting Records from among ICPSR databases, and recoded the data such that -1 is a 'nay', 0 is an abstention, and 1 is a 'yea'.[15] Next we calculated the winning percentages of each vote to determine their closeness [(Yeas-Nays)/(Yeas+Nays) = WinPct.]. By this method, only 13 were decided by one percent or less. Given the small number of extremely close votes, we decided to calculate the loyalty index for two percent or less (n=32) and also three percent or less (n=48). If the index for slightly less close votes is highly correlated with the index for one percent closeness, it would be preferable to rely on the broader number of votes.[16]

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[15] The 105th Congress conducted 1157 roll calls. ICPSR records each member's vote as such: 0. Not a member at time of vote; 1. Yes (Y); 2. Paired Yes (PY); 3. Announced Yes (AY); 4. Announced No (AN); 5. Paired No (PN); 6. No (N); 7. General Pair; 8. Present; 9. Not voting or not ascertained. Pairing is simply a way for absent members to make an official record of how they would have voted if present. An absent member pairs with another absent member who would have voted opposite, and they agree to cancel each other's paired votes out. Less than 2/10's of a percent of the sample were PY or PN. The practices of announced voting (either AY or AN) and General Pairing are even more rare, which few members ever use anymore. Through conversations with long experienced congressional staff, we understand the effect of an announced vote is the same as a paired vote. "Present" is also rarely used, mainly when the Congress wishes to express its position on ethical matters occurring outside its body (e.g., condemning an act of another government). Finally, paired voting has been effectively abolished with the start of the 106th Congress (Sachs 1999).

[16] What we are really trying to measure is the leadership's ability to evaluate individual members on their

For each close vote, it is necessary to establish the leadership's preferred position. We took the outcome within the respective parties' steering committees as a statement of the leadership's position. For example, on roll call 10, which passed by a margin of 2.35 percent (218-208), the Democratic Steering Committee voted 36 in favor and 4 opposed, thus establishing a supportive position. In contrast, the Republican Steering Committee voted 4 for and 21 against, establishing the opposite position. In this manner, we calculated the preferred positions on each vote at all three levels of closeness. Next it is straightforward to establish the frequency with which the member votes loyally, and then calculate each member's loyalty index according to Equation 3 above. The results of these calculations appear in Table 2, which contains descriptive statistics and a range of sample values for the loyalty index in the 105th Congress. At the bottom of the table the correlation coefficients among the index at different degrees of closeness are listed along with significance levels. Given the high degree of correlation, we consider the λ at three percent closeness to be more attractive because of the larger number of votes. As Figure 1B shows, the calculated λ values assume the shape of the log function, showing clearly how λ increases with the frequency of voting with the leaders.

4.4. The Cost of Voting Loyally

Like our construction of λ, we can use the properties of logarithms to create the cost measure. Let the cost variable Υ_i be separable into γ_i^k variables for each of k measures of constituent interest. Then let M_i^k represent the measure of the k^{th} constituent interest for the i^{th} member, and let L^k represent the same measure for the party leadership. We express the cost of loyalty using the ratio of M and L. Let g define that ratio as follows:

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voting loyalty. Restricting the proxy to 13 votes seems to narrow. Admittedly, this is somewhat arbitrary. But there must have been more than 13 important votes in the 105th Congress. Ideally, we would survey the leaders on which are the important votes. But this would result in dirty data through disagreement and subjective, sophisticated, or otherwise beguiling responses. Why not just ask the leaders to give a numerical score that they implicitly assigned members while deciding committee assignments? The point is that our index is necessarily somewhat arbitrary in the number of votes we incorporate into its calculation. But we will attempt to minimize the adverse effects of this arbitrariness by looking at various degrees of closeness.

4a. $g_i^k = M_i^k / L^k$ if $M_i^k \geq L^k$ and

4b. $g_i^k = L^k / M_i^k$ if $M_i^k < L^k$.

Now the "match" between the i^{th} member and the party leaders along the k^{th} constituent interest variable can be expressed as:

4c. $\gamma_i^k = \ln (g_i^k)$.

Consider the properties of this expression. As the match improves, g_i^k approaches 1 and therefore γ_i^k approaches 0. As the match worsens, the cost variable increases logarithmically. We have depicted this property in Figure 2A below. The closer the match between the rank-and-file legislator and his or her leadership, the more likely that legislator will meet his or her constituents' interests by voting the way the party leaders do. In other words, the costs of voting loyally are lower as each γ^k approaches 0.

{FIGURE 2A AND 2B HERE}

We calculated γ^k values for each of the following constituent characteristic measures.

Variable Name	**Represents γ^k where M and L measure**
PEROT-match	Percent of 1992 presidential vote for Perot
FARM-match	Percent of population living on farms
PCTCOLL-match:	Percent of population with a college degree
MANUF-match:	Total manufacturing employment in district
PCTBLACK-match:	Percent of population that is black
PUBEMP-match:	Total public sector employment in district
MEDINC-match:	Median income in the district
WELFARE-match:	Aggregate welfare expenditures in district

Next, we construct a weighted statistic over these eight constituent characteristics to serve as our proxy for the cost variable Υ_i. To do so, we first regress V on the eight match variables to estimate their relative weights on the variable of interest.

5a. $V_i = \alpha + \Sigma \pi_{ik} \gamma_i^k + \mu_I$ for k = 1-8.

Each of the π_{ik} estimates from this equation delivers, for each i^{th} member, the k^{th} constituent characteristic's effect on the dependent variable (which are comparable because natural logs are on the right hand side). Now we can calculate the relative weights of the k characteristics by:

5b. $\omega_i=\pi_i/\Sigma\pi_i$

And from this we can use these ω_i's to form a single weighted average of the γ^k's according to:

5c. $\Upsilon_i=\Sigma\omega_i^k\gamma_i^k$

Now the Υ_i is the i^{th} member's cost of producing loyalty calculated over all k constituent characteristics.

{TABLE 3 HERE}

Table 3 presents the summary statistics for all of our major variables.

5. Estimations and Results

Because each party allocates seats separately, and the underlying calculus in question is one of party loyalty, we will estimate each empirical model for Republicans (majority party) and Democrats (minority party) separately. Our first regression is:

6. $V_i = \alpha + \beta_1\lambda_i + \beta_3 T_i + \beta_4 D_i + \mu_i.$

Here T is tenure (to proxy seniority and the property norm convention), and D is a leader dummy (=1 for the 13 leaders in each party as listed in footnote 10 above).

{TABLE 4 HERE}

Table 4 contains our main regression results where the G&S Scores are the dependent variable. Equation 6 above corresponds to Model 1 in Table 4. The estimated β_1 in the Republican equation is both positive and significant, revealing a direct relationship between committee portfolio value and party loyalty in the immediate past. In magnitude, the coefficient implies that an increase in loyalty by just over three standard deviations leads to a 1.6-unit increase in the member's committee portfolio value—roughly the equivalent of adding a seat on the Budget Committee. Alternatively, an increase in loyalty by one standard deviation would increase V_i by the equivalent of a seat on the Banking Committee. This result is obtained only for the Republican majority, however. For the Democratic minority, the estimated loyalty index

coefficient is statistically zero. This difference between the parties is maintained throughout all of our subsequent estimations, and we will return to discuss it further below.

Our second estimation incorporates the cost of producing loyalty. We estimate:

7. $V_i = \alpha + \beta_1\lambda_i + \beta_3 T_i + \beta_4 D_i + \Sigma(\beta_k\gamma^k) + \mu_i.$

This model includes the γ^k values calculated over all eight constituent characteristics listed above. A joint F-test on the γ^k coefficient estimates will indicate whether the cost variables represent an improvement in model fit. In Table 4, Equation 7 corresponds to Model 2. The variables that are repeated from Model 1 perform the same. A joint F-test indicates the block of "match" variables is statistically significant, for both Republicans and Democrats.[17] The combined significance of the match variables, however, ignores the fact that the joint test can only say whether the signs on the match variables are different from zero. It does not say whether they are jointly positive or jointly negative.

To more directly estimate the sign on our cost variable, we now use the weighted cost variable from equation 5c in the following two regressions:

8a. $V_i = \alpha + \beta_1\lambda_i + \beta_2\Upsilon_i + \beta_3 T_i + \beta_4 D_i + \mu_i.$

8b. $V_i = \alpha + \beta_1\lambda_i + \beta_2(\lambda_i\Upsilon_I) + \beta_3 T_i + \beta_4 D_i + \mu_i.$

Now our coefficients of interest are β_1 and β_2. Equation 8b, in particular, tests the cross partial derivative $\partial^2 V/\partial\lambda\partial\Upsilon$. Models 3 and 4 in Table 4 correspond to Equations 8a and 8b, respectively. In Model 3, party loyalty is still positive and statistically significant for the majority, and the magnitude of the estimate is changed only slightly. Also, our cost of loyalty coefficient estimate is both positive and significant. This would indicate that members with higher cost of producing loyalty are assigned to more valuable committee seats, ceteris paribus.

[17] Model 1 is the constrained and Model 2 is the unconstrained. The joint-F test would be (where subscripts refer to the model $[(RSS_1-RSS_2)/k]/[RSS_2/(N-12)]$. For Republicans this would =[(667.07-635.93)/8]/[635.93/(205-8)]=9.646, which is statistically significant at .01%. For Democrats this would =[(685.86-664.74)/8]/[664.74/(184-8)]=5.59 which is statistically significant at 1%.

By these estimates, an increase of one standard deviation in the cost of loyalty is associated with a .19 increase in the G&S scores—slightly better than a seat on Veterans Affairs. Model 4, which includes the interaction term between loyalty and cost of loyalty, estimates a positive and significant coefficient on loyalty, though its magnitude is now lower due to the interaction with the cost variable. The coefficient on the interaction term is positive and significant, and of a large magnitude. A one standard deviation of the cost variable, given a mean value for loyalty, increases a member's portfolio value by .61—or a bit more than a seat on the Banking committee. In other words, this result suggests that for a given amount of loyalty in voting, members with higher cost of producing loyalty are given more valuable committee seats.

We attempted to solidify this result using an alternative cost proxy, the 1996 general election margin of victory. A member with a safer seat will be less bound by an adverse match with party leaders. We re-estimated the empirical model using margin of victory as a stand-alone variable and as interactions with the cost and loyalty proxies. The results appear in Table 5. When used as a stand-alone addition to Model 1, seen in the first column of Table 5, the estimate of margin of victory on committee portfolio value is statistically zero.

{TABLE 5 HERE}

However, when interacted with our loyalty index—the second column of Table5—the estimate on the interaction term is negative and statistically significant. If margin of victory is deemed a suitable substitute for our Υ term in measuring the cost of producing loyalty, then we have a counter result. That is, supposing margin of victory is a good measure of the safeness of a seat, which in turn enables members to vote more loyally to leaders, this estimate implies that, for a given amount of loyalty, a safer seat results in a lower committee portfolio value. It contradicts our earlier finding of the cost of loyalty, so we may wish to be more careful in interpreting that result. It is possible, on the other hand, that the margin of victory result is an artifact of that variable's empirical properties. Though it is a straightforward idea to try to incorporate the

safeness of a seat, margin of victory is an unruly series because there are many uncontested races, the measure is bounded {1,100}, and it has high kurtosis. It also supposes that general election voters is the only constituency that matters. Moreover, we are already capturing some of the safeness of a seat with the tenure variable. In fact, each cohort's average margin of victory increases monotonically with tenure. None of this suggests that we ought not use margin of victory to proxy safeness of seats. But the variable does behave somewhat erratically in our empirical framework. When for example, margin of victory is interacted with the cost of loyalty—third column of Table 5—the coefficient estimate is very close to being statistically zero. And when we interact loyalty, margin of victory and our cost term, the estimate becomes positive and significant. This last result reinforces our earlier positive sign on the cost-loyalty interaction, but it is somewhat ambiguous to interpret the cost-loyalty-margin coefficient. In sum, rather than bolstering our earlier result, introducing margin of victory has produced a slightly muddier picture on estimating $\partial^2 V/\partial\lambda\partial\Upsilon$.

Returning to the relationship between loyalty and committee seats, we also re-estimated Models 1-4 on the narrower loyalty indexes calculated on 2-percent and 1-percent closeness. Since the results are nearly identical, we do not report these estimations. But we will briefly mention the main difference: We obtained a smaller estimate on the loyalty coefficient in the 2-percent models, and even smaller in the 1-percent models. This would seem to be a sensible result, because the narrower the set of votes that we count as important to party leaders, the smaller the leaders' information set and the smaller impact we would expect that to have on the dependent variable.

Moving to the ordered categorical dependent variable, we report our obtained ordered probit estimations on Models 1, 3 and 4 in Table 6 below. Recall that the dependent variable for Republicans is coded {0,1,2,3} for {0 Exclusive or Non-exclusive, 1 Non-exclusive, 2 or more Non-exclusives, 1 Exclusive}

{TABLE 6 HERE}

The first thing we see is that the estimates on loyalty and cost of loyalty perform in ways that are similar to the continuous regressions above. That is, loyalty and the cost of loyalty are both positive and significant for the Republican sample but not for Democrats. Ordered probit parameter estimates are not of direct interpretive value, however, so we will discuss the model further. Ordered probit calculates β estimates as well as threshold values, or "cut points" (denoted μ_k) to split the estimation of the independent variable along the standard normal distribution. In this case k=3—there are three cut point estimates—because V_i takes four possible values. The parameter estimates can be used together with the cut point estimates to calculate estimated marginal effects for each of the independent variables. That is, the coefficient estimates can be transformed into each regressor's marginal effect on the probability that the dependent variable falls into each category. We calculate the estimated marginal effects by evaluating the probability density function (denoted ϕ) of the standard normal distribution at the ordered probit estimates and the means of the regressor matrix (Greene 2000:878-9). In the case of the loyalty variable λ and its coefficient estimate β_1, for example:

9a. $$\frac{\partial \Pr(Vi=0)}{\partial \lambda} = -\phi(\hat{V})\beta_1$$

9b. $$\frac{\partial \Pr(Vi=1)}{\partial \lambda} = [\phi(\hat{V}) - \phi(\hat{\mu}_1 - \hat{V})]\beta_1$$

9c. $$\frac{\partial \Pr(Vi=2)}{\partial \lambda} = [\phi(\hat{\mu}_1 - \hat{V}) - \phi(\hat{\mu}_2 - \hat{V})]\beta_1$$

9d. $$\frac{\partial \Pr(Vi=3)}{\partial \lambda} = \phi(\hat{\mu}_2 - \hat{V})\beta_1.$$

The marginal effects of other independent variables could be calculated analogously, but we are most interested in the loyalty variable. Again, the loyalty coefficient is positive and significant for all models in the Republican sample. And looking at the marginal effects, reported at the bottom of Table 6, increasing loyalty decreases the probability of having zero committee assignments, and increases the probability of having one or more exclusive assignments. The

marginal effects on categories 2 and 3 are positive and negative, respectively. The most we can ascertain from these estimates is that increasing loyalty shifts some of the distribution from the bottom category (no important committee assignments) to the top category (one exclusive committee assignment). By equation 9, of course, this follows directly from the positive sign on the β_1 estimate. However, the value of the estimated marginal effects is in their interpretation of magnitude. In Model 3 and 4, a one unit increase in loyalty reduces the probability of having no committee assignments by 10 to 12 percent, and increases the probability of being on an exclusive committee by three percent. For comparision, a one-standard deviation increase in loyalty decreases probability of having no committee assignments by six percent, while increasing the probability of an exclusive seat by approximately 1.6 percent. While smaller in magnitude, our discrete variable model reinforces the results obtained by our OLS model: that there is a strongly positive relationship between committee portfolio value and loyal voting in the immediate past.

Our results were obtained nearly exclusively for Republicans. The question is whether this is because they are Republicans or because they are the majority party. Our data set is incapable of answering this. However, given that Coker and Crain (1994) obtained similar results for democrats when they were in the majority (90^{th} Congress), we suppose that it was because of majority status rather than some unobservable difference in the manner that each party allocates seats. As seen in Section 2 above, both parties employ similar institutional rules in allocating seats. Moreover, these rules have survived one switch of party control. For reasons that our data do not capture, the minority party seems not to allocate along loyalty lines. We will leave speculation and more data work on this question to other research.

6. Conclusion

In this paper, we have calculated proxies for a member's party loyalty (based on Coker and Crain 1994), the member's likely electoral costs of voting loyally (using our own modeling), and the value of members' committee portfolios (based on Groseclose and Stewart 1998). Using these

data in both continuous and discrete dependent variable models, we have estimated the relationship between how party leaders assign seats to rank-and-file members and how those members supported the party in the immediate past. For the majority party, we have found that higher party loyalty results in a more valuable committee portfolio in the next congress, ceteris paribus. And we have also found, though less convincingly, that for a given degree of loyalty a higher cost of producing that loyalty results in a higher portfolio value, ceteris paribus. Both of these results imply some degree of signaling and/or exchange between leaders and the rank-and-file in the allocation of parliamentary rights.

Our results hold implications for the broader literature on the legislator's decision calculus. The paper by Denzau and Munger (1986) represents a standard model of re-election. Their model consists of three sets of agents: voters, interest groups, and legislators. The legislator maximizes votes by supplying vote-producing policies or by supplying services to interest groups in exchange for vote-producing campaign resources. In equilibrium, the legislator equalizes marginal returns from services across these groups. An important implication of this model is that the legislator's "price" for providing service to an interest group depends on two factors: productivity in providing the service and voter preferences. Grier and Munger (1991) expand on this model by demonstrating that a more productive legislator can provide more (or more valuable) service to interest groups, ceteris paribus, which produces more campaign resources, which produces more votes. In the Grier and Munger model, a key determinant of a legislator's productivity is acquisition of the right committee assignments. The loyalty and cost of loyalty hypotheses bear directly on this question by illuminating a higher order effect/constraint imposed on the legislator: acquiring advantageous committee seats requires voting loyally, which in turn is constrained by constituent interests.

Our results also hold implications for the broader debate over legislative organization. Rank-and-file members voting loyally for advantageous committee assignments is one example of exchange for parliamentary rights. In our discussion of steering committees we have seen that

this exchange, insofar as our data reveal that it occurs, is institutionalized in the functions of those committees. The ostensible purpose of such a gains-from-exchange institution would be to generate benefits to the members in the legislature—a form of efficiency argument.[18] Gilligan and Krehbiel (1994) critique this argument, placing it in a logical trap. The exchange is only efficient if: a) parliamentary rights, as opposed to mere policy outcomes (i.e., logrolling), are exchanged according to member preferences; and b) the institutionalization of such exchanges imparts greater policy benefits to members. The results obtained here would satisfy the first statement, and Grier and Munger (1991) satisfy the latter. Taken together, the combined results support a gains-from-exchange hypothesis of legislative organization, at least where committee assignments are concerned. In addition, our perspective suggests not only that committee assignments are organized to facilitate gains from exchange and to enforce bargains, but that committees are themselves partly the result of bargains. The rights to capture gains from exchange are not self-selected, but are allocated in a mutually beneficial exchange process. This finding supports a new-institutional perspective on legislative organization. And, because we do not regard the preference distribution of committees, our approach serves as an alternative to the still controversial preference outlier question.

Only slightly more narrowly, but directly related, are the implications for Snyder and Groseclose (2000) who, as mentioned earlier, also examine close votes.[19] Their results indicate that parties ought to devote more resources to monitoring and rewarding/punishing close votes. If so, perhaps the most natural place to find evidence of this would be in committee assignments. Our paper seems to have identified such evidence. However, this is only the case for the majority party, a distinction that is not provided for in Snyder and Groseclose and that points to areas of future work on this topic.

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[18] Whether the efficiency criterion is global, compensatory, or other, is an important though finer question, the answer to which would not invalidate the present conclusion.

[19] We thank one of our anonymous referee's for pointing this out.

Finally, our results can also be applied to the legislator shirking literature. We have identified a rational choice reason for there to exist some positive amount of voting contrary to constituent interests. If a shirking inference is supported by the roll call voting literature (e.g., Kalt and Zupan 1990), then the suggestion of an investment inference is supported by our results. Legislators may diverge from current constituent interests in order to increase their political capital so as to better serve their interests in the future (e.g., Dougan and Munger 1989).

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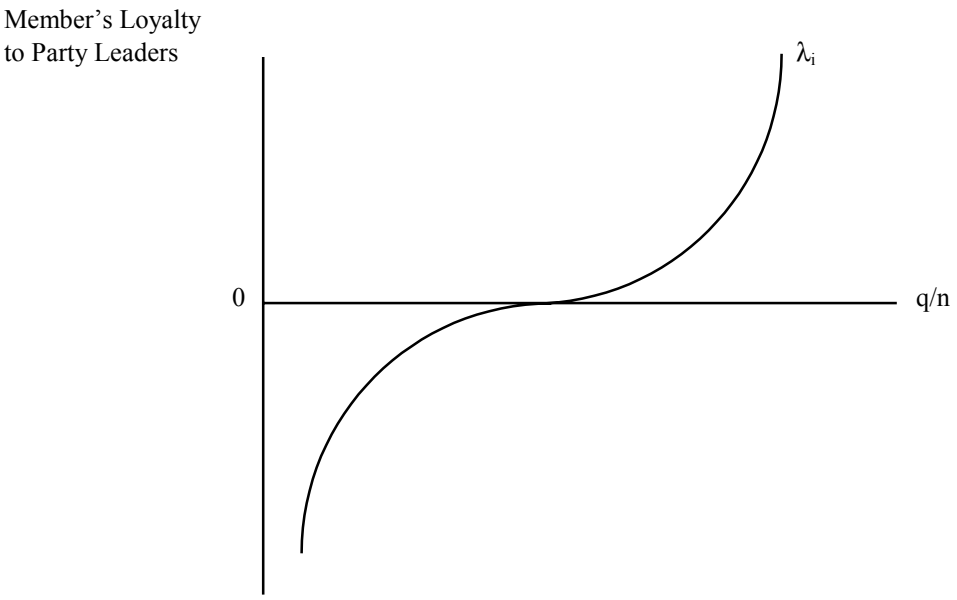
Figure 1A
Member Voting and Loyalty to Party Leadership



Note: See equation (3) in text and surrounding discussion for construction of the λi term.

Figure 1B
Calculation of Loyalty Index for 3 Percent Closeness in 105th Congress

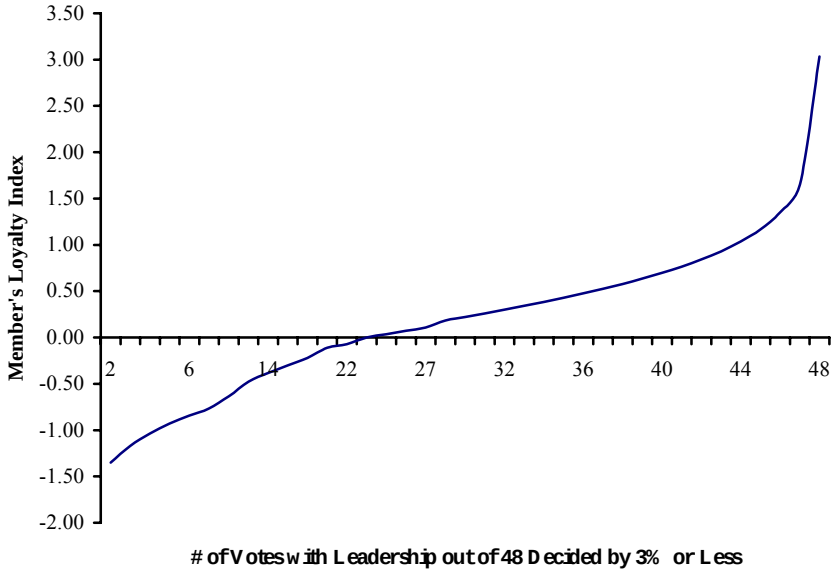
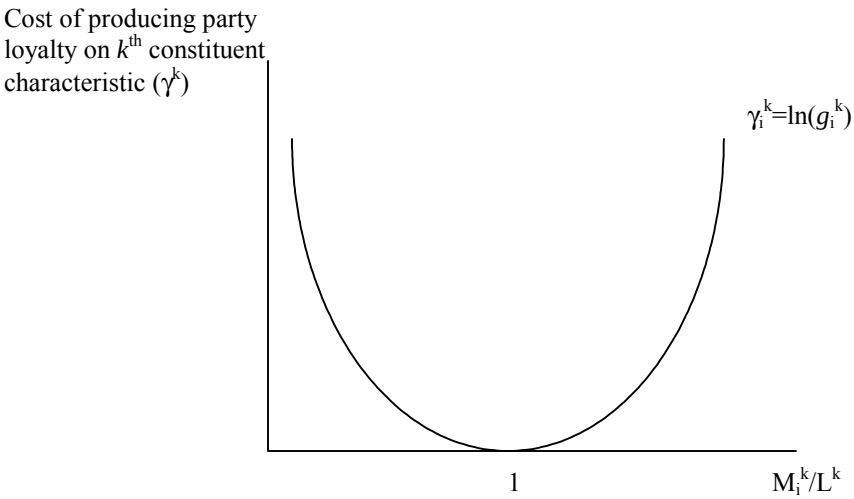


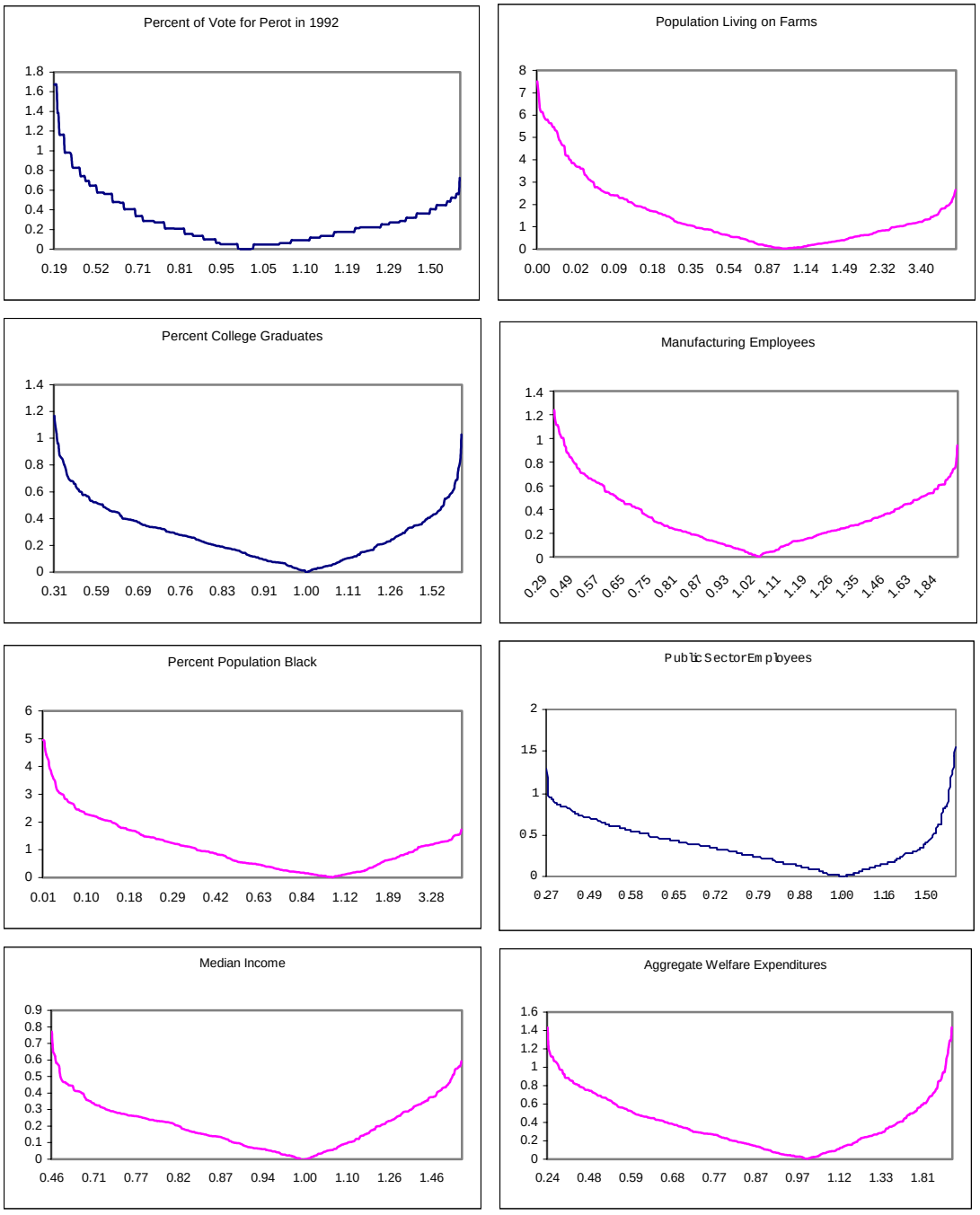
Figure 2A

Leader-Member Match and the Cost of Voting Loyal to the Party



Notes: M_i^k is the k^{th} constituent variable for the i^{th} member, and L^k is the k^{th} constituent variable averaged for the party leadership (members of the steering committee). The variable g^k is equal to M_i^k/L^k when $M_i^k>=L^k$ and L^k/M_i^k when $M_i^k<L^k$.

Figures 2B
Calculation of Cost of Loyalty Over *k*-constituent Interest Variables



Notes: Horizontal axes correspond to M_i^k/L^k in Figure 2A above. Vertical axes are the resultant γ^k calculations, also corresponding to Figure 2A. Box titles refer to the k^{th} constituent interest variable.

Table 1

Ranking the Value of Committee Seats

Rank	House Committee Name	G&S Score	Republican Classification	Democrat Classification
1	Ways and Means	∞(~6.00)	Exclusive	Exclusive
2	Appropriations	5.08	Exclusive	Exclusive
3	Rules	4.47	Exclusive	Exclusive
4	Energy and Commerce	2.00	Exclusive	Major
5	Armed Services	1.96	Non-exclusive	Major
6	Foreign Affairs	1.72	Non-exclusive	Major
7	Budget	1.56	Non-exclusive	Major
8	House Administration	1.08	Other	Non-Major
9	Internal Security *	0.97	N/A	N/A
10	Natural Resources	0.93	Non-exclusive	Non-Major
11	Agriculture	0.84	Non-exclusive	Major
12	Judiciary	0.81	Non-exclusive	Major
13	District of Columbia *	0.59	N/A	N/A
14	Banking	0.56	Non-exclusive	Major
15	Merchant Marine *	0.56	N/A	N/A
16	Pub. Works (Transportation)	0.55	Non-exclusive	Major
17	Science	0.34	Non-exclusive	Non-Major
18	Post Office *	0.31	N/A	N/A
19	Education and Labor	0.28	Non-exclusive	Major
20	Stds. of Official Conduct	0.28	Other	Non-Major
21	Government Operations	0.26	Non-exclusive	Non-Major
22	Veterans Affairs	0.15	Non-exclusive	Non-Major
23	Small Business	-0.25	Non-exclusive	Non-Major

Notes:

1. Committees marked with * were no longer standing committees as of the 106th Congress.
2. G&S Scores (Groesclose and Stewart 1998) are calculated to estimate the value of a seat over the 81st to 102nd Congress (the last period of their data set).
3. Dependent variable 1: Sum of G&S Scores for each committee on which the member has a seat.
4. Dependent variable 2 for Republicans: Ordered categorical variable that is: {0,1,2,3} for {0 Exclusive or Non-exclusive, 1 Non-exclusive, 2 or more Non-exclusives, 1 Exclusive}
5. Dependent variable 2 for Democrats: Ordered categorical variable that is: {0,1,2,3} for {0 Exclusive or Major, 1 Major, 2 or more Majors, 1 Exclusive}
6. The G&S Score for Ways and Means is estimated by Groesclose and Stewart's model to be infinite. We select a value of 6 based on conversations with congressional staff (further explained in text).

Table 2

Summary Statistics and Correlation Coefficients for Index of loyal Voting (1)

Democrats

q3(n=48)	loy(3)	q2(n=32)	loy(2)	q1(n=13)	loy(1)
3.00	-1.17	3	-0.98	2	-0.73
4.00	-1.04	4	-0.84	3	-0.52
5.00	-0.93	11	-0.28	4	-0.35
7.00	-0.77	12	-0.22	6	-0.07
16.00	-0.30	15	-0.05	7	0.07
18.00	-0.22	16	0.00	8	0.20
21.00	-0.11	18	0.11	9	0.35
22.00	-0.07	20	0.22	10	0.52
27.00	0.11	21	0.28	11	0.73
29.00	0.18	22	0.34	12	1.06
30.00	0.22	23	0.41	12	1.06
32.00	0.30	24	0.48	13	2.47
33.00	0.34	25	0.55		
35.00	0.43	26	0.63		
35.00	0.43	27	0.73		
36.00	0.48	28	0.84		
37.00	0.53	29	0.98		
37.00	0.53	30	1.17		
38.00	0.58	31	1.47		
39.00	0.63	32	2.86		
40.00	0.70				
41.00	0.77				
42.00	0.84				
43.00	0.93				
44.00	1.04				
45.00	1.17				
46.00	1.35				
47.00	1.65				
48.00	3.03				
Mean	0.400860687		0.4342282		0.3990617
Std Error	0.158558234		0.1867718		0.2510619
Median	0.429077511		0.3736324		0.275849
Std Dev	0.853862221		0.835269		0.869704
Sample Var	0.729080693		0.6976742		0.756385
Kurtosis	2.291709917		2.8708832		1.8562531
Skewness	0.642886942		1.0238918		1.1066654
Count	29		20		12

Correlations

	loy(3)	*loy(2)*	*loy(1)*
loy(3)	1		
loy(2)	0.842541559	1	
loy(1)	0.873338203	0.847065593	1

Republicans

q3(n=48)	loy(3)	q2(n=32)	loy(2)	q1(n=13)	loy(1)
2.00	-1.35	2	-1.17	1	-1.06
3.00	-1.17	3	-0.98	2	-0.73
4.00	-1.04	5	-0.73	3	-0.52
6.00	-0.84	6	-0.63	4	-0.35
9.00	-0.63	8	-0.48	5	-0.20
12.00	-0.48	10	-0.34	6	-0.07
14.00	-0.38	15	-0.05	7	0.07
24.00	0.00	17	0.05	8	0.20
25.00	0.04	18	0.11	9	0.35
26.00	0.07	19	0.16	10	0.52
27.00	0.11	20	0.22	11	0.73
29.00	0.18	21	0.28	12	1.06
30.00	0.22	22	0.34	13	2.47
31.00	0.26	23	0.41		
32.00	0.30	24	0.48		
33.00	0.34	25	0.55		
34.00	0.38	26	0.63		
35.00	0.43	27	0.73		
36.00	0.48	28	0.84		
37.00	0.53	29	0.98		
38.00	0.58	30	1.17		
39.00	0.63	31	1.47		
40.00	0.70	32	2.86		
41.00	0.77				
42.00	0.84				
43.00	0.93				
44.00	1.04				
45.00	1.17				
46.00	1.35				
47.00	1.65				
48.00	3.03				
Mean	0.326896546		0.2999544		0.1897416
Std Error	0.158040873		0.1821546		0.2506942
Median	0.341634964		0.2798898		0.0664337
Std Dev	0.879934341		0.8735829		0.9038907
Sample Var	0.774284444		0.763147		0.8170185
Kurtosis	2.016406134		2.2113213		2.4903277
Skewness	0.556808607		0.8689252		1.2453323
Count	31		23		13

Correlations

	loy(3)	*loy(2)*	*loy(1)*
loy(3)	1		
loy(2)	0.884718185	1	
loy(1)	0.848735025	0.855614385	1

Table 3
Descriptive Statistics

	Variable Description	Entire Sample Mean	Entire Sample σ	Republican Sub-Sample Mean	Republican Sub-Sample σ	Democrat Sub-Sample Mean	Democrat Sub-Sample σ
Dependent Variables							
V_i	G&S Scores	3.003	1.99	3.21	1.94	2.77	2.04
V_i	Ordered Categorical	2.07	.832	2.38	.619	1.73	.905
Independent Variables							
λ	Party Loyalty	.819	.521	.775	.536	.869	.499
Υ	Cost of Loyalty	-.111	.199	.171	.166	.045	.210
T	Tenure	9.19	7.45	8.52	6.62	9.95	8.23
D	Leader Dummy	.067	.250	.063	.244	.071	.257
M	Margin of Victory*	30.84	22.36	27.56	19.36	34.45	24.81
	Number of Observations	389		205		196	

* Note: Due to missing data, number of observations for Margin of Victory is 370 total, 194 for Republican sub-sample, and 176 for Democrats.

Table 4

OLS Regression Results

Variable	Variable Name	Model 1 GOP	Model 1 DEM	Model 2 GOP	Model 2 DEM	Model 3 GOP	Model 3 DEM	Model 4 GOP	Model 4 DEM
C	Constant	2.368***	2.33***	1.79***	2.06***	2.07***	2.14***	2.31***	2.21***
		(.264)	(.388)	(.428)	(.593)	(.279)	(.383)	(.219)	(.410)
λ	Party Loyalty	1.02***	.046	1.07***	.172	.983***	.142	.526***	.099
		(.239)	(.359)	(.247)	(.395)	(.236)	(.383)	(.205)	(.382)
Υ	Cost of Loyalty					2.01**	1.44**		
		~~	~~	~~	~~	(.76)	(.707)	~~	~~
$(\lambda)(\Upsilon)$	Cost-Loyalty							2.84***	1.25*
	Interaction Term	~~	~~	~~	~~	~~	~~	(.770)	(.772)
T	Tenure	-.006	.024	-.009	.027	-.007	.028	.001	.029
		(.019)	(.018)	(.019)	(.018)	(.019)	(.018)	(.018)	(.018)
D	Leader Dummy	1.591**	2.278***	1.62**	2.31***	1.61**	2.32***	1.45*	2.30***
		(.743)	(.708)	(.766)	(.715)	(.698)	(.689)	(.671)	(.688)
γ^1	PEROT-match			-.579	-.165				
		~~	~~	(.681)	(.434)	~~	~~	~~	~~
γ^2	FARM-match			-.029	-.056				
		~~	~~	(.052)	(.049)	~~	~~	~~	~~
γ^3	PCTBLACK-match			-.011	-.149				
		~~	~~	(.213)	(.161)	~~	~~	~~	~~
γ^4	PCTCOLL-match			-.461	-.021				
		~~	~~	(.820)	(.857)	~~	~~	~~	~~
γ^5	PUBEMP-match			-.057	.651				
		~~	~~	(.474)	(.585)	~~	~~	~~	~~
γ^6	MEDINC-match			2.95**	.837				
		~~	~~	(1.15)	(1.25)	~~	~~	~~	~~
γ^7	WELFARE-match			.205	.136				
		~~	~~	(.505)	(.476)	~~	~~	~~	~~
γ^8	MANUF-match			.514	.351				
		~~	~~	(.521)	(.656)	~~	~~	~~	~~
	N	205	184	205	184	205	184	205	184
	F	8.2***	4.59***	3.21***	1.91*	8.03***	4.52***	12.5***	4.12***
	(df num., df denom.)	(3,201)	(3,180)	(11,193)	(11,172)	(4,200)	(4,179)	(4,200)	(4,179)
	R^2	.131	.103	.172	.131	.160	.124	.186	.119

Notes: Dependent Variable is Value of Committee Portfolio (V_i) based on G&S Scores from Table 1. All coefficients are OLS estimates with robust standard errors appearing in parentheses. *** indicates 1%, ** indicates 5%, and * indicates 10% significance.

Table 5

OLS Estimations Using Margin of Victory as Alternative Proxy for Cost of Voting Loyally
Majority Party (Republican) Sub-sample Only

Variable	Variable Name	1	2	3	4
C	Constant	2.68***	2.32***	2.45***	2.52***
		(.285)	(.244)	(.254)	(.237)
λ	Party Loyalty	.901***	1.40***	.892***	.783***
		(.221)	(.291)	(.221)	(.209)
Υ	Cost of Loyalty	~~	~~	~~	~~
M	Margin of Victory	-.009	~~	~~	~~
		(.007)			
$(\lambda)(M)$	Loyalty-Margin of Victory Interaction	~~	-.016**	~~	~~
			(.006)		
$(M)(\Upsilon)$	Margin-Cost Interaction	~~	~~	.023	~~
				(.016)	
$(\lambda)(M)(\Upsilon)$	Loyalty-Margin-Cost Interaction	~~	~~	~~	.027*
					(.016)
T	Tenure	.001	.009	-.014	-.012
		(.021)	(.021)	(.020)	(.019)
D	Leader Dummy	1.18	1.15	1.18	1.17
		(.857)	(.847)	(.862)	(.860)
N		194	194	194	194
F		5.15	6.72	5.00	5.43
R^2		.086	.101	.085	.089

Notes: Dependent Variable is Value of Committee Portfolio (V_i) based on G&S Scores from Table 1. All coefficients are OLS estimates with robust standard errors appearing in parentheses. *** indicates 1%, ** indicates 5%, and * indicates 10% significance.

Table 6

Ordered Probit Maximum Likelihood Results

Variable	Variable Name	Model 1 GOP	Model 1 DEM	Model 3 GOP	Model 3 DEM	Model 4 GOP	Model 4 DEM
Parameter Estimates							
λ	Party Loyalty	.286*	-.038	.267*	-.041	.314**	-.031
		(.151)	(.167)	(.152)	(.167)	(.153)	(.167)
Υ	Cost of Loyalty	~~	~~	.012	.015	~~	~~
				(.013)	(.015)		
$(\lambda)(\Upsilon)$	Cost-Loyalty Interaction Term	~~	~~	~~	~~	.016	.015
						(.015)	(.015)
T	Tenure	-.008	-.001	-.007	-.002	-.006	-.003
		(.012)	(.010)	(.012)	(.010)	(.013)	(.010)
D	Leader Dummy	-.352	.464	-.382	.458	-.417	.459
		(.334)	(.331)	(.336)	(.331)	(.339)	(.331)
μ_1	Cut-1	-2.24	-1.78	-2.28	-1.84	-2.22	-.183
		(.311)	(.250)	(.313)	(.256)	(.307)	(.254)
μ_2	Cut-2	-1.51	-.019	-1.55	-.062	-1.50	-.049
		(.204)	(.198)	(.211)	(.203)	(.204)	(.201)
μ_3	Cut-3	.278	.597	.233	.555	.282	.567
		(.173)	(.203)	(.179)	(.207)	(.172)	(.205)
Marginal Effects of Loyalty							
	∂Prob(V_i=0)/$\partial\lambda$	-.011	.015	-.106	.016	-.124	.01
	∂Prob(V_i=1)/$\partial\lambda$	.106	-.012	.099	-.013	.116	0
	∂Prob(V_i=2)/$\partial\lambda$	-.023	.012	-.021	.013	-.025	-.01
	∂Prob(V_i=3)/$\partial\lambda$	.030	-.015	.028	-.016	.032	0
	N	205	184	205	184	205	184
	Log-Likelihood	-179.9	-214.7	-179.5	-214.1	-179.3	

Notes: Dependent Variable is Value of Committee Portfolio (V_i) based on categorical variables defined in Table 1. Marginal effects are calculated using equation 9 in text. *** indicates 1%, ** indicates 5%, and * indicates 10% significance.