Are Agricultural PACs Monolithic? An Empirical Investigation

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Abstract: This paper analyzes donation strategies of agricultural PACs by examining and testing a variety of variables theoretically related to contributions and formally testing for equivalence of donation strategies across PACs of varying levels of aggregation. Both chambers of the 108th Congress were modeled, with particular attention paid to the targeting of different power or influence sources within the legislature. Results showed significant heterogeneity across PAC subaggregates within a chamber, as well as between chambers, in terms of overall strategy and magnitude of marginal impacts. Evidence supporting the conditional party government hypothesis where PACs target top Party officials rather than influential legislative members was mixed and subindustry specific, with chairmanships apparently less important in the Senate than in the House.

KEYWORDS: Monolithic Behavior, Political Action Committee, Political Donation Strategies, Tobit model

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Introduction

There is a wealth of literature supporting the notion that politicians provide political favors in return for financial contributions (Ansolabehere, Snyder and Tripathi; Becker). Ironically, individuals frequently must band together to gain enough scale to be effective, but the aggregation competes with their own self interests. Agricultural Political Action Committees (PACs), for example, enable people to concentrate donations under a large community banner like "agriculture," livestock," or "cotton" (van Doren, Hoag and Field; Taylo). Thomas Jefferson romanticized the "Agrarian Ideology" that binds people to an agricultural community over 200 years ago and it still holds today, as written by essayists like Wendell Berry (Browne et. al; Hamlin and Shepard). However, at the same time there are disparate interests among agriculture's many constituents. Cattle and poultry producers, for example, may not prefer programs that prop up corn prices, and ethanol producers might support sugar embargos. To be sure, there is a community ethic applied to agricultural values. But which outweighs the other: one's parochial interests or their interest in the broader agricultural community? To formally test the hypothesis of homogeneity between various agricultural interests, this paper investigates the patterns of agricultural PAC contributions to members of the House and Senate for the 108th Congress, and formally tests for differences in the marginal impacts of alternative legislator attributes on donations across different PAC categories in agriculture.

Although there is strong evidence that PACs will allocate their contributions to buy access to politicians (Ansolabehere, Snyder and Tripathi), there is little evidence about whether agricultural PACs cooperate to buy the same things. On one hand, the nature of a PAC is to

advocate a partisan interest, and the interests in agriculture can be diverse. "The Making of the 1996 Farm Act," for example, described several instances where interests conflicted (Schertz and Doering). Commodity programs competed with each other, as well as food programs, for budget allocations, and how cotton and rice interests were reluctant at first to agree to the Freedom To Farm legislation. Over the past few decades, livestock producers mounted little resistance to programs that boosted crop prices, even though they would have to pay more for feed and receive very little Federal support relative to crop producers.

All of the PAC studies we could find looked at how PAC's pursued rent seeking. Using data from the 108th Congress, we revisit a study from ten years earlier by van Doren, Hoag and Field. They looked at agricultural PAC contributions in the Senate, but did not investigate whether contributions were monolithic (devoted to community over self interest). There are several reasons to believe that agricultural PAC's parochial interests might be limited by group values and beliefs. Experience has shown that cooperation has characterized country values (Castle). People often refer to agriculture as a whole and the Agrarian Ideology reconciles community values and self-interest as one in the same (Browne, et. al). Furthermore, Gardner and Pasour and Rucker showed that groups form coalitions to seek rents, especially in the case of agriculture where new interests, such as environmentalists, are growing. Hamlin and Shepard suggest that agricultural groups see the world as an "us (agriculture) versus them (everybody else)". Finally, the Agrarian Ideology may persist because non-producers have little knowledge about agriculture, and those in agriculture have an incentive to promote a romantic image.

As a means of investigating the revealed behavior of PAC actions that incorporates both the Agrarian Ideology and partisan interests, we examine both the House and Senate for differences in the structural equations that explain donations for several subsectors of agriculture.

Our analysis unveils overall agricultural PAC strategies, as well as differences between subaggregates. This information, plus our ability to compare to the earlier study when the Senate was controlled by Democrats, also allows us to determine the homogeneity of agricultural PAC donation strategies and to discuss what their behavior implies monolithic donation behavior. Cooperation at the cost of partisan interests is a new dimension in public choice literatture and offers a chance to investigate how group cooperation can produce or reduce rents for both the participants and society (Pasour and Rucker). Therefore, we proceed by looking at the tension between cross-compliance expectations with an agricultural community and self interests.

Determining PAC Contribution Strategies

Public choice theory suggests that PACs and legislators are participants in a market for political favors, where the former use campaign contributions and other favors to purchase services (such as specific legislation or votes for that legislation, access to House or Senate members, or effort from elected individuals) supplied by the latter (Becker; Mitchell and Munger; van Doren, Hoag, and Field; Stratmann). Unlike typical market transactions, however, the quantity of these services is often either unobservable or measured with a significant degree of error, rendering traditional estimation of supply and demand untenable (van Doren, Hoag, and Field). An alternative strategy employed in both the political science and economics literature is to estimate a reduced-form equation that describes either equilibrium price (i.e., contributions from PACs), the probability of a transaction, or both as a function of exogenous legislator characteristics that shift supply or demand (van Doren, Hoag, and Field; Poole, Romer, and Rosenthal; Grenzke; Taylor).

Past research suggests that, in general, PACs target contributions in different ways to get their desired policy outcomes. In general, contributions depend on the following legislator

characteristics: power (in terms of leadership such as committee chairs and subcommittee chairs), influence (which targets seniority and committee members), political ideology or policy stance (conservative/liberal voting record and political party), constituency interests in agriculture, and the tightness of an election race (Grenzke; Poole, Romer, and Rosenthal; van Doren, Hoag, and Field).

One line of recent literature has focused on the source of power due to the casual observation that voting preferences within political parties have been increasingly homogenized, and thus the source of power, primarily in terms of veto power, comes from party leadership, rather than committee leadership (Taylor). Taylor combined this "conditional party government" hypothesis with the idea that inter-industry PACs may be heterogeneous in terms of donation strategies and/or targeted attributes (see, for e.g., Grenzke; van Doren, Hoag, and Field; Grier and Munger, 1991; Gopian). He concluded that, depending on the salience of the issues faced by PACs, each may target alternative types of legislators. That is, PAC's now must compare the party power with each legislator's power when targeting their donations.

The model that follows builds on this literature by examining the House and Senate member attributes that attract PAC contributions *within* one industry, namely agricultural PACs for the Republican-majority 108th Congress. Furthermore, we test for differences across subgroup strategies in order to determine if their donation behavior is monolithic. This paper updates and extends the analysis in van Doren, Hoag and Field, who examined agricultural PAC donations for the Senate of the Democratic-majority103rd Congress.

Data and Methods

Two Tobit models are employed in the analysis for each chamber of the 108th Congress. The first uses aggregate PAC donations by subgroups (defined by industry codes) as the

dependent variable, and is used in a standard way to determine the marginal effects of several relevant power and influence explanatory variables, thus providing evidence both in favor of and against the conditional party hypothesis, and between these two categories of contribution determinants. The second model normalizes this variable by dividing by mean subgroup donations, and thus creates a dependent variable of the proportion of the mean contribution for each subgroup, while retaining the property of truncation at zero. Unlike the standard model, the resultant coefficients in this model are normalized as well, and can thus be used to test for monolithic behavior between PAC subgroups.

The dependent variables were created from data obtained from the Center for Responsive Politics (CRP) in Washington, D.C. on total agricultural PAC subgroup donations for each legislator serving in the 108th Congress. Data for each House member includes all agricultural PAC donations made during the 2004 election cycle, while data for the Senate includes aggregate donations for the 2000, 2002, and 2004 to account for the staggered election cycle (van Doren, Hoag, and Field). The 29 agricultural PAC subgroups were defined by CRP based on industry classifications, with the taxonomy described by 9 aggregates further broken into sub-aggregates, as described in table 1. The 9 subgroups are Ag Services/Products, Crop Production and Basic Processing, Dairy, Food Processing and Sales, Forestry and Forest Products, Livestock, Miscellaneous Agriculture, Poultry and Eggs, and Tobacco and Tobacco Products. One of these major subgroups, Miscellaneous Agriculture, only contained a small number of non-zero observations, and was thus dropped from the analysis. Total agriculture represents the aggregation of all 29 subgroups.

Guided by the literature cited above, we use several independent variables to control for party affiliation, ideology, power (including leadership by chamber and on key committees),

influence (including seniority and committee membership), constituency, and election margin. Party affiliation is coded as a binary variable with zero corresponding to Democratic legislators (and the one independent, Vermont Senator Jeffords). Ideology was proxied by an indicator variable that represents approval of the American Farm Bureau Federation (AFBF),based on how consistent a legislator's votes were with that organization's goals.[1] Additional rating variables from various conservative political organizations (e.g., the American Conservative Union (ACU), John Birch Society, Christian Coalition, etc…) were found to be highly correlated with party affiliation and with each other (correlation coefficients greater than .9, not shown). Likewise, liberal indexes (e.g. NARAL, Democrats for Life of America) were highly negatively correlated with the AFBF index. As such, they were not included as additional linear effects in the models, as inclusion would induce serious multicollinearity and add very little explanatory power to the model. Instead, a new ideology variable was created by calculating the distance between each legislator's ACU rating and the party mean ACU rating. This variable was normalized such that the mean score for each party was 100, with positive deviations indicating a more conservative legislator (as defined by ACU). We thus capture the effects of deviation from the party norm on agricultural PAC donations, and allow non-linearities through a quadratic term.

Power is defined as in Taylor, and includes Speaker, majority and minority leaders, whips, caucus/conference chairs, and campaign committee chairs in the House of Representatives, and majority and minority leaders, President and President Pro-Tempore, whips, conference chairman/secretary, and campaign committee chairs for the Senate. Influence was captured in the model through the use of indicator variables that denote membership on relevant agriculture-related committees and length of tenure in office, which may affect ability of the

legislator to influence his/her peers. This variable is introduced with a quadratic term to allow for non-constant marginal effects. Two standing (sub)committees for each chamber expected to influence legislation related to agriculture are included: Agriculture and the Appropriations Subcommittee on Agriculture for the House, and Agriculture, Nutrition, and Forestry and the Appropriations Subcommittee on Agriculture, Rural Development, Food and Drug Administration, and Related Agencies for the Senate. To capture potential non-linear marginal effects of committee membership due to seniority, the committee indicator variables were interacted with the number of years in office. Although these interaction variables introduce multicollinearity into the analysis, we found that the model fit was improved, and thus the variables were retained.

The remaining independent variables include the margin of victory in the last election cycle to control for the impacts of the contention of the race (van Doren, Hoag, and Field; Taylor), the percentage of employment in Agriculture, Forestry, Fishing and Hunting, and Mining by state or congressional district (from the 2000 U.S. Census), and dummy variables in the Senate models that indicate election cycle. An interaction term between Agricultural Committee membership and seniority was included as an additional explanatory variable describing power and influence with regard to agricultural legislation. Summary statistics for the variables used in the analysis are presented in table 2. Estimation was performed using Stata 7.0.

Base Tobit Model Results

Senate

Results of the non-normalized Senate Tobit models for each major subaggregate, including the parent model that includes all agricultural PAC donations, are presented in table 3. Zero coefficient restrictions have been imposed where appropriate above the 15% level, based on

the results of likelihood ratio test statistics between the restricted and unrestricted models. This makes it easier to focus on which variables have an impact and which do not, because both are left in the table of results. The restricted and unrestricted models yield equally valid estimates and very small differences in significant coefficient estimates. As neither of the two dummy year election variables were significant in any model, they are excluded from the table. Slope coefficients for each model are jointly significant at the 1% level, with signs that are generally as expected. Two exceptions are the negative and significant effect of a committee or subcommittee chairmanship on donations from the Crop Production subgroup and the negative and significant effect of state agricultural employment on contributions from Poultry and Eggs. The former appears to be a result of Crop Production targeting members of the minority Democrats (who do not hold chairs) in addition to majority leaders, while the latter may be explained by the concentrated nature of the Poultry and Egg industry.

The Total Ag PAC regression (column 2 of table 3) shows that when taken in aggregate, agricultural PACs generally favor contributing to Republican members of the Senate who gain the approval of the AFBF. While the latter result is unsurprising, the former stands in stark contrast to the findings of Van Doren, Hoag, and Field, who found that Democrats are more likely to receive contributions. The earlier result applied to the 103rd Congress in which Democrats were the majority party, suggesting that party allegiance is a less important attribute than legislative control for describing agricultural contribution decisions. Additional evidence supporting this hypothesis is the positive and significant relationship between donations and many of the power and influence explanatory variables, including being a member of the majority leadership, membership on the agriculture or agriculture appropriations (sub)committees, and the interaction term between tenure and committee membership.

Chairmanships, seniority alone, the percentage of farm employment in the state, electoral margin, and ideology deviations from the party mean were insignificant. Taken together, this suggests that agricultural PACs tend to follow a strategy that specifically targets legislators on (sub)committees with influence over important legislation, but do not ignore the importance of power in terms of overall party majorities and more specifically, majority leadership. The insignificance of chairmanships further supports the notion of the conditional party hypothesis, and implies that power and influence interact to drive agricultural campaign donations to the Senate.

The decomposition of the regressions into PAC subaggregates (columns 3-10) reveals differences in how power and influence is targeted across agricultural donors. For example, of the 8 subgroups, only 1 was found to specifically target the majority leadership at the 5% level of significance (although three more are identified at 10%), and three focused on tight races, as shown by the negative and significant (at 5%) sign on the margin variable. In addition, deviations from party ideology in the conservative direction tended to increase contributions from the Livestock, Poultry and Eggs, and Tobacco sectors, with the latter two also targeting majority leadership rather than chairs. In fact, the chair power variables were not positive and significant for any subaggregate. These results support the conditional party hypothesis of targeting majority leadership rather than (sub)committee leadership, especially if one interprets contributions to close electoral races as indicative of a desire to maintain majority control of the Senate.

Influence through committee membership was significant for 7 of 8 PAC subgroups, with the exception being the Tobacco industry. Of these, all positively targeted the agriculture committee, and 6 contributed more to the appropriations subcommittee. Interestingly, the five

subgroups that did not target majority leadership all tended to contribute more to at least one group of committee members, but Tobacco was the only PAC that conditionally contributed more to majority leadership but not to committee members. Thus, it appears that the subgroups in the sample tend to follow either a singular strategy of either contributing more to influential committee members, or pursuing a mixed strategy targeting majority power and influence. Chairmanships in the Senate do not appear to attract significantly more financial contributions. Even so, there appears to be considerable heterogeneity in contribution strategies for agricultural PACs in the Senate, which will be more formally tested in a later section.

House of Representatives

Table 4 presents a similar table of the non-normalized Tobit regressions for the 108th House of Representatives. Like the Senate results, Republicans generated more campaign contributions from agricultural PACs overall (as indicated by the positive and significant coefficient on *Party*), but approval of the AFBF was not a significant variable in this regression. There continues to be evidence that power and influence are key explanatory components of contribution strategies for this chamber as well, with positive and significant coefficients on the majority leadership interaction variable, certain committee variables, and unlike the Senate, (sub)committee chair indicators. As in the Senate, however, electoral margin and constituency variables were insignificant for aggregate contributions.

In addition to the targeting of (sub)committee chairs, the significance of office tenure and deviations from party ideology for the House is a distinguishing feature from Senate. Seniority alone was found to have a nonlinear relationship with aggregate agricultural PAC contributions, with an initially negative impact that becomes less negative with tenure, eventually turning positive after about 18 years (about the 83rd percentile in the sample). This is similar to the

results in van Doren, Hoag, and Field and Grier and Munger (1993), and suggests that freshman House members and senior statespersons were more likely to receive large contributions in the 2004 election. Also in contrast to our Senate results, deviation from a party's mean ideology positions are a significant explanatory factor, entering via a quadratic function that suggests relatively extreme positions are rewarded relative to mean party beliefs. The turning point of the function, however, is at an ideology score of approximately 67, corresponding to the 2nd percentile of the sample (i.e., 98% of the observations had scores greater than 67). Thus, for the majority of observations, a more conservative position results in greater PAC donations.

In the House, 6 of 8 of the subaggregates target majority leadership and 5 of 8 target members of the majority party (at the 5% level of significance) regardless of their power. Only the Crop Production and Basic Processing sector targets neither, opting instead to contribute to senior members and chairs of the relevant (sub)committees. This stands in contrast to this subgroup's contribution behavior in the Senate, in which majority leadership is a significant explanatory variable, suggesting that there may be heterogeneity in strategy across chambers for one subgroup as well as across subgroups. In a similar vein, 7 of 8 subaggregates contribute more to (sub)committee chairs, perhaps recognizing their power to influence legislation coming before the broader House and in contrast to the conditional party hypothesis. Thus, the evidence suggests that for agricultural PACs, party leadership is relatively more important in the Senate than in the House, where committee leadership is more valuable from the standpoint of legislators. Stated slightly differently, both power and influence are generally targeted in the House, and donation strategies do not tend to target one source of power, but rather diversify across both majority leadership and (sub)committee chairs.

The other key difference between results for the House and Senate are the predictive power of district agricultural employment, positive and significant in 3 of the 8 cases in the House at the 5% level versus only the Livestock sector for the Senate. Seniority is penalized at a decreasing rate for Congresspersons in 5 of the 8 cases (with turning points between 15 and 19 years, again at 5%), and that conservative ideologues in either party tend to be rewarded in 6 of 8 cases. However, this result manifests itself non-linearly (i.e., through the positive squared term) for the Ag Services/Products and Tobacco sectors, while the effect is linear for Dairy, Food Processing and Sales, and Forestry and Forest Products. In other words, the marginal effect of deviation from party ideology in the conservative direction is estimated to be constant and positive for these latter sectors, while the marginal effect becomes less negative with the former. In addition, the Livestock PACs are the only organizations to continue to contribute more to legislators in tight races (though there is limited evidence that the Tobacco industry targets landslide candidates).

We now turn to formal testing of the equivalence of agricultural PAC donation strategies across subaggregates.

Testing the Hypothesis of Monolithic Behavior

The equivalence of campaign contribution strategies is formally tested by transforming the dependent variable by the mean contribution within a subgroup to allow for comparisons, then jointly testing the equivalence of the Tobit model coefficients in a pairwise fashion using likelihood ratio tests.[2] More formally, the normalized contribution from subgroup *j* to legislator *i* in either the House or the Senate is defined as $n_{ij} = \frac{c_{ij}}{\bar{c}_{ij}}$, where c_{ij} is the dollar contribution from subgroup *j* to legislator *i* and $\bar{c}_{ij} = \sum_{i=1}^{I} c_{ij} / I$. A rejection of the null hypothesis that the coefficients

are equal provides evidence against homogeneity of campaign contribution strategies, although it does not necessarily provide the source of the discrepancy. As such, visual inspection of the magnitude and significance of individual variables will be used to determine how the strategies differ. Due to space considerations, the normalized regressions are not reported here, but are available from authors upon request.

Senate

Table 5 provides the results of these tests for the Total Ag PAC model and major subaggregates in the Senate. Table entries provide the probability that the null hypothesis of equal coefficients is true, based on a chi-squared (17) distribution, where stars denote statistical significance at the 1, 5, and 10% levels. When compared to the pooled model that presumes a consistent data-generating process for all subaggregates (column 2), only Ag Services/Products, Crop Production and Basic Processing, and Dairy cannot be distinguished from overall industry behavior, with these three apparently focusing on a strategy that includes donations to both majority leadership (power) and committee members' (influence). However, it should be noted that the data comprising each subaggregate is a subset of the Total Agricultural PAC aggregate, and the multicollinearity that results from all variables being included in the analysis will tend to inflate standard errors, and decrease the power of the statistical test. In addition, these three sectors comprise just over half (51%) of all PAC donations in the sample for the Senate.

When comparing subgroups against each other, there is evidence to suggest that several groups of PACs act according to the same contribution strategy. For example, there is no statistical difference between Ag Services/Products and Crop Production and Basic Processing. These are the two largest major subaggregates in terms of dollar amounts, contributing just over $4.6 million, or 44% of all agricultural PAC donations, to Senate members. Their strategy can be

characterized as one of targeting primarily influence regardless of party, although AFBF approval is a significant determinant of higher contributions, suggesting a strong policy stance link. In addition, the joint model suggests that chairs of relevant (sub)committees receive less money, all else equal, and thus power is not a strong targeted attribute. This similarity might be attributed to the close ties between these sectors in terms of trade (with the Ag Services/Products sector likely providing many inputs into the Crop Production sector), but as we shall see, there are differences within these sectors as well. On the other hand, Forestry and Forest Products and Tobacco can not be distinguished either, but tend to follow a strategy of donating to majority party members overall, while specifically targeting party leadership, members of the appropriations subcommittee, and tight election races. This implies a desire to see the majority party remain dominant rather than directly influencing individual pieces of legislation (except perhaps appropriations). Overall, these PACs contributed about $2.3 million, or 22% of total giving, to sitting Senators, though any potential links between these two sectors beyond geography is not immediately clear.

Additional decomposition analysis on these major subaggregates was performed by testing the equivalence of strategies for the smaller subgroups of PACs that comprise the larger industry. These results are presented in table 6, and show that while there is more similarity between PACs that comprise a larger subgroup than between these larger subgroups themselves, a large degree of heterogeneity still exists within a major subaggregate. One exception is Forestry, in which Forestry and Forest Products and Paper and Pulp Mills and Paper Manufacturing target primarily Republican and AFBF-friendly Senators in close electoral races. Within commodity groups, there is a good deal of homogeneity, with Cotton, Vegetables, Fruits, and Tree Nuts, and Other Commodities focusing contributions on the appropriations

subcommittee and majority leadership, while Sugar directs dollars to Republicans and other relative conservatives in highly agricultural states irregardless of majority leadership position. In the Agricultural Services/Products sector, all PAC groups target either one or both committees as well, with only Farm Machinery and Equipment and Florists and Nursery Services pursuing a party-based strategy, and little evidence of power as a determinant of donations. Finally, in the Food Processing and Sales sector, Food and Beverage Products and Services, Food and Kindred Products Manufacturing, and Food Wholesalers target primarily influence via seniority on the agricultural committee, while Wholesalers also donate to majority party leadership, despite being the only subaggregate in this sector that does not systematically contribute to Republicans in general (an insignificant coefficient on *Party*). Several subgroups, namely Food and Beverage Products and Services and Meat Processing and Products, tend to prefer giving to candidates in states with high non-farm employment. Meet Processing and Products follows a similar strategy but with an eye towards policy stance via the AFBF variable, and Food Wholesalers tend to target agricultural committee members.

House of Representatives

Tables 7 and 8 present the results of a similar analysis for the House. As can be seen in table 7, column 2, the null hypothesis of equivalence of strategy between major subaggregates and total agricultural PACs for this chamber is rejected in each case. Overall, there is more heterogeneity across major subaggregates, with only 2 of a possible 28 tests of equivalence not rejected at the 5% level, as opposed to 8 of 28 in the Senate. However, these two pairs, Crop Production and Basic Processing /Dairy and Forestry and Forest Products/Tobacco, were also not significantly different for the Senate regressions. The determinants of contributions differ slightly, however. In the first case, committee chairs are positively targeted in the House, and

tenure and constituency tend to play a much bigger role in the contribution decision, although membership on the appropriations subcommittee still plays a role. In the second case, the difference comes from a lack of strong targeting of power via party leadership, instead focusing on a party affiliation as a whole and influence via committee membership.

Table 8 displays the likelihood ratio tests for the breakdown of subaggregates in the House. Again, there seems to be more heterogeneity of strategy in the House as compared to the Senate, with many more rejections of the null hypothesis of equivalence. Nevertheless, there are some similarities. For example, all of the components of Ag Services/Products contribute more to members of the agriculture committee, although the relative strength of the marginal effects and the channels by which they enter the model differs considerably. Potentially cooperative subsectors include Farm Orgs and Co-Ops and Ag Chemicals, and Farm Orgs and Co-Ops and Ag Services, perhaps as a result of close working relationships between these subsectors.

On the other hand, the Crop Production and Basic Processing sector targets the agriculture committee in only 3 of 6 cases, but exhibits a positive correlation between contributions and agricultural employment in 5 of 6 categories (Crop Production excluded) with varying strengths. There are relatively fewer differences within this sector, with similar strategies for Wheat/Corn/Soy/Grain, Cotton, and Other Commodities and Crop Production. Furthermore, the Grain crop and Veges/Fruits/Nuts subaggregates are significantly different only at the 10% level, suggesting, as in the Senate, some similarities in those sectors directly related to farm commodity production. The components of Food Processing and Sales PACs also identify very similar determinants with different magnitudes, including party affiliation and the agriculture committee, but with widely varying (normalized) coefficients (between 3.2 and 28 for party, for example). Finally, in the Forestry sector, Paper and Pulp Mills target Republicans

much more strongly than Forestry and Forestry Products, who also tend to donate in heavily agricultural areas.

Summary, Deductions, and Conclusions

This paper extended the literature relating to the donation strategies of agricultural PACs by examining and testing a variety of variables theoretically related to contributions and formally testing for equivalence of donation strategies across PACs of varying levels of aggregation. We assume that each PAC seeks to maximize a latent, unobservable objective related to some combination of legislative outcomes and political access, and engages in rent-seeking behavior pursuing a strategy of its own choosing. Both chambers of the 108th Congress were modeled, with particular attention paid to the targeting of different power and influence sources within the legislature, while also controlling for ideology, constituency, and the tightness of the electoral race.

The results showed that there is significant heterogeneity between PAC subgroups in agriculture, and that this heterogeneity manifests itself across both industry subgroups and across chambers. In some cases, certain agricultural PACs tend to target according to party, either across the broad spectrum of legislators, or specifically to the majority leadership in power, as proposed by the conditional party government hypothesis. In other cases, especially in the House, committee assignments and chairs tend to attract larger donations, most likely due to the relative power over legislation important to the subindustry. In still other cases, a mixed strategy is pursued in which both majority leadership and committee leadership is targeted.

The observation of considerable heterogeneity within- and between- subindustry strategies and objectives has implications that reach beyond the statistical findings about how each PAC seeks rents. As suggested in the introduction, our results provide insights about rent-

seeking behavior from PACs that are not easily observed. First, our results inform how contributions are being used and how they might continue to be used as the legislature evolves, which in turn might be important for legislation for campaign-finance reform. Whether it is spending limits, public financing, or public disclosure, reforms would likely affect subgroups with different strategies and goals in different ways, including reallocating political favors and access and thus affecting political rents. In a broad yet partially supported industry like agriculture, these impacts have the potential to be severe at both the subsector and individual level.

Second, our finding that PACs deploy different strategies across the two chambers highlights the impact of the structure of favor-granting institutions on rent-seeking strategies. For example, it appears that the building polarization of political parties has a greater effect on donation strategies in the Senate than the House, perhaps due to the differences in how tightly each is organized, the ability of majority leaders to control legislation, and the marginal power of each legislator. However, as the institutions of government continue to evolve, and power becomes either more or less concentrated in committee leadership or majority leadership in each chamber, we would expect contribution strategies to adjust accordingly. In other words, our findings are a static snapshot of an underlying dynamic process.

Third, and finally, we found that there is little evidence of cooperative behavior, which is at odds with conventional thinking that agricultural subsidies persist because of a romantic and mostly homogenous image of farms. The degree of homogeneity, or lack thereof, between agricultural PAC groups begs the question of whether or not there could be gains from collaboration between subindustries, or if division of labor and other forms of diversification are indeed optimal. There is little doubt that ultimately, rent-seeking behavior influences policy, and

that most effective policy decisions have definite welfare effects. But has there been a sort of collective impact of rent seeking that helps “agriculture” overall, leaving it to the participants to divide the spoils based on their rent seeking efforts? If so, there are two dimensions in rent seeking that must be accounted for, the cumulative impact and the individual impact. Differential goals and strategies in campaign finance can interact as either complements or substitutes in increasing (or decreasing) welfare between subsectors, and further research is needed to identify if these subsectors act in a strategic manner to take these interactions into account.

Endnotes

[1] See www.fb.org.

[2] For the Senate, the electoral year dummy variables were included in the regressions, but not tested for equivalence.

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Table 1. Total PAC donations and number of recipients by chamber, 108th Congress

	Senate			*House of Representatives*		
PAC Subgroup	***Total $***	***% of Total***	***# Recipients***	***Total $***	***% of Total***	***# Recipients***
TOTAL AG PACS	10,488,041	100%	94	12,227,277	100%	413
AG SERVICES/PRODUCTS	2,413,151	23%	90	2,483,328	20%	306
Ag Chemicals	507,056	5%	57	486,463	4%	133
Ag Services	558,538	5%	62	629,771	5%	172
Animal Feed and Health Products	251,250	2%	34	196,500	2%	46
Farm Machinery and Equipment	177,050	2%	39	259,500	2%	84
Farm Organizations and Co-ops	325,691	3%	60	519,924	4%	160
Florists and Nursery Services	109,666	1%	42	177,920	1%	82
Grain Traders and Terminals	175,650	2%	46	47,250	0%	29
Veterinarians	308,250	3%	72	166,000	1%	119
CROP PRODUCTION AND BASIC PROCESSING	2,149,378	20%	87	3,138,205	26%	310
Cotton	217,284	2%	44	365,938	3%	101
Crop Production	82,050	1%	27	130,000	1%	52
Other Commodities	354,500	3%	45	337,400	3%	71
Sugarcane and Sugarbeets	1,046,872	10%	72	1,741,667	14%	268
Vegetables, Fruits, and Tree Nuts	269,222	3%	52	385,200	3%	111
Wheat, Corn, Soybeans, and Cash Grain	179,450	2%	40	178,000	1%	83
DAIRY -- MILK AND DAIRY PRODUCERS	793,585	8%	88	1,313,366	11%	326
FOOD PROCESSING AND SALES	1,960,798	19%	87	1,618,611	13%	282
Food and Beverage Products and Services	188,857	2%	54	202,719	2%	118
Food and Kindered Products Manufacturing	963,457	9%	77	629,228	5%	182
Food Stores	521,582	5%	71	454,716	4%	153
Food Wholesalers	75,988	1%	33	82,000	1%	31
Meat Processing and Products	211,914	2%	53	249,948	2%	74
FORESTRY AND FOREST PRODUCTS	1,338,768	13%	71	1,115,279	9%	236
Forestry and Forest Products	928,292	9%	63	918,202	8%	222
Paper and Pulp Mills and Paper Manufacturing	410,476	4%	60	197,077	2%	89
LIVESTOCK	504,371	5%	68	478,045	4%	142
Feedlots and Related Livestock Services	41,500	0%	18	52,500	0%	22
Horse Breeders	7,000	0%	2	3,500	0%	4
Livestock	414,211	4%	66	413,295	3%	133
Sheep and Wool Producers	41,660	0%	25	8,750	0%	7
MISC AGRICULTURE	2,721	0%	3	0	0%	0
POULTRY AND EGGS	361,028	3%	56	509,359	4%	124
TOBACCO AND TOBACCO PRODUCTS	964,241	9%	57	1,571,084	13%	230

Table 2. Independent variable summary statistics by chamber

	House		*Senate*	
	Mean	***Std. Dev.***	***Mean***	***Std. Dev.***
Party and Ideology				
Party (1 if Republican)	0.53	0.50	0.51	0.50
AFBF (1 if "friend")	0.40	0.49	0.55	0.50
Ideology Difference (by party)	100	14.54	100	13.99
Influence				
Yrs in Office	11.11	7.80	13.72	10.16
Appropriations Ag Subcommittee (1 if member)	0.03	0.17	0.17	0.38
Agriculture Committee (1 if member)	0.11	0.31	0.26	0.44
Power				
Majority Leadership (1 if leadership)	0.01	0.11	0.06	0.24
Committee/Sub Chair (1 if chair)	0.03	0.16	0.16	0.37
Constituency				
State/District Ag Employment (% of total)	1.94	2.36	2.78	2.26
Tightness of Race				
Electoral Margin (%)	42.26	26.36	25.51	19.61

Table 3. Restricted non-normalized Tobit regression results, U.S. Senate, 108th Congress

	Total Ag PACs	Ag Services/ Products	Crop Production & Basic Processing	Dairy	Food Processing & Sales	Forestry and Forest Products	Livestock	Poultry and Eggs	Tobacco
Party and Ideology									
Party	40,934		-7,450		25,439	20,477	9,003		17,967
	(2.47)**		(1.44)		(7.00)***	(4.71)***	(7.81)***		(3.81)***
AFBF	50,369	13,207	11,643		6,013	11,367		5,701	9,674
	(3.09)***	(3.05)***	(2.22)**		(1.67)*	(2.74)***		(3.70)***	(2.06)**
Id Diff.							93	130	2,127
							(2.40)**	(2.45)**	(2.52)**
(Id Diff.)^2									-7
									(2.07)**
Influence									
Yrs in Off.				413				301	
				(1.82)*				(1.22)	
(Yrs in Off.)^2				-9				-15	
				(1.66)*				(2.21)**	
Ag. Com.	52,571	21,915	33,261	7,505					
	(2.28)**	(3.19)***	(5.36)***	(4.61)***					
App. Ag Sub.	70,695	27,054	32,646	7,228		-11,121	4,260		
	(3.89)***	(4.84)***	(5.45)***	(3.83)***		(1.54)	(3.04)***		
Yrs in Off*Ag Com.	4,475	1,809			1,078		278	602	
	(3.55)***	(4.79)***			(5.37)***		(4.00)***	(5.82)***	
Yrs in Off*App. Sub.						837		326	
						(2.04)**		(2.77)***	
Power									
Maj Lead	51,192					13,705		14,515	14,130
	(1.72)*					(1.93)*		(2.76)***	(1.93)*
Com/Sub Chair			-42,300						
			(4.04)***						
Yrs in Off*Maj Lead.					1,364			-1,325	
					(1.62)			(1.93)*	
Yrs in Off*Chair			1,971						
			(3.66)***						
Constituency									
State Ag Emp					-1,166	1,299	666	-792	
					(1.62)	(1.59)	(2.56)**	(2.15)**	
Tightness of Race									
Margin		187			-273	-310	-51		-220
		(1.71)*			(3.32)***	(3.17)***	(1.71)*		(2.29)**
Constant	9,823	-5,845	5,303	1,332	7,848	-4,542	-12,774	-16,158	-150,106
	(0.84)	(1.28)	(1.40)	(0.69)	(2.35)**	(1.10)	(3.16)***	(2.91)***	(2.92)***
Observations	100	100	100	100	100	100	100	100	100

Absolute value of t statistics in parentheses. Zero coefficient restrictions imposed based on likelihood ratio tests (5%).
* significant at 10%; ** significant at 5%; *** significant at 1%

Table 4. Restricted non-normalized Tobit regression results, U.S. House of Representatives, 108th Congress

	Total Ag PACs	Ag Services/ Products	Crop Production & Basic Processing	Dairy	Food Processing & Sales	Forestry and Forest Products	Livestock	Poultry and Eggs	Tobacco
Party and Ideology									
Party	16,096	6,384			6,409	7,410	4,620		8,253
	(5.16)***	(5.97)***			(6.67)***	(8.31)***	(6.71)***		(8.09)***
AFBF				1,696				2,123	
				(3.30)***				(3.02)***	
Id Diff.	-1,334	-542	-218	44	128	188	132		-556
	(1.69)*	(2.10)**	-0.73	(2.44)**	(3.70)***	(6.29)***	(5.54)***		(2.50)**
(Id Diff.)^2	10	4	2						4
	(2.54)**	(2.84)***	-1.51						(3.33)***
Influence									
Yrs in Off.	-1,628	-364	-559	-232	-348				-383
	(2.79)***	(1.88)*	(2.70)***	(2.57)**	(2.02)**				(2.18)**
(Yrs in Off.)^2	45	12	17	8	9				11
	(2.61)***	(2.08)**	(2.78)***	(2.94)***	(1.78)*				(2.07)**
Ag. Com.						3,075		6,366	2,561
						(2.42)**		(4.56)***	(1.63)
App. Ag Sub.	74,591	19,150	18,938	7,587	16,776		9,350	11,933	5,191
	(8.25)***	(6.62)***	(5.95)***	(5.50)***	(6.54)***		(6.80)***	(7.59)***	(1.93)*
Yrs in Off*Ag Com.	7,224	2,472	2,078	796	1,051		468	408	
	(11.16)***	(11.98)***	(9.05)***	(8.25)***	(5.66)***		(4.67)***	(2.58)**	
Power									
Maj Lead				15,512	8,621				6,537
				(2.82)***	(2.10)**				(1.65)*
Com/Sub Chair	49,466	11,472	13,917		11,062		6,814	3,468	4,811
	(4.85)***	(3.50)***	(3.94)***		(3.86)***		(4.15)***	(1.90)*	(1.66)*
Yrs in Off*Maj Lead.	3,795	1,549		-657			433	436	
	(3.65)***	(4.70)***		(1.67)*			(2.86)***	(2.45)**	
Yrs in Off*Chair				253					
				(2.43)**					
Constituency									
District Ag Emp			1,058	434	-415	345	242		
			(4.24)***	(3.93)***	(1.95)*	(1.90)*	(2.07)**		
Tightness of Race									
Margin							-52		33
							(4.07)***		(1.75)*
Constant	50,891	15,848	2,189	-3,744	-13,994	-24,987	-18,328	-6,031	13,526
	(1.26)	(1.20)	(0.14)	(1.95)*	(3.71)***	(7.75)***	(6.73)***	(8.73)***	(1.19)
Observations	435	435	435	435	435	435	435	435	435

Absolute value of t statistics in parentheses. Zero coefficient restrictions imposed based on likelihood ratio tests (5%).
* significant at 10%; ** significant at 5%; *** significant at 1%

Table 5. Likelihood ratio tests of joint equivalence of normalized Tobit coefficients by major subaggregate
U.S. Senate, 108th Congress

	Total Ag PACs	Ag Services/ Products	Crop Production & Basic Processing	Dairy	Food Processing & Sales	Forestry and Forest Products	Livestock	Poultry and Eggs
Ag Services/Products	0.247							
Crop Production & Basic Processing	0.123	0.457						
Dairy	0.594	0.090*	0.587					
Food Processing & Sales	0.092*	0.000***	0.000***	0.002***				
Forestry and Forest Products	0.001***	0.000***	0.000***	0.000***	0.113			
Livestock	0.025**	0.001***	0.000***	0.001***	0.027**	0.120		
Poultry and Eggs	0.006***	0.011**	0.001***	0.000***	0.002***	0.003***	0.008***	
Tobacco	0.000***	0.000***	0.000***	0.000***	0.007***	0.346	0.063*	0.072*

Table values indicate Pr (Null hypothesis of joint equivalency is not rejected)
* significant at 10%; ** significant at 5%; *** significant at 1%

Table 6. Likelihood ratio tests of joint equivalence of normalized Tobit coefficients by minor subaggregate
U.S. Senate, 108th Congress

	AG SERV/PROD	Ag Chem	Ag Serv	An Feed & Health	Farm Mach & Equip	Farm Org & Co-op	Florists/Nursery	Grain Trade/Term
Ag Chem	0.105							
Ag Serv	0.661	0.546						
An Feed & Health	0.000***	0.001***	0.000***					
Farm Mach & Equip	0.003***	0.355	0.076**	0.005***				
Farm Org & Co-op	0.625	0.688	0.698	0.000***	0.088*			
Florists/Nursery	0.000***	0.031**	0.017**	0.000***	0.909	0.022**		
Grain Trade/Term	0.224	0.439	0.423	0.001***	0.085*	0.592	0.033**	
Vets	0.113	0.008***	0.015**	0.000***	0.006***	0.232	0.011**	0.231
	CROP PROD/PROC	Cotton	Crop Prod	Other Com	Sugar	Veges/Fruits/Nuts		
Cotton	0.004***							
Crop Prod	0.000***	0.049**						
Other Com	0.013**	0.986	0.012**					
Sugar	0.400	0.000***	0.000***	0.008***				
Veges/Fruits/Nuts	0.442	0.388	0.006***	0.254	0.093*			
Wheat/Corn/Soy/Grain	0.001***	0.084*	0.097**	0.219	0.002***	0.300		
	FOOD PROC & SALES	Food & Bev	Food /Prod Man	Food Stores	Food Whole			
Food & Bev	0.357							
Food /Prod Man	0.964	0.116						
Food Stores	0.956	0.296	0.683					
Food Whole	0.000***	0.005***	0.000***	0.001***				
Meat Proc& Prod	0.001***	0.047**	0.007***	0.031**	0.012**			
	FORESTRY	Forest Prod						
Forest Prod	1.000							
Paper and Pulp	0.608	0.249						

Table values indicate Pr (Null hypothesis of joint equivalency is not rejected)
* significant at 10%; ** significant at 5%; *** significant at 1%

Table 7. Likelihood ratio tests of joint equivalence of normalized Tobit coefficients by major subaggregate
U.S. House of Representatives, 108th Congress

	Total Ag PACs	Ag Services/ Products	Crop Production & Basic Processing	Dairy	Food Processing & Sales	Forestry and Forest Products	Livestock	Poultry and Eggs
Ag Services/Products	0.000***							
Crop Production & Basic Processing	0.005***	0.000***						
Dairy	0.062**	0.000***	0.413					
Food Processing & Sales	0.000***	0.013**	0.000***	0.000***				
Forestry and Forest Products	0.000***	0.000***	0.000***	0.000***	0.000***			
Livestock	0.000***	0.000***	0.000***	0.000***	0.000***	0.000***		
Poultry and Eggs	0.000***	0.000***	0.000***	0.000***	0.000***	0.000***	0.020**	
Tobacco	0.000***	0.000***	0.000***	0.000***	0.000***	0.577	0.000***	0.000***

Table values indicate Pr (Null hypothesis of joint equivalency is not rejected)
* significant at 10%; ** significant at 5%; *** significant at 1%

Table 8. Likelihood ratio tests of joint equivalence of normalized Tobit coefficients by minor subaggregate
U.S. House of Representatives, 108th Congress

	AG SERV/PROD	Ag Chem	Ag Serv	An Feed & Health	Farm Mach & Equip	Farm Org & Co-op	Florists/Nursery	Grain Trade/Term
Ag Chem	0.000***							
Ag Serv	0.000***	0.002***						
An Feed & Health	0.000***	0.000***	0.000***					
Farm Mach & Equip	0.000***	0.000***	0.000***	0.000***				
Farm Org & Co-op	0.000***	0.086*	0.476	0.000***	0.000***			
Florists/Nursery	0.000***	0.000***	0.000***	0.000***	0.015**	0.000***		
Grain Trade/Term	0.000***	0.000***	0.000***	0.048**	0.000***	0.000***	0.000***	
Vets	0.000***	0.017**	0.000***	0.000***	0.000***	0.000***	0.000***	0.000***
	CROP PROD/PROC	Cotton	Crop Prod	Other Com	Sugar	Veges/Fruits/Nuts		
Cotton	0.000***							
Crop Prod	0.000***	0.006***						
Other Com	0.000***	0.059**	0.290					
Sugar	0.255	0.000***	0.000***	0.000***				
Veges/Fruits/Nuts	0.000***	0.050**	0.003***	0.002***	0.000***			
Wheat/Corn/Soy/Grain	0.000***	0.299	0.201	0.034**	0.000***	0.074*		
	FOOD PROC & SALES	Food & Bev	Food /Prod Man	Food Stores				
Food & Bev	0.000***							
Food /Prod Man	0.335	0.001***						
Food Stores	0.000***	0.000***	0.097*					
Meat Proc& Prod	0.000***	0.000***	0.000***	0.000***				
	FORESTRY	Forest Prod						
Forest Prod	1.000							
Paper and Pulp	0.000***	0.000***						

Table values indicate Pr (Null hypothesis of joint equivalency is not rejected)
* significant at 10%; ** significant at 5%; *** significant at 1%
Food wholesale sector excluded due to extreme censoring/collinearity in estimation.