

Bicameralism and U.S. Agriculture Policy, 1995-2008

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Perhaps the most consequential institutional choice made by the framers of the U.S. Constitution was the adoption of a bicameral structure for the Congress. The requirement that legislation be acceptable to two distinct chambers with dramatically different apportionment schemes has significant implications for both policy making and representation. For one, the apportionment of Senate seats by state, rather than population, may substantially alter the political importance of constituency groups that are not distributed roughly equally across state boundaries. By most accounts, the residents of small states are especially advantaged. The approximately 532,000 people living in Wyoming, for example, have precisely the same representation within the U.S. Senate as do the 37 million residents of California. One longstanding conjecture is that this small-state bias primarily benefits rural voters and thus the constituencies and groups that are primarily located in rural parts of the nation.

Although claims about the policy consequences of Senate apportionment have always been a staple of commentary about American politics, with a few significant exceptions there has been surprisingly little systematic empirical analysis. In her important book, *Stalemate*, Binder (2003) demonstrates that ideological differences between the House and Senate promote legislative gridlock. Interestingly, she does not find that either chamber is disproportionately likely to kill bills passed by the other body. Several studies provide a degree of support for claims that Senate apportionment may help make the chamber more ideologically liberal as compared to the House (e.g., Kernell, 1973; Grofman, Griffin, and Glazer, 1991). There is compelling evidence that small states can use their disproportionate voting power in the Senate to secure a larger share of federal expenditures than they would receive based on population (Ansolabehere, Gerber, and Snyder, 2002; Lee 1998). African Americans, Latino voters, and ideological liberals are also especially likely to reside in larger states, and thus may receive less voting weight in the Senate than their percentage of the full population. Indeed, Senators representing small states are generally less supportive of policies

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advocated by major civil rights groups (Griffin 2006). Still other research, however, questions whether Senate apportionment regularly and systematically helps or hurts major constituency groups in American politics, or that it has major consequences for policy outcomes (e.g., Dahl, 1956; see Moffet 1895 and Wooddy 1926 for earlier studies).

In this paper, we hope to add to scholarship about bicameralism and Senate apportionment by analyzing the consequences of these institutional arrangements for coalition building on agriculture issues, 1995-2008. Our main questions are straightforward. Does the small-state bias produced by the institutional design of the framers make the Senate more responsive to farm interests than is the House? Or do recent trends in American politics – especially heightened partisanship, semi-binding budget rules that affect both chambers, the decline of the House committee system, and the nationalization of American politics – combine to dampen any bicameral differences that might emerge in agricultural policymaking?

We begin in Section 1 with background about recent farm politics in Congress and motivate our decision to use the policy area to explore how House-Senate differences can affect coalition building. Section 2 presents systematic evidence that the apportionment of the Senate by state has significant consequences for the distribution of farm interests within the two chambers. The magnitude of the effect varies somewhat by commodity, however, and to properly understand farm politics it is important to consider precisely what is grown and where. In Section 3, we use the roll call record and data about outcomes to assess the relative success of agricultural interests in the two chambers over the past fifteen years. Interestingly, the results are mixed. Section 4 is an individual-level analysis of member decision-making on three key roll calls that took place during congressional action on the pivotal 2002 farm bill. In each case, the questions posed in the House and Senate were very similar, creating a useful quasi-experiment for weighing the relative importance of constituency and other chamber differences for coalition building. In Section 5, we employ yet another vantage point for comparing the relative influence of farm interests across the two chambers – the initial spending recommendations of the House and Senate for agriculture and related programs during the annual appropriations process. Recent appropriations data support our claim

that Senate apportionment shapes farm policy. In the final section, we summarize our findings.

1. Background

Farm politics is perhaps the preeminent illustration of distributive policy making in Congress. Beginning with the Agricultural Adjustment Act of 1933, the New Deal era statute that established the basic framework of acreage limits, subsidies, and price supports that structures U.S. farm policy, the federal government has taken on an increasingly central role in the domestic farm economy, now spending close to \$50 billion annually on American agriculture and related programs. According to the basic logic of the distributive model, legislators self-select onto committees with jurisdiction over policies and programs that are important to their constituents. In Weingast and Marshall's (1988) classic statement of distributive theory, these lawmakers then use their committee prerogatives to pass bills that concentrate benefits on their constituents, while dispersing the costs more widely throughout the population. On the floor, other members defer to the recommendations of committees because these costs, although very real in an economic sense, are mostly invisible to their constituents. Congressional politics, in this view, is essentially a system of interrelated logrolls in which members receive disproportionate influence over programs that they care about in exchange for looking the other way when their colleagues in turn channel federal largesse to their own constituents. According to distributive theory, such logrolls are maintained by institutional arrangements like jurisdictional boundaries, agenda control, and the use of omnibus legislation, as well as norms of reciprocity.

For more than a generation, instructors in college courses about American politics have referred to farm politics as the classic example of this institutionalized logroll at work. The producers of individual commodities, such as corn or sugar, tend to be concentrated in a subset of congressional districts and states. Their elected representatives in Congress self-select onto the Agriculture Committees of the House and Senate, and within these panels onto subcommittees that are organized along commodity lines. Policy designed to promote the interests of dairy farmers, corn growers, and cotton operations are devised within the relevant subcommittee, so the story goes, and then the

results are stitched together into omnibus measures, especially the legendary “farm bill” that is reauthorized every four to six years. Although the benefits of Agriculture Committee recommendations are targeted to a minority of congressional districts and states, the full House and Senate typically enact them without major change because the costs are spread throughout the country as a whole.

Does this caricature actually reflect the essential realities of farm politics on Capitol Hill? To some extent, we think it does. One of the first scholarly studies of the committee system, for instance, was Jones’s (1961, 1962) analysis of the House Committee on Agriculture. He described in rich detail how producer interests used the committee and its subcommittees to dominate farm policymaking. Ferejohn’s (1986) article about the agriculture community’s use of the food stamps program to broaden its supporting coalition on the floor remains one of the best empirical studies of bargaining in Congress. But there also is substantial evidence that farm issues are not and have never been exclusively distributive. Jones, for example, pointed out that in the 1960s certain crops were mostly grown in areas represented by Republicans, while others tended to be in districts or states represented by Democrats, producing a degree of partisan conflict on farm bills. Most important, while individual commodity programs tend to be noncontroversial because of the broad dispersion of costs, disagreements about the magnitude and basic contours of farm policy tend to divide members along partisan lines. Moreover, even when farm issues are not partisan, they still can generate enormous conflict between competing producers groups and regions. Federal policy toward dairy, for example, is almost entirely driven by producer interests, but these interests vary considerably depending on geography, climate, and farm size.

Hurwitz, Moiles, and Rohde (2001) get it right, we believe, when they describe agricultural policy making as a multidimensional issue area that evokes both a myriad of distributive cleavages and also divides members by party. Indeed, aspects of the policy area are consistent with all major models of congressional organization, including the distributive perspective and alternative theories that emphasize party influence in the legislative process (e.g., Rohde, 1991; Cox and McCubbins 1994; Sinclair, 1995). As such, farm policy is a highly useful vehicle for exploring inter-chamber differences that may be rooted in the Senate’s apportionment scheme. Farm issues evoke interests that

are concentrated geographically, and individual producer groups are not distributed equally across states, creating the possibility that decision-making patterns in the Senate will diverge from what we observe in the House. But the presence of conflict between producer groups and the periodic outbreak of partisan disagreements mean that the issue area is sufficiently representative to teach us something about the impact of Senate apportionment on coalition building more generally.

Freedom to Farm, Freedom to Fail²

The remarkable changes that have occurred in agricultural politics in Congress over the past two decades are yet another reason to focus on the issue area. In 1995, Speaker Newt Gingrich and the new Republican majority spearheaded an effort to reduce the dependence of farmers on subsidies and price supports and increase their exposure to market forces. The vehicle was the reauthorization of the farm bill, already scheduled for the 104th Congress. The reform effort largely originated in the House, and there was substantial opposition to it among Republican and Democratic members of the Agriculture Committee. Indeed, a majority of the GOP-controlled panel initially voted against reporting the Republican plan, which was known as the “Freedom to Farm” bill. The package eventually was included in the year’s reconciliation bill that was vetoed by President Bill Clinton, helping set the stage for the budgetary impasse that occurred a few months later. But in 1996, the Congress passed an amended version of the legislation by wide majorities and Clinton signed the measure in April.

“Freedom to Farm” was a landmark enactment and, for a time, a major change of direction for U.S. farm policy. It reversed existing policies that provided farmers with countervailing subsidies when market prices fell and set restrictions on what they could plant. Freedom to Farm relaxed these restrictions and replaced the subsidy regime with fixed payments intended to decline over time. Many Democrats opposed the bill because it rolled back the safety net that had shored up farm incomes for a generation. Indeed, as a result of international competition, technological efficiencies, and perhaps bad weather in certain parts of farm country, agricultural prices and incomes fell sharply during the

² The events recounted in this section are summarized in relevant issues of *CQ Almanac*, Washington, D.C.: Congressional Quarterly Press.

late 1990s, leading to the passage of a succession of “emergency” farm spending bills via the annual appropriations process.

In 2001, when Congress once again reauthorized the farm bill, Republicans remained the majority party in the House, but Democrats now had organizational control in the Senate. Members of both Agriculture Committees approved legislation aimed at reversing “Freedom to Farm” and restoring and extending the commodity support system. There was a wide consensus among producer groups that the Gingrich reforms had failed. Interestingly, given the subject of this paper, throughout the reauthorization process the Senate bill was generally viewed as more expensive than the House counterpart. Key features of the 2002 farm bill included fixed payments to farmers, a new countercyclical aid program that linked assistance to price guarantees, and extensive loans for marketing. Midway through floor consideration in the Senate, the chamber surprised the farm coalition by adopting an amendment that limited federal subsidies to \$225,000 for individuals and \$275,000 for couples. The initial income cap in the House bill had been \$500,000. But after the Senate took steps to reduce the cap, House members voted to instruct their conferees to accede to the Senate position. Following conference negotiations, the final limit in the enacted legislation turned out to be \$360,000. The conflict over capping subsidy payments pitted larger farmers, mostly located in the South and far West, against smaller operations primarily in the Midwest, and it marked the emergence of a potentially enduring source of instability in the farm coalition.

Needless to say, the 2002 reauthorization did not solve the economic problems of farm country, which are structural and enduring. In each succeeding year, Congress provided agriculture with significant new infusions of “disaster assistance.” Indeed, over \$30 billion in additional “emergency” funds were allocated to agriculture between 2002 and 2007. During the 110th Congress, 2007-08, with Democrats now in majority control of both chambers, Congress passed farm bills that mostly expanded the federal role and built upon the pivotal changes of 2002. President George W. Bush vetoed the legislation, mostly because of the costs, but large bipartisan majorities in both chambers easily overrode his veto. In both chambers, farm state representatives embraced higher expenditures for environmental conservation, in part to broaden the base of support for the farm bill among non-agricultural constituencies. If anything, then, the competing

parochial and partisan pressures that structure farm politics have become more pronounced over the past two decades.³

2. Senate Bias toward Agriculture

Close observers of agricultural policy making (e.g., Browne 1995) generally claim that there is a greater percentage of members from farm constituencies in the Senate than in the House. Is the conventional wisdom consistent with systematic evidence?

For the most part, we think that it is consistent. Table 1 provides summary information about the incidence of agricultural interests within the two chambers. For three key variables, each related to the presence or absence of farming, the table denotes the levels associated with various percentiles in the House and Senate, controlling for population. The first variable is the percent of residents in the constituency who live in areas that are categorized as rural by the U.S. Census of 2000. The second variable is the percent of employed constituents over the age of 16 who work in farm-related employment, also according to the Census. Perhaps most relevant, the third indicator is the dollar value of all federal agricultural subsidies received by a constituency (districts in the House, states for the Senate) during 2003-05, divided by population. Included here are payments from the direct and counter-cyclical programs, the marketing assistance and loan deficiency programs, various commodity-specific supports for dairy and peanuts, and so on. The data were compiled from Agriculture Department sources by the Environmental Working Group, a prominent environmental organization, and are widely viewed as credible.⁴ Indeed, upon initial release during congressional consideration of the 2002 farm bill, the data generated a firestorm of controversy within farm country

³ One intriguing indicator of how much agricultural policymaking in Congress has changed over the past few decades is the evolving structure of the subcommittee systems within the Agriculture panels, especially in the House. In a now classic article, Jones (1962) asserted that the cross-commodity logroll of the 1960s was reflected in the committee's internal structure. Separate subcommittees existed for corn, wheat, and so on. In the contemporary House, the subcommittee structure for the most part is programmatic, rather than commodity-specific.

⁴ For background about the subsidy data, consult the website of the Environmental Working Group: <http://farm.ewg.org/sites/farmbill2007/cdlist.php>. Remaining data in the table are from *Congressional Districts in the 2000's*, CQ Press, 2003.

because they revealed that about half (49.7 percent) of all subsidy spending in the nation was targeted to just 19 congressional districts.

For each indicator, the table provides summary information about the distribution of agricultural interests in the House and Senate. The median levels, of course, are denoted in the cells for the 50th percentile of the relevant chamber distribution. In the House, the median district in terms of rural population had about 15 percent of its residents living in such areas. For the Senate, the median state (in terms of rural residency) had a much higher percentage. The medians for the other two indicators tell a similar story. For the Senate, the median constituency farm employment is about twice the level for the House. Perhaps the most striking difference is for the subsidy data. Here, the expenditures per capita for the median constituency in the Senate are about ten times higher than for the median constituency in the House.

Notice, though, how small the percentages are for working adults employed in agriculture. The 1920 Census indicated that about 30 percent of Americans lived on farms at the time. In 1991, when the Census ceased collecting data about farm residence, the proportion had plummeted to just 1.9% (Gardner, 2002). The farm employment numbers in Table 1 show just how narrow the agricultural base has become in most parts of the country. True, farming can create external economic benefits for related industries, as well as the local service sector. But the dwindling number of individuals employed in agriculture complicates attempts on Capitol Hill to maintain the farm coalition. And every year the political challenges grow.

Looking again at the median levels, Table 1 provides a compelling case that Senate apportionment advantages agriculture. But the main ingredients in legislative coalition building are votes, and preference intensities also matter. As a result, we need to consider the broader distribution of interests. The pro-farm tilt of the Senate appears less pronounced for the upper percentiles in the table. Indeed, the top farm districts in the House appear to be even more dominated by agriculture than are the top farm states for the Senate. In both chambers, but especially in the House, the Agriculture Committee and the agriculture subcommittee on Appropriations have disproportionate sway over the contents of farm policy. And within both chambers, roughly 15 percent of the

membership belongs to one or both panels. These lawmakers are almost exclusively from districts and states in the 80-100 percentile range in Table 1.

The table also shows that about a third of the House is almost completely lacking in agricultural presence, while there is a nontrivial degree of farming in most states. A much larger percentage of the Senate appears to have at least moderate linkages to agriculture, while in the House the proportion is lower. As a result, there is a broader and stronger base for farm interests in the Senate. But again, such claims should be conditioned by congressional organization. The House leadership has procedural tools necessary to block most attempts to unravel the farm coalition on the floor, perhaps from amendments offered by lawmakers without direct linkages to agriculture. The proportion of non-farm legislators may be lower in the Senate, but in that chamber all members have ample access to the floor agenda and the leadership is relatively weak. In other words, the distributions reflected in Table 1 do suggest a pro-agriculture tilt in the Senate, but the ability of farm interests to translate that leverage into votes and legislation may be constrained by the institutional context.

The farm lobby is a coalition of disparate commodity groups and we also need to consider the internal politics of the coalition to gauge inter-chamber differences. Table 2 provides analogous information about the distribution of producer interests for seven diverse commodities: corn, wheat, cotton, peanuts, tobacco, sugar, and rice.⁵ For each commodity, the table indicates the number of farms (per thousand constituents) at the various percentile cut points, first for the House and then for the Senate.⁶ Notice that the numbers are higher for the Senate pretty much across the board. Since the two chambers use divergent apportionment schemes to carve up the same underlying national population, it may seem counterintuitive that the Senate numbers are almost always higher. Consider, for instance, the upper percentiles for wheat and cotton. It makes good sense that the most cotton oriented congressional district would have more cotton farms per

⁵ Notice that we do not include dairy farming in Table 2, nor do we analyze any dairy votes in Section 4, even though dairy is a major commodity and has been the subject of significant and recent congressional action. The reason is the sheer complexity of dairy issues. The topic needs to be the subject of a separate paper. But for background, consult Evans and Isaacs (2001).

⁶ The data are from the 1997 Census of Agriculture. We use the 1997 statistics here because they also are employed for the regressions reported in Section 4 of this paper. But we also have considered farm statistics by commodity for more recent years and the patterns in Table 2 hold over time. Population data for 1997-98 are from the Congressional District dataset compiled by E. Scott Adler.

capita than the States with the heaviest cotton presence because districts are smaller and typically more homogeneous than are states. So how can the most wheat-centered state have more wheat farms per capita than the district at the 99th percentile cut point in the House for that commodity?

The farming of wheat is broadly dispersed, but conditions for it are especially favorable in the plains states, such as Kansas, Nebraska, South Dakota, and especially North Dakota. Indeed, by far the largest wheat-producing constituency (again, on a per capita basis) in the Senate is the state of North Dakota. Interestingly, that state's sole congressional district does not top the House distribution. The honor instead goes to Kansas 1, which encompasses almost two-thirds of the state's landmass. North Dakota is second, followed by Nebraska 1 and then Oklahoma 1. The 99th percentile cut point for wheat is so much higher in the Senate because there is a large drop off per capita after North Dakota.

As mentioned, the differences across commodity groups are consequential for coalition building. For example, notice that the distributions for peanuts and sugar are especially concentrated and that the overall number of farms is very low. The data for sugar includes cane producers in places like Louisiana and Florida, but also sugar beet growers disproportionately located near the Red River Valley area that stretches from the Dakotas and Minnesota to Idaho. In different ways, growers of sugar cane and beets both benefit from the federal sugar program and they are coalition partners. Peanut producers are disproportionately located in Georgia, but also are present in other Southern states such as Alabama, North Carolina, and Virginia, as well as the western half of Oklahoma. Sugar and peanut interests are highly concentrated, even by the standards of American agriculture. As a result, opponents of farm policy often single out the sugar and peanut programs with hostile floor amendments aimed at unraveling the farm coalition.

It also is instructive to consider the distributions for wheat and corn, on the one hand, and cotton and rice, on the other. The first two commodities are widely distributed throughout the Midwest and plains states. In contrast, cotton is very heavy in Texas, Georgia, Mississippi, and Alabama, while rice farming primarily occurs in Arkansas and portions of Louisiana. Corn and wheat often are grown on mid- and small-sized farms, while economies of scale mean that cotton and rice operations typically are much larger.

Beginning with Senate action on the 2002 Farm Bill, Midwestern and plains state lawmakers in both chambers have attempted to place stricter limitations on subsidy payments to individuals, which would effectively redistribute farm benefits away from rice and cotton farmers located in the south toward agricultural interests in the Midwest. The highly concentrated character of these commodities, especially for rice, gives the Midwesterners the upper hand during these floor fights, at least in terms of members. But once again intensities matter for coalition building and rice farming is “make or break” for lawmakers from places like Arkansas, which in turn can affect bargaining across producer groups.

In summary, the distributions of agricultural interests within the two chambers captured in Tables 1-2 do suggest a pro-farm tilt in the Senate relative to the House. In both chambers, however, there also is a sizable subset of constituencies with a significant agricultural presence. These constituencies dominate the ranks of the Agriculture panels. Moreover, the skewed character of the distributions means that the constituencies with agriculture will have highly intense preferences on most farm issues, while the sizable proportion of members without much agriculture back home will have far less at stake during floor fights about the farm program. In both the House and Senate, in other words, there may be sufficient proportions of pro-agriculture lawmakers to stave off attacks from opponents and maintain the logroll. Our attention now turns to the relative success of the farm bloc across the chambers.

3. Partisanship, Roll Rates, and Committee Success

In this and the following two sections, we explore the legislative impact of Senate apportionment on agricultural issues from several related perspectives: committee success rates, the voting decisions of individual members, appropriations recommendations, and the narrative history of recent farm legislation. Perhaps the central form of cross-pressure in contemporary congressional politics is tension between a member’s party program and the more parochial interests of her constituency. As mentioned, farm issues often evoke partisan cleavages, which may dampen any interchamber differences. We examined the more than 10,000 roll call votes that occurred in Congress during 1995-2008 and identified the questions that had clear and

direct agricultural content, producing a sample of 346 votes, 197 in the House and 149 in the Senate. Votes that dealt exclusively with food stamps, the WIC program, or the internal operations of the Food and Drug Administration were excluded from the sample even though they often occurred during consideration of farm legislation. Included are a range of votes touching on the crop subsidy program, market promotion, emergency assistance to farmers, and so on. Motions that we judged to be primarily procedural were dropped.⁷

As indicated in Table 3, the percentage of all agricultural roll calls that divided the two political parties was substantially higher in the Senate than in the House.⁸ And in five of the seven Congresses under examination, there was a higher proportion of party votes in the Senate. The two exceptions were the 108th and 110th Congresses, and in both cases Senators cast relatively few roll call on farming issues. One reason for the higher incidence of partisanship in the Senate may be that the leadership in that chamber, especially for Democrats, disproportionately represented states reliant on agriculture. Moreover, particularly during congressional consideration of the 2001-02 farm bill, with party control of the Senate hanging in the balance, a large number of the electorally vulnerable Senate Democrats hailed from farm states. From 1995-2005, the Senate Democratic leader was Thomas Daschle of South Dakota. The eastern portions of Daschle's state hold about two thirds of the people and the economy there is dominated by corn, soybeans, and related industries. Within the Senate, Daschle was a close political ally of Tom Harkin, Iowa, ranking Democrat on the Agriculture Committee, Kent Conrad, North Dakota, ranking on the Budget Committee, and Byron Dorgan, North Dakota, a member of the extended Democratic leadership. Farmers throughout the plains states were buffeted by low crop prices during much of 1995-2008, and Senators from the region helped make assistance for agriculture a central element of the Democratic policy

⁷ When appropriate, tabling motions in the Senate and the House motion to recommit with instructions are treated as substantive and are thus included in the sample. We continue to scour the record for roll calls with agriculture content that may have been missed, so there may be minor adjustments in this part of the evidence as the project proceeds. But we do not expect any fine-tuning of the coding criteria to alter the results reported here.

⁸ A roll call is categorized as partisan if a simple majority of Democrats voted differently from a majority of Republicans.

program. To some extent, then, partisan imperatives may have reinforced constituency interests, especially for Senate Democrats from farm states. We need to dig deeper.

For the farm-related roll calls, 1995-2008, we determined whether the position adopted by a majority of the membership of the Agriculture Committee prevailed on the floor.⁹ The results are reported in Table 4. When scholars use “roll rates” to gauge party influence, the focus typically is on final passage votes. The claim is that the majority party can use its control over the agenda to block measures that would divide the majority rank and file. Once bills are placed on the agenda, however, lawmakers may successfully offer amendments that are opposed by most majority party members. So it makes good conceptual sense for scholarship about party influence to focus on final passage rolls. Most farm votes, however, occur on one of two vehicles; the farm bill that is reauthorized every four to six years, and the annual appropriations bill for agriculture. In the long term, the failure to reauthorize the subsidy program or to provide funds for the Agriculture Department would be disastrous for agriculture, so final passage votes invariably are supported by a majority of Agriculture Committee members. Thus, in Table 4 we include all “substantive” questions that relate to agriculture, including amendments.

A second caveat merits consideration. As mentioned, especially during the 1990s, the majority Republicans occasionally sought to advance market-oriented initiatives that raised significant concerns in farm country. The Freedom to Farm bill is the most prominent example. These proposals often resulted in partisan roll calls on the floor. A majority of members on and off the Agriculture Committee voted the same way, but the divisions were partisan and the farm community itself was internally divided over the matter. Particularly during the 104th Congress, Agriculture Committee victories on the floor may not be unambiguous wins for farm interests. However, based on media accounts and other sources, we also identified the farm-related roll calls that clearly did unify the agricultural community, and the basic results reported in Table 4 did not change.

⁹ The results would not be substantially altered if the positions taken by a majority of members of the agriculture subcommittees of appropriations also were considered.

The table denotes the Agriculture Committee roll rates by chamber and Congress for 1995-2008. The second and third column contain the percentage of roll calls during the relevant Congress in which the majority position within the Agriculture panel did *not* prevail on the floor. Interestingly, the proportion of committee rolls is higher in the Senate than in the House. In six of the seven Congresses, committee rolls were more prevalent in the Senate, and for the remaining Congress, the 108th, the figures are identical. Senate rules, however, require sixty votes rather than a simple majority to adopt many motions on the floor. Motions to invoke cloture are the best-known example, but also included are the adoption of amendments that would require waiver of the Budget Act. The higher incidence of committee rolls in the Senate may reflect higher thresholds for adoption. As a result, we recalculated the roll rate percentages for the Senate without motions that required a 60-vote supermajority. As reported in the table, the interchamber differences all but disappeared.

Senate rules also provide rank-and-file members of both parties with ample opportunities to offer amendments to legislation on the floor. The questions that are subjected to recorded votes in the House and Senate may differ in important ways. In the House, for example, the majority leadership may promote the Agriculture Committee position by blocking from the floor agenda proposals that would divide or defeat the farm bloc. In the Senate, in contrast, opponents of the agricultural community face fewer restrictions to securing votes on their amendments. The fairly high incidence of committee rolls in the Senate may be an artifact of chamber procedure, in other words, rather than the clout of the farm lobby.

From the broader sample of agricultural votes, we identified 19 substantive questions that were put to a roll call vote in both chambers during the same Congress. Here, House members and Senators took positions on essentially the same question, allowing us to control for differences in agenda prerogatives across chambers. Of course, roll call votes are formally pair-wise comparisons between two alternatives. Votes on final passage, for example, call on members to compare the bill as amended to the outcome that would obtain if no bill passed. Amendment roll calls force choices between the bill as amended and the content of the legislation without the proposed modification. In compiling the set of comparable votes, we carefully considered whether the broader

legislative context indicated that votes were being cast between two roughly comparable alternatives. The pairings are not perfect, but in our judgment the 19 items are sufficiently similar in content and context to permit tentative inferences about the relative support for agriculture across the two chambers.

Summary information is provided in Table 5. The fourth and fifth columns show the percentage of votes cast in the House and Senate, respectively, for the Agriculture Committee position. Asterisks mark two questions where the interests of the farm bloc were unclear or divided. Ten of the pairs occurred on conference reports or attempts to override a presidential veto, and the two alternatives under consideration (the legislation and existing law) are essentially identical across chambers. Six more of the pairs were attempts to target or promote discrete products or commodities, and thus also confronted House members and Senators with similar choices. Of the 19 pairs, the amendments dealing with mink exports and the consumption of horses (we leave the details to your imagination) were not particularly significant for agriculture. In part because so many of the identical pairs are conference reports, support levels overall are high, but there still are instructive differences across chambers.

For 14 of the 19 pairs, support for the Agriculture Committee position was higher in the Senate than in the House, often by ten percentage points or more. The one glaring exception is the roll call on the conference report for the FY1999 appropriations bill. Consideration of that measure became highly partisan in the Senate, but not the House. Especially in the Senate, Democrats argued that the measure provided insufficient emergency assistance to midwestern farmers who were suffering from reduced exports, severe drought, and other weather-related problems. President Clinton threatened to veto the legislation in part because the administration viewed the \$4 billion disaster relief package it contained as too low, and in the Senate most Democrats voted against the conference report. The comparatively low levels of Senate support for the FY1999 conference report, in other words, occurred because many members viewed the measure as not providing enough funding for agriculture. Overall, then, the support levels reported in Table 5 suggest that farm interests are indeed stronger in the Senate.

4. Individual Level Analysis

Further evidence about the relative importance of agricultural constituencies in the two chambers can be gleaned from a multivariate analysis of the factors shaping the decisions of individual members on major roll calls. Of particular interest are the votes listed in Table 5, which forced House members and Senators to take positions on essentially the same underlying question. In this section, we single out three roll call pairs for systematic analysis at the individual level. The votes were selected in part because they occurred during consideration of the 2002 farm bill, which took place near the middle of our time series and constituted a pivotal transition in the recent evolution of U.S. agricultural policy. As mentioned, the legislation reversed the free-market reforms of “Freedom to Farm” and restored the subsidy system as the centerpiece of U.S. policy toward agriculture.

The three votes, we believe, provide a useful vehicle for gauging the relative importance of constituency pressures and other factors in member decision making. **(1)** In the 107th Congress, both chambers considered similar amendments that would have eliminated the sugar program. **(2)** In both chambers, lawmakers also took positions on a proposal to limit subsidy payments to individual farms at \$225,000. The House vote on the income cap occurred on a motion to instruct conferees that also referenced other portions of the Senate-passed measure, but media accounts of the vote indicate that decision-making turned on the subsidy limit. **(3)** The final conference report on the legislation was the subject of recorded votes in both chambers. In combination, the three questions tap the divergent cleavages that often characterize agricultural politics in Congress. The sugar proposal targeted a highly concentrated commodity group, pitting sugar constituencies and other highly concentrated crops against producers less reliant on public support and members from non-farming areas. The income cap divided farm country along regional and economic lines, with large cotton and rice producers, mostly located in the South, facing off against smaller, Midwestern, farms specializing in wheat and corn. And the conference report tapped basic ideological and constituency cleavages related to the broad contours of U.S. farm policy.

Our simple quasi-experimental design is complicated, of course, by Senator James Jeffords’ June 2001 decision to leave the Republican Party, which shifted formal majority

status in the Senate from the GOP to the Democrats. As a result, during much of the debate over the farm bill in 2001-02, different political parties organized the House and Senate. Obviously, we need to be careful that any pro-farm tilt that we observe in the Senate of 2001-02 derives in part from the different apportionment schemes, rather than split party control or other institutional differences between the chambers.

Expectations

The factors shaping member decision making should vary somewhat across roll calls, but for all three we consider the effects of party, membership on the Agriculture Committee and/or agriculture subcommittee of Appropriations, and farm employment in the constituency. For the sugar vote, we also consider the number of sugar cane and sugar beet operations in the constituency, divided by population. For the income cap vote, per capita constituency indicators are included for wheat, corn, and cotton farms, tapping the differences that the proposal evoked between large and small farms. For the vote on the conference report, we drop the commodity-specific indicators and instead include two variables that capture the ideological views of members. The first is Common Space DW-NOMINATE scores, first dimension, which place individual lawmakers along the liberal-conservative dimension and are comparable across chambers of Congress. We also include a quadratic term that is the square of the Common Space scores. The quadratic term allow us to test whether “ends-against-the-middle” voting occurred in either or both chambers. Ideological centrists may be more supportive of the farm program than are either free-market conservatives or liberals from urban and suburban constituencies.

Most of our hypotheses concerning these variables are straightforward and do not require much explanation. Constituencies with a high proportion of farms and many sugar operations per capita obviously should vote against proposals to eliminate the sugar program. Constituencies heavy in wheat or corn should support the income cap, while cotton constituencies should be opposed. We expect that membership on the Agriculture panels should make members especially likely to support proposals that strengthen the cross-commodity logroll and oppose initiatives that might endanger it. Agriculture Committee members should oppose the efforts to eliminate the sugar program and cap subsidies and support final adoption of the Farm Bill.

Several additional expectations relate more directly to the central questions addressed in this paper about the policy consequences of Senate apportionment and other differences between the chambers. First, controlling for other factors, including the divergent procedural and institutional contexts of the two chambers, the broader distribution of agriculture interests in the Senate should translate into higher overall support levels for farm interests on the sugar and conference votes. In other words, the differences in agricultural support that are suggested by the voting statistics in Tables 4-5 should result in part from the divergent distributions of agricultural interests across the chambers, not just institutional or partisan differences between the Senate and House. Our expectations for the income cap vote are ambiguous because the proposal divided the agricultural community along regional and economics lines.

Second, our central claim is that Senate apportionment has consequences for agriculture support because farming interests are distributed across a broader subset of constituencies in that chamber relative to the House. We are not arguing that the impact of sugar farms or other indicators of agricultural presence on the votes of individual lawmakers will be higher in the Senate than is the case in the House, controlling for population differences. The farming variables should matter for both chambers, but we do not expect significant differences across the House and Senate in the magnitude of the relationships that exist between constituency farm presence and the votes of individual members.

Third, the institutional context also should matter, and may serve to reduce the impact of Senate apportionment on support for the farm bloc. In particular, party leaders and committees have fewer formal prerogatives on the Senate side of the capital. Membership on an agriculture panel should be associated with increased support for the collective interests of farmers, especially on the sugar and conference votes where the agricultural community was fairly united. But we expect that the magnitude of the relationship to be smaller in the Senate.

Results

Results are summarized in the columns of Table 6. The second and third columns are for the sugar vote (first the Senate, then the House), and here the dependent variables take the value of one if a member voted with the farm bloc and against eliminating the

sugar program and otherwise are zero. The third and fourth columns are for the vote on the subsidy cap, and the dependent variables are one for members voting for the cap and zero for those voting against. The right-most columns are for the conference vote, and the dependent variables take the value of one for “yes” votes and otherwise are zero. The explanatory variables are as discussed. Party takes the value of one for Republicans and zero for Democrats. For the regressions in Table 6, the estimator is probit. Since certain of our hypotheses relate to the relative magnitude of effects across the two chambers, we indicate statistically significant differences between the House and Senate parameter estimates for an independent variable with bolded entries.

Consider each roll call in turn, beginning with the sugar vote. In both chambers, Republicans were less likely to vote to maintain the sugar program than were Democrats, reflecting in part the ideological opposition many conservatives have to the narrower commodity subsidies. The effects of agriculture committee membership differed by chamber. In the House, members of the Agriculture Committee and the relevant Appropriations subcommittee, who together are primarily responsible for maintaining the cross-commodity logroll, were especially likely to oppose the attack on their coalition partners (keep in mind that a “yes” is in favor of maintaining the program). For the Senate, in contrast, the impact of committee membership on the likelihood of a pro-farm vote was actually negative, although not statistically significant. (As the bolded entries indicate, we also can reject the null hypothesis of analogous effects across the two chambers for committee status). Not surprisingly, farm employment and sugar farms in the constituency are associated with higher support for the sugar subsidy in both chambers, although the coefficient for sugar farms does not achieve statistical significance in the Senate regression. The results for the sugar vote, in other words, are largely consistent with expectations.

The story for the subsidy cap is more complicated. As expected, membership on the Agriculture panels is associated with a reduced likelihood of voting for the cap, in part because the proposal was contrary to the longstanding political logic of the cross-commodity logroll. There was also a statistically significant difference (in the expected direction) in the magnitude of the effect across chambers. Compared to their Senate counterparts, the House panels are far stronger advocates for traditional farm interests.

Also as expected, in both chambers corn farms back home are associated with pro-cap sentiments, while a heavy cotton presence increases the likelihood of opposition. Notice that we did not include a variable for rice farms per capita on the right-hand side, even though rice operations tend to be large and concentrated and thus would be hurt by the subsidy limit. The reason is that the presence of rice farms in the district or state is so strongly associated with opposition to subsidy limits that the specification approaches perfect prediction when such variables are included. But rice production clearly is associated with a vote against the cap in both chambers. Interestingly, there also is a statistically significant difference in the magnitude of the effects for cotton farms across the House and Senate. Compared to the other body, in the Senate a heavy cotton presence back home is disproportionately likely to have led to a “no” vote on the subsidy limits.

The differential effects for party on the subsidy cap vote are harder to explain. The relationship between party and the vote is negative and statistically significant in the House and positive and statistically significant for the other body. Why is GOP status associated with a pro-cap vote in the Senate, while the opposite relationship emerges in the House? One possibility is that we have uncovered majority party effects. Republicans were the majority party in the House at the time of the relevant roll call, while in the Senate Democrats were the partisan majority, so perhaps the different signs on the coefficients for party result from split party control. There is no straightforward reason, however, why majority status, in and of itself, would translate into greater support for a cap on subsidy income. The proposal might endanger incumbents from both parties in both chambers. Another possibility is that the mix of commodities represented by Republicans (or Democrats) in the House diverges from the kinds of agriculture represented by Republicans (or Democrats) in the other chamber. However, bivariate regressions of commodity presence on chamber for each party suggest that this probably is not the explanation. The matter merits further investigation and may simply reflect idiosyncratic factors, such as the presence of corn state Republicans in key positions on the Senate Agriculture Committee.

The regression results for the roll calls on the conference report are also mostly as expected. It appears that the combined effect for ideology is indeed shaped like an upside

down “U.” While there is no statistically significant, monotonic, relationship between ideology and a pro-agriculture vote on the conference report in either chamber, the negative signs on the quadratic terms are indicative of “ends-against-the-middle” voting (although the relationship achieves statistical significance only in the House). Free market conservatives and ideological liberals were both more likely than moderates to vote against the conference package. As expected, membership on one of the agriculture panels is strongly associated with support for the conference report in both chambers.

For the conference report, we believe, the divergent results for party probably are indicative of majority party effects. Controlling for other factors, Republicans were somewhat less likely to vote for the conference report in both chambers, but the magnitude of the effect was much stronger on the Senate side. The farm bill borders on “must pass” legislation for the majority party in Congress because of its importance to agricultural interests across the country. Republican Senators may have been statistically more likely to vote “no” on the conference report, even after controlling for ideology and other factors, in part because they were in the minority and could afford to cast a protest vote against the handiwork of Tom Daschle, Tom Harkin, and other Senate Democratic leaders. Since GOP leaders in the House were fully complicit in the contents of the conference report, rank-and-file Republicans in the House may have been less likely to walk away from the package.

Counterfactuals

The results reported in Table 6 are instructive about the decision calculus of members on agricultural issues across the House and Senate, but by themselves, do not allow us to say very much about the impact of the Senate’s apportionment scheme in this policy area. Instead, more direct evidence about the consequences of Senate apportionment for member decision-making can be gleaned from a simple “counterfactual” analysis of the first two votes, where the agricultural presence back home clearly made a difference.

First, for members of the Senate, we calculated the predicted probabilities of a vote in favor of the sugar program for different levels of farm employment, using the parameter estimates from the relevant regression, and setting the other variables to their

Senate means or medians.¹⁰ More concretely, we performed these calculations for the levels of constituency farm employment associated with each of the percentile cut points used in Table 1 and Table 2 (they were 1, 5, 10, 25, and so on up to 99). The results are reported in the second column of Table 7. So, for a Senator at the first percentile for constituency farm employment (New Jersey, to be specific), the predicted probability of a pro-sugar vote is .462, holding other factors at their means/medians. For a Senator at the 50 percentile of constituency farm employment (that would be Texas), the predicted probability rises to .633, and so on to the 99th percentile (the state of South Dakota), where the likelihood of a vote for the sugar program is basically 100 percent.

Next, we ask, what would the predicted probabilities of a pro-sugar vote have been if farm interests in the Senate had been distributed across states the way they were distributed across districts in the House? In a sense, we are asking how Senators would have behaved if the chamber had been apportioned like the House. We can shed light on the question by repeating the calculations in the second column of Table 7, but this time using the percentile cut points for the House. Thus, farm employment for the district at the first percentile of the House distribution was zero. If the state at the bottom of the Senate distribution had a farm employment rate of zero, the likelihood of a pro-sugar vote would have dropped from .462 to .394. For the 50th percentile, using the House cut point rather than the Senate value reduces the probability of a pro-sugar vote from .633 to .547, and so on. Notice that the predicted probabilities of pro-sugar votes under the actual (Senate) and counterfactual (House) distributions of farm employment are fairly different at the lower percentile levels, but basically indistinguishable at the higher levels.

An analogous simulation was conducted for the different percentile cut points for sugar farms per capita, using the parameter estimates from the regression and setting other explanatory variables to their means or medians. Interestingly, here the distribution of sugar operations across constituencies is so skewed in both chambers that the only significant differences that occur between the actual and counterfactual scenarios are in the 75-95 percentile range, where pro-sugar votes are substantially more likely with the Senate distribution. We conducted similar counterfactual analyses for the income cap

¹⁰ For the farm employment and commodity variables, we use medians rather than means because the underlying distributions in both chambers are so skewed.

roll call, predicting the likelihood of pro-limit votes in the Senate with both the Senate and House distributions of corn farms and cotton operations across constituencies, and the results are reported in Table 8. The differences for corn are not very important, substantively. But for cotton, there are significant differences in the 75-95 percentile range. The counterfactual analysis of Tables 7-8, we believe, makes a compelling case that Senate apportionment does have significant behavioral implications on agriculture votes, although the nature of the impact varies by commodity and issue, as well as the level of the agricultural presence back home.

5. Spending Recommendations

Before concluding, we briefly explore the appropriations recommendations for agriculture made by the two chambers from 1995 to 2008, looking for House-Senate differences. The roll rate and vote analyses in this paper are suggestive of noteworthy effects for agricultural policy making from the framers' decision to apportion the Senate by state. However, we are especially interested in the consequences of Senate apportionment for policy outcomes. There is evidence from the content of recent farm bills that the Senate tilts more toward the interests of the farm bloc than does the House. The momentum behind passage of the Freedom to Farm bill, which aimed to roll back the subsidy programs, began in the House under the leadership of Speaker Newt Gingrich. During congressional action on the farm bill of 2001-02, the authorization levels in the Senate-passed bill were systematically higher than the analogous levels included in the version of the legislation that first passed the House. In both chamber, however, authorization levels for most programs, including agriculture, are constrained by the budget resolution, and, in any event, it is difficult to construct systematic quantitative indicators of the contents of the farm bill capable of tapping House-Senate differences. Appropriations recommendations, in contrast, lend themselves to more straightforward inter-chamber comparisons. Although the sizes of the appropriations measures in both chambers are limited by 302(b) allocations, these constraints are "fuzzy" at best and there often are differences in the spending recommendations made by the House and Senate on individual bills.

We gathered data about the appropriations recommendations of the House and Senate for 1995 through 2007, the last year for which authoritative published sources are available for all of the annual appropriations measures. For both the overall recommendations on the freestanding bills and for each of the individual measures, we calculated the percentage difference between the initial Senate and House recommendations. If our hypothesis about a Senate tilt toward agriculture is correct, then the Senate funding recommendations for agriculture should be systematically higher than the recommendations from the House.

Typically, almost all of the appropriations bills are formally considered and passed by the full House, and for that chamber we can generally use the numbers in the House-passed measure for the purposes of analysis. The full Senate, however, often fails to act on all of the appropriations bills. For one, the House generally moves first in the appropriations process and the Senate timetable is somewhat slower. More important, the ability of individual Senators to filibuster and otherwise delay appropriations measures can lead to gridlock. As a result, one or more of the annual spending bills may need to be considered by the full Senate as part of an omnibus funding bill, often immediately prior to the beginning of the next fiscal year. As a result, data are not always available for initial Senate passage on all of the appropriations measures, and in its public records the chamber instead records the funding level recommended by the Senate Appropriations Committee. We adopt that posture and use committee recommendations when reliable data are unavailable for the full Senate.

The results of our exploratory analysis are summarized in Figure 1. A generation of research about the congressional appropriations process finds that, overall, the Senate often recommends higher funding levels than does the House (Fenno, 1966; Kieweit and McCubbins, 1991). As mentioned, the House traditionally has moved first and the Senate generally has functioned as an “appeals court” of sorts in which the House-passed numbers often are adjusted upward. Thus, it is not sufficient for us to show that the Senate recommendations for agriculture generally exceed the House-passed levels. We also need to demonstrate that the magnitude of the difference is larger than for the other appropriations measures in the aggregate. In Figure 1, the percentage difference between the House and Senate recommendations for all of the annual appropriations bills

(Senate/(Senate+House)) is captured by the solid line, and as you can see, there is a general tendency for the appropriations recommendations of the Senate to exceed those of the House. This pattern also holds for funding recommendations for the Department of Agriculture and related agencies, which are reflected in the “dashed” line. Most important, the size of the difference is usually larger for agriculture than is the case for discretionary spending more generally. Recent appropriations decisions, in short, reinforce our central claim that Senate apportionment makes the chamber an especially receptive arena for farm interests.

6. Conclusion

Our goal in this paper is to assess whether bicameralism and the apportionment decisions of the framers have consequences for farm politics and agricultural policy in Congress. Constituency data indicate that agricultural interests are indeed distributed more widely throughout the Senate than in the House. The magnitude of the difference clearly varies by commodity, however, with potentially important consequences for coalition building. Senate apportionment, we find, creates at least the possibility of a greater tilt toward the farm bloc in that chamber relative to the House.

We then considered a range of indicators to gauge whether the potential for disproportionate Senate responsiveness toward agriculture is actually reflected in member behavior and legislative outcomes. Interestingly, agricultural roll calls tend to be more partisan in the Senate when compared to the House, and the roll-call record does not indicate that Agriculture Committee members are more likely to prevail on floor votes in the Senate than in the House. When we attempt to control for possible differences in the floor agenda across chambers by focusing on votes on identical or nearly identical proposals, then the Senate’s pro-farm tilt becomes apparent.

Next we conducted an in-depth analysis of the factors shaping member decision making on three important votes that occurred in both chambers on the pivotal farm bill of 2002. This part of our research design is complicated by split party control of the House and Senate during most of the 107th Congress. Still, for the most part the relationships that we find between the agricultural presence in a member’s district or state

and the votes are as expected, especially for the roll calls on the sugar program and the proposed subsidy cap.

Most important, the counterfactual analysis of the impact of alternative distributions of agricultural interests across constituencies indicates that Senate apportionment by state has substantively significant consequences for behavior on farm issues. On the sugar vote, the result is a stronger tilt toward traditional agricultural interests and the subsidy program. On the vote to cap subsidy payments, Senate apportionment appears to influence the distribution of political power between larger and small producers in important ways, with potential implications for the long-term viability of the agricultural logroll.

Finally, our initial foray into appropriations decisions on agriculture, as compared to chamber spending recommendations in other policy areas, shows that agricultural and related programs tend to do disproportionately well in the Senate as compared to the House. Taken together, the diverse evidence employed in this study reflects the complexity of the underlying question that we are asking. But overall the case appears to be strong that there exists a pro-agriculture tilt in the Senate, relative to the other body, in part because of the enduring apportionment decisions made by the framers during the summer of 1789.

Table 1. The distribution of agriculture interests in the House and Senate

Percentile	Rural House	Rural Senate	Farming House	Farming Senate	Subsidies House	Subsidies Senate
1	0	5.5	0	.2	0	.0025
5	0	8.4	.1	.2	0	.516
10	0	8.85	.1	.3	0	1.51
25	1.7	13.9	.2	.5	.17	10.63
50	15.3	28.45	.4	.75	6.75	57.50
75	35.8	39.5	.9	1.3	68.86	151.43
90	51.1	47.85	1.7	1.7	325.63	622.51
95	59.7	53.9	2.2	1.9	683.40	1275.86
99	66.6	61.8	6.5	2.7	1841.57	1557.15

Note: Cell entries are levels for each indicator for each constituency percentile in the House or Senate.

Table 2. The distribution of agricultural interests in the House and Senate, selected commodities (farms per 1,000 constituents)

Percen-Tile	Corn House	Corn Senate	Wheat House	Wheat Senate	Cotton House	Cotton Senate	Peanut House	Peanut Senate
1	0	0	0	0	0	0	0	0
5	0	.0066	0	0	0	0	0	0
10	0	.0195	0	.0027	0	0	0	0
25	.00183	.104	.0017	.0796	0	0	0	0
50	.114	.691	.0808	.575	0	0	0	0
75	1.166	1.792	.619	1.430	.0019	.161	0	.00273
90	5.088	6.249	2.370	5.61	.246	.350	.0173	.109
95	10.131	18.369	4.633	12.256	.670	.646	.114	.257
99	22.462	22.273	12.753	29.579	2.315	.736	1.097	.725

Cont.

Percen-Tile	Tobacco House	Tobacco Senate	Sugar House	Sugar Senate	Rice House	Rice Senate
1	0	0	0	0	0	0
5	0	0	0	0	0	0
10	0	0	0	0	0	0
25	0	0	0	0	0	0
50	0	0	0	0	0	0
75	0	.094	0	.0117	0	0
90	.277	.390	.0088	.30	0	.051
95	1.121	1.762	.0936	.749	.0195	.206
99	10.816	12.202	.947	1.325	.969	1.790

Table 3. Percent of party divisions, Agriculture roll calls, 1995-2008

Congress	House Agriculture	Senate Agriculture	House Overall	Senate Overall
104	47.2	55.6	67.4	66.6
105	40.7	52.0	52.5	53.1
106	32.5	50.0	45.2	56.5
107	41.7	64.9	41.6	51.0
108	68.8	62.5	49.5	62.1
109	33.3	66.7	51.5	60.2
110	60.6	50.0	58.5	57.4
Total	45.2	57.1		

Table 4. Agriculture Committee roll rates, all farm votes, 1995-2008

Congress	House	Senate all	Senate majority
104	8.33	20.0	13.6
105	3.7	4.0	4.2
106	2.5	12.5	4.8
107	8.3	21.6	10.3
108	12.5	12.5	12.5
109	14.3	16.7	16.7
110	3.0	12.5	0
Total	6.6	15.0	8.7

Note: Cell entries are the percentage of agricultural roll calls for which the majority position of the Agriculture Committee did not prevail on the floor.

Table 5. Agriculture roll calls on the same question, House and Senate, 1995-2008

Year	Bill	Question	House % yes	Senate % Yes	Difference
1995	FY96 Approp	Market promotion of mink exports*	59.2	81.3	22.1
1996	Farm Bill	Peanut price supports	50.4	62.1	11.7
1996	Farm Bill	Sugar price supports	51.1	63.5	12.5
1996	Farm Bill	Conference report*	78.1	74	-4.1
1997	FY98 Approp	Tobacco crop insurance	50.8	53.0	2.2
1998	Farm Bill	Conference report	87.9	92.0	4.1
1998	FY99 Approp	Conference report	86.3	56.1	-30.1
1998	FY99 Approp	Market access program	72.2	70.7	-1.5
1999	FY00 Approp	Conference report	57.8	74.0	16.2
2000	FY01 Approp	Conference report	81.9	91.5	9.6
2001	FY02 Approp	Conference report	92.0	92.9	.9
2001	Farm Bill	Sugar program	57.5	71.0	13.5
2002	Farm Bill	Payment limits*	62.6	68.0	5.4
2002	Farm Bill	Conference report	66.5	64.6	-1.9
2003	FY04 Approp	Meat country of origin	51.9	61.7	9.8
2005	FY06 Approp	Conference report	83.5	81.8	-1.6
2005	FY06 Approp	Horses/consumption	63.0	71.1	8.1
2008	Farm Bill	Conference report	75.0	84.4	9.4
2008	Farm Bill	Veto override	74.5	86.3	11.8

* Agriculture interests ambiguous

Table 6. Factors shaping three key roll calls, 2002 Farm Bill

	Sugar Senate	Sugar House	Cap Senate	Cap House	Conference Senate	Conference House
Party	-.799**	-.503**	.752**	-.647**	-1.656**	-.295
Committee	-.159	.769**	-.125	-1.009**	.816**	.851**
Farm employment	.273**	.100**	-.214	-.166**	.067	.044
Sugar farms	.219	.055*				
Wheat farms			.061	-.029		
Corn farms			.187*	.079**		
Cotton farms			-6.035**	-1.008**		
Nominate					.461	.463
Nominate Squared					-1.795	-3.909**
Constant	.111	.070	1.011**	1.192**	1.066*	.897**
N	100	416	97	423	99	421
Correctly predicted	.750	.673	.825	.757	.758	.708
Pseudo R2	.228	.122	.208	.494	.245	.101

** p<.05, * p<.1

Bolded entries indicate a statistically significant difference in the magnitude of the parameter estimates for an explanatory variable across the House and Senate regressions for a vote.

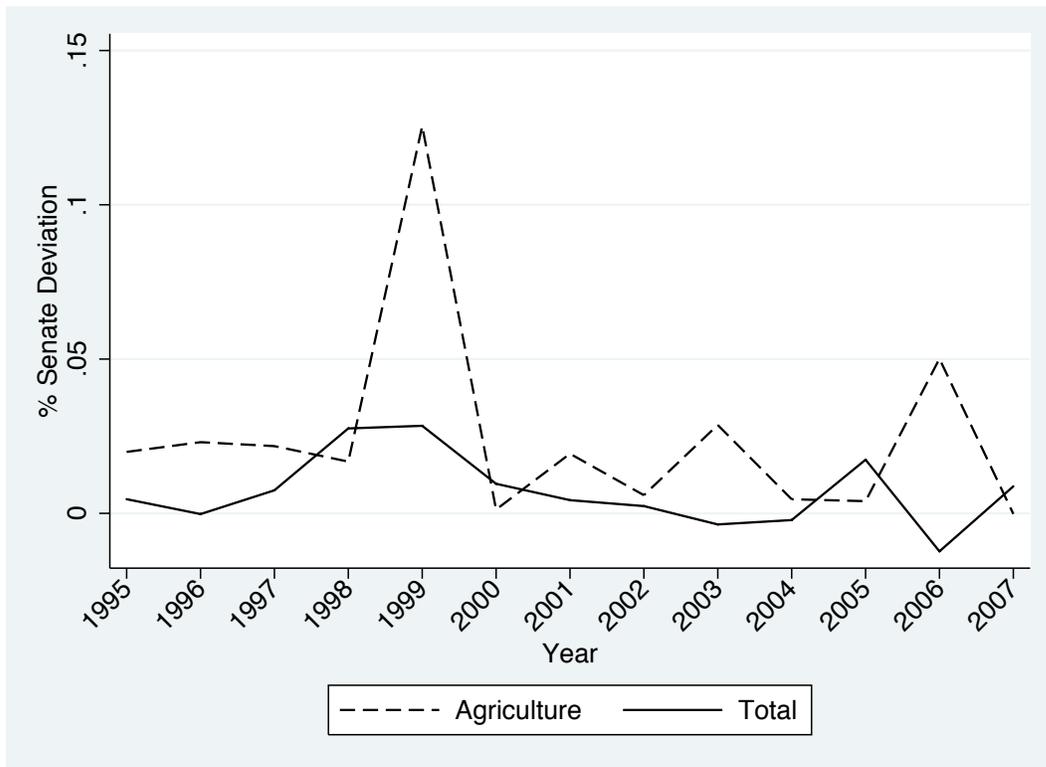
Table 7. Predicted sugar votes in the Senate under the actual (Senate) and counterfactual (House) distributions of farm interests

Perce- tiles	Actual Farm Employment	Counterfactual Farm Employment	Actual Sugar Farms	Counterfactual Sugar Farms
1	.462	.394	.633	.633
5	.477	.416	.633	.633
10	.507	.430	.633	.633
25	.556	.470	.633	.633
50	.633	.547	.633	.633
75	.770	.689	.724	.633
90	.932	.849	1.0	.702
95	.971	.937	1.0	.990
99	.998	.996	1.0	1.0

Table 8. Predicted income cap votes in the Senate under the actual (Senate) and counterfactual (House) distributions of farm interests

Percentiles	Actual Corn Farms	Counterfactual Corn Farms	Actual Cotton farms	Counterfactual Cotton Farms
1	.80	.80	.832	.832
5	.80	.80	.832	.832
10	.80	.80	.832	.832
25	.80	.80	.832	.832
50	.832	.80	.832	.832
75	.880	.85	.497	.827
90	.969	.962	.142	.243
95	1.0	.996	.002	.001
99	1.0	1.0	0	0

Figure 1. Percentage difference in Agriculture recommendations, Senate relative to the House, 1995-2007



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