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Abstract

This essay contains a reduced form analysis of campaign contributions made by subsidy receiving farmers, in order to better understand if contribution strategies for campaigns in the House of Representatives by individual farmers differ based on whether or not the candidate represents their local congressional district, a non-local congressional district within the donor?s state, or an out of state congressional district. This is accomplished by applying a Tobit model to a panel of contributions, recording zero values of farmers in a given congressional district contribute nothing to a given legislator. Results indicate that farmers appear to contribute heavily to local campaigns regardless of the power of the legislator to influence agricultural legislation, while the ability of legislators to influence agricultural legislation becomes a more important driver of campaign contributions in more distant elections.

Key words: Agricultural Policy, Lobbying, Rent Seeking, Campaign Finance

JEL classification: Q18,D72

The agricultural lobby has been studied in depth by the agricultural economic and political economy literatures for decades. This research suggests that agricultural interests have had great success in shaping beneficial government policy. While the influence of agricultural political action committees (PACs) has been thoroughly studied over the last 30 years, little research has been done on the political activities of individual farmers. The analysis in chapter **??** suggests that geography may play a role in the political contribution behavior exhibited by farmers. On one hand, a slim majority of contributions made by politically active farmers go to legislators representing their own congressional districts. Contributions made out of district, by and large, still go to legislators representing the donor's state. At the same time, there appears to be a stark preference for contributing to members of the House Committee on Agriculture. This preference is evident in contributions made both within district and out of district.

This research seeks to analyze the role of geography in further detail. The goal is understanding what motivates farmers to contribute. One null hypothesis is that farmers are simply contributing to local elections, and thus, treat campaign contributions as a form fo consumption. In this case, it could be that members of the House Committee on Agriculture are more likely to represent districts with relatively larger numbers of farmers. On the other hand, if farmers treat campaign contributions as a political investment, then we would expect for them to contribute to legislators with power over shaping agricultural policy whether or not these legislators represent their district. This analysis studies which of these motivations appear to drive farmer contribution behavior. A further topic of interest is whether or not contributions made by farmers increase during election cycles in which farm bills are passed. Elevated contribution levels during such election cycles would also point towards the political investment hypothesis.

The paper will proceed as follows. Section 1 will review the relevant literature, section 2 will describe the empirical model, section 3 discusses the data used in the empirical analysis and section 4 will discuss the empirical results. Section 5 concludes.

Theory and Prior Literature

There are two separate literatures relevant to this research. The first is the agricultural rent seeking literature, based in large part on the actions of agricultural PACs. Much of this literature applies the simultaneous probit-tobit model introduced by Chappell, which studies the interaction between legislators and political action committees by modeling the legislator vote decision as a function of campaign contributions and constituency characteristics, and the contribution decision of the PACs as a function of legislator power (9). Stratmann (1995) uses such a model to analyze the importance of the timing of contributions on the vote decision. Brooks, Cameron and Cater study the impact of contributions by rival lobbies on votes to repeal sugar tariffs (2). Drope and Hansen incorporate lobbying and soft money spending by PACs on votes for the implementation of trade protection in the steel industry (4). Wright also studies the relationship between lobbying and direct campaign contributions on votes within the House Committee on Agriculture (18). Stratmann 1998 uses different empirical methods to refine the study of contribution timing and farm bill amendment votes, focusing on contributions occurring in close proximity to relevant votes (15).

There is, however, a major unresolved issue with this literature. Despite the fact that maximum contribution limits are quite low, it is rare that these upper limits bind. Even in studies that find that PAC contributions have a statistically significant effect on policy, the magnitude of the effect is quite small. PACs in general have a variety of avenues to aid or sway legislators. PACs can attempt to mold legislation through lobbying. While data from these activities are available from the FEC, the information applies to lobbying efforts directed towards specific agencies, for specific bills. There is no information on which legislators are lobbied (3). At the same time, PACs can aid legislators through the use of issue advertising. Issue advertising circumvents direct campaign contribution laws by advertising on behalf of a cause that a legislator supports, rather than for the legislators themselves (13). As such, direct campaign contributions by PACs, while being the best understood due to extensive regulation, is the least likely avenue for PACs to sway legislators.

When it comes to direct campaign contributions, individual donors contribute substantially more to congressional campaigns than PACs (1).

A more recent literature on individual campaign contributions is emerging. These studies focus on political contributions made by individuals, without any identifiable special interest. Ensley (2009) studies the relationship between individual campaign contributions and legislator ideology. This research finds evidence that individual political donors, both Republican and Democrat, are strongly motivated by political ideology. Further, these results are robust when the ideological divergence of opponents is considered. This suggests that donors care more about the candidate's policy positions than the difference between the candidates policy positions when making campaign contributions, which could explain the increasing ideological divergence in federal political campaigns. Results also indicate a propensity to contribute to legislators in tight races.

Gimpel, Lee and Kaminski study the geographic origins of individual campaign contributions and the importance of social networks in contribution behavior (7). They find that contributions tend to originate from a small number of geographic locations. These locations are both affluent and urban. Campaign contributions from these locations flow to both Republicans and Democrats, and the landscape of contribution behavior doesn't resemble known electoral patterns. That is to say, that substantial levels of contributions to Republicans can be found in affluent urban areas characterized by Democratic Party dominance in election results, and vice versa. Evidence suggests that local elections do not drive contributions. Using geospatial econometric methods, they further find evidence of the importance of social networks in driving contribution behavior.

Gimpel, Lee and Pearson-Merkowitz go even further, studying local, semi-local and non-local contributions (8). Here, the focus of their study is a topic they call monetary surrogacy, or contributing to like minded non-local politicians. This behavior, according to the authors, allows individuals to participate in the political process whether or not their local race is competitive. As with their prior work, evidence suggests the existence of a specialized class of political donors, typically located in affluent urban areas, and often in non-competitive congressional districts. Donors, regardless of geography, are highly motivated by partisanship. These results suggest that out of district contributions are likely coordinated by political organizations that serve to direct individual donors and lessen their informational costs. These out of district contributions flow towards highly competitive congressional races. When the districts with large propensities to contribute happen to be competitive, donors do not reduce out of district contributions. Instead, they maintain out of district contribution levels and contribute more to local congressional races. Also, their analysis suggests that there is an inverse relationship between the legislator's seniority and the amount of contributions they receive from their local constituency.

Empirical Model

To answer the questions regarding the impact of geography on farmer campaign contribution behavior, a reduced form estimation model is used. Since data exists on both the legislators that farmers contribute to, and those whom they don't contribute to, the estimation equations will consist of tobit models to account for zero observations. Consider the following empirical model.

(1) $$D_{i,j,t} = \alpha C_{i,t} + \beta L_{j,t} + \gamma G_{i,j,t} + \tau T_t + \sigma \varepsilon_{i,j,t}$$

(2) $$D^*_{i,j,t} = \begin{cases} D_{i,j,t} \text{ if } D_{i,j,t} > 0 \\ 0 \text{ otherwise.} \end{cases}$$

(3) $$E[\varepsilon_{i,j,t}] = 0$$

(4) $$E[\varepsilon^2_{i,j,t}] = 1$$

The contribution variable $D_{i,j,t}$ denotes contributions by farmers in congressional district i to legislator j in election cycle t. $C_{i,j,t}$ is a vector of variables containing information pertinent to the farmers in congressional district i. These include the quantity of subsidies received by the farmers making the contributions, the total number of subsidy receiving farmers within the district, and indicator variables for which region encompasses the congressional district, as distinguished by the USDA Farm Services Agency. Since the subsidies are aggregate subsidies received by farmers making campaign contributions, this varies by legislator j. The base geography is the region defined by the USDA as the corn belt. Contributions for Alaska and Hawaii are dropped.

$L_{j,t}$ represents the vector of variables pertaining to legislative characteristics. These characteristics include chamber seniority, vote shares received in the prior election, membership on the House Committee on Agriculture, membership on the House Appropriations Committee, and the interaction of these two committee indicators with committee seniority. Also included are partisanship variables, such as Democratic Party membership, a measure of liberalism, and the interaction of these two variables. T_t includes temporal indicators. The vector of variables $G_{i,j,t}$ denotes variables dependent on geography. In this model, these variables include an indicator for whether or not the farmers and the legislator are in the same district, an indicator for whether or not the legislator is in the same state, and interactions of these indicators with the committee membership and seniority variables. The sole temporal indicator variable is whether or not a farm bill vote occurs within the election cycle.

A total of six estimations are conducted using this basic framework. Model one considers only within district contributions. Model two considers within state contributions, controlling for which legislator represents the district making the contribution. Model three estimates a comprehensive model incorporating all contributions, without controlling for relative geography, to understand how failing to control for relative geography biases results. Model four, the primary focus of this research, estimates contributions from all congressional districts to all incumbent legislators, controlling for geography. Model five looks at out of district contributions, controlling for contributions made within the same state. Model six includes only out of state contributions. By estimating each geographic type of contributions both jointly and separately allows for robustness checks, and to gauge how appropriate the joint model is. Disparities could indicate heterogeneous strategies based on relative location, requiring separate estimation.

The expected signs of coefficients will vary depending on each of the hypotheses. These competing hypotheses only affect the signs on a subset of variables. Beginning with those that should not vary, are the partisanship variables. Based on prior results, a strong propensity to contribute to members of the Democratic Party is expected. Likewise, a negative propensity to contribute to liberals or liberal Democrats is also expected. The number of subsidy receiving farmers living within the contributing congressional district should have a positive effect on contributions. Given the fact that all observations pertain to incumbents, and the suggestions by prior research that individuals prefer donating to competitive races, the coefficient on the percentage of the popular vote received in the prior election should be negative. In these models, the square of this term is also included to account for non-linear relationships.

If farmers are not engaging in investment behavior, then the total amount of subsidies received by donating farmers should not have a significant impact on contributions when farming population is controlled for. Committee and legislator tenure variables for out of state and out of district contributions should not be statistically different from zero. Positive coefficients are still expected for agriculture committee membership for within district contributions, if legislators representing districts with high levels of farming activities are more likely to be members of the House Committee on Agriculture. However, the impact of legislative tenure and committee tenure should not be statistically different than zero. Neither should the effects of representation on the House Appropriations committee and seniority on that committee be significantly different from zero, since membership on this committee is not likely to be affected by the prevalence of farmers within a legislator's district. If this is correct, then the geographic indicator variables for the geographic relationship between candidates and donors should both be positive, with the local indicator having a higher magnitude than the indicator for whether or not the legislator is in the same state.

On the other hand, if farmers are making campaign contributions in an effort to influence legislators, these contributions are expected to flow towards legislators who draft agricultural policy or fund agricultural programs. It is also expected that the power of a legislator, here modeled by committee seniority and tenure in the chamber, will also affect their ability to influence legislation, and thus, their ability to aid farmers. As such, if the political investment hypothesis is correct, positive coefficients are expected for all of the included measures of committee membership and seniority, regardless of the geographic relationship between the donors and recipients. If legislator power is the motivator behind contributions, then the geographic legislator indicators shouldn't be statistically different from zero.

This empirical model can also accommodate differing strategies based upon geography. It could be the case that farmers contribute substantially to members of the relevant committees, with positive coefficients on seniority variables, while at the same time also showing a preference for contributing to more local races. If this hypothesis is correct, then positive coefficients are expected on all committee variables, tenure variables, geographic relationship variables, and the interactions of the committee and tenure variables with the geographic relationship variables.

Models seven through twelve are analogous to models one through six, except that the contribution and received subsidy variables are expressed in per capita terms. Expressing these variables in per capita terms allows for a more accurate reflection of the motivations of the farmers themselves, while the model in terms of levels allows instead allows for an understanding of overall money transfers. Further, examining per capita contributions bypasses the probable endogeneity of the agricultural committee membership variables. In models one through six, if agricultural committee members disproportionately represent areas with large numbers of subsidy receiving farmers, then more farmers will be contributing, resulting in a statistically significant coefficient, even if membership on the committee doesn't significantly impact contribution behavior. Using per capita variables solves this issue. The expected signs of the coefficients do not change between these specifications.

Fit statistics are also presented. Fit is measured using the squared correlation between predicted and actual values of the dependent variable. Marginal effects are calculated using the average of partial effects approach (17).

Data

Individual data comes from the Federal Elections Commission (5). These data contain campaign contributions from individual farmers to legislators in the House of Representatives. Farmers are identified using subsidy data obtained by Freedom of Information Act request from the USDA Farm Services Agency (FSA) (16). These data contain a record of every single crop subsidy transaction made between 1995 and 2014. There are nearly 300 million transaction records. These data include the full name and mailing address of the recipients. The names are matched by postal zip code, last name, first initial, and suffix. Note that there are two major caveats regarding these data. The first is that, rather than having a list of the names of all farmers in the US, this is a list of subsidy receiving farmers. As such, the farmers included in this study are the ones who receive the most benefits from the government.

The congressional district in which an individual resides is determined using geocoded postal zip codes. Historical congressional district shapefiles are used to determine where the center of each zip code lies using GIS software (11).

Information on legislator characteristics comes from a number of sources. Information on legislator tenure, committee assignments and committee seniority comes from Charles Stewart III (14). Data on election results comes from the Constituency Level Election Archive (10). Political ideology measures come from the DW-Nominate dataset (12). The first dimension coordinate, representing economic liberalism is rescaled, with a score of zero indicating a politician is perfectly conservative and a score of 100 indicating that the politician is perfectly liberal.

Summary statistics for these data are presented in table 1. Note that these summary statistics are conditional on the values of the variables being different from zero. There are 18,644 instances of contributions being made by farmers in a specific congressional district to a given legislator. The average quantity of contributions is $4,370. Note however, that there are considerable differences in contributions between counties, as the maximum amount of contributions from a specific county to a legislator is over one million dollars. The total amount contributed by farmers to congressional campaigns over the ten election cycle time series is $81 million. Over half of these contributions are made to local legislators. The mean local contribution is approximately $16,316. Approximately $25 million worth of contributions are contributed out of district to legislators representing the same state as the farmers making the contributions. The average size of these contributions is $3,056. With a substantially larger number of contributions, this suggests that farmers are highly active in contributing to out of district legislators, but contribute substantially less than they contribute to their local legislators. The variable non-local contributions represents contributions made to legislators in different states. As can be seen, farmers are also highly active in making out of state contributions, but the average contribution size, at $1,418, is even lower than for non-local contributions within the same state. Only $10 million are contributed to out of state legislators during the span of this time series. This suggests, as expected, that geography is an important determinant of contribution behavior. In particular, the importance of committee assignment in determining out of district contributions will be critical in understanding whether or not contributions are strategically targeting legislators with influence over farm programs.

The received subsidies variable should be interpreted with care. This variable represents the subsidies received by the individuals making a campaign contribution. Since different individuals are making contributions to different legislators within the same congressional district, this varies for different observations for the same donor congressional district and election cycle. The average amount of subsidies received by farmers making campaign contributions is $21,036 with a standard deviation of $27,560. Note that negative subsidy levels are possible. Certain subsidy programs offer payments in advanced, based on expected market conditions. If the realization of these conditions differs from what was expected, then farmers are required to refund excess subsidies to the USDA. These are recorded as negative subsidy payments in the USDA FSA dataset.

The percentage of legislators who are members of the Democratic Party are slightly below 50%. This because the majority of congresses in the time series had Republican majorities. Somewhat more surprising given this fact is the average value of the partisanship variable, indicating somewhat that the Congress on average was more liberal than conservative.

At any given moment, around 11% of the Congress is a member of the House Committee on Agriculture, while 14% are members of the House Committee on Appropriations. The average seniority of a member of the House of Representatives is 5.58 terms. Note that the average vote share for House representatives is 65%, which is intuitive considering the high incumbency rates for House legislators.

Tables 2 through 7 report correlation coefficients for model variables, based on geography. Table 2 looks at the correlation between contributions, received subsidies and legislative characteristics for the entire dataset without controlling for geography. As should be expected, contributions and the subsidies received by donors are positively and highly correlated. Vote shares are positively correlated with chamber seniority and appropriations committee seniority, while negatively correlated with agricultural committee seniority. Chamber seniority itself is also negatively correlated with both agricultural committee membership and seniority, suggesting that membership on the agricultural committee is less common among more senior legislators. What is somewhat surprising is that contributions by farmers are very weakly correlated with agricultural and appropriations committee membership. This suggests that, when considering contributions from each congressional district to every incumbent legislator, membership on relevant committees does not drive contribution behavior.

Geography does appear to be the significant driver of contribution behavior. Table 3 reports correlation coefficients for contributions and geographic indicator variables. Contributions are strongly positively correlated with the indicator for local legislators. The indicator for non local races within the same state as the donor is weakly positively correlated with contributions. There is a negative correlation between contributions and the indicator for races located in different states. Surprisingly, the correlation between the number of subsidy receiving farmers and both contributions and subsidies received is very weak.

Interactions of the indicators for local elections and the committee variables are shown in table 4. Contributions are strongly and positively correlated with agricultural and appropriations committee membership, along with committee seniority variables, when these variables are interacted with the local indicator. This suggests that, without controlling for geography, the correlation between contributions and relevant committee memberships could be erroneous.

To better explore this, table 5 explores the correlation between contributions and committee variables interacted with an indicator equal to one if the legislator represents a non-local district within the same state as the donor. The correlation between the relevant committee variables and contributions is weaker than in the case of local races, but is still positive. This suggests that there could be some propensity to direct contributions towards legislators in the same state that have influence over legislation that creates or funds agricultural programs.

Now the analysis shifts to subsets of the total sample. Table 6 shows correlation coefficients between contributions and committee membership for local contributions only. Agricultural committee membership is highly correlated with contributions, as is agricultural committee seniority. Appropriations committee membership and seniority are weakly and positively correlated with contributions. As is the case in table 2, contributions are negatively correlated with chamber seniority. However, for local contributions, this negative correlation is much stronger. This could be caused by a negative attitude towards entrenched incumbents, or this could instead be related to the fact that the longer a legislator serves in congress, the less likely they are to lose elections and thus need campaign funds. Table 7 looks at the subsample of contributions made to legislators in the same state as the donor. The correlation coefficients maintain the same signs, but the magnitude diminishes.

Graphs of the contribution data are presented in figures 1 through 6. Figure 1 shows the sums of campaign contributions from farmers by geography. From the beginning of the time series until the 112th congress, contributions are generally increasing. Note that, for each farm bill, there is a spike in contributions in the previous congress. This suggests that farmers may increase contributions to the races of the legislators who will draft or pass the farm bill. This spike is only evident in non-local contributions in the Congress preceding the vote for the 2014 farm bill. Note also the huge reduction in contributions in 113th congress. This decline affects local and non-local contributions alike. The cause is unknown. Compare this to figure 4, which shows the average contribution per capita. While fewer farmers make contributions out of district or out of state, the average size of the contributions is comparable in several election cycles of the time series. In particular, at many points, the average size of an out of district contribution exceeds the average local contribution. Note that during the 113th congress, the smallest average contributions were made to local legislators. This suggests that farmers may have had cause to stop supporting their local legislators en masse during the 2014 farm bill vote.

Figure 2 shows the sums of campaign contributions made by farmer to members of the House Committee on Agriculture by geography. Here, it can be seen that contributions continue to follow a pattern of spikes and troughs that correspond to farm bill votes. The only exception is the 110th congress. There is no noticeable drop in contributions for this congress, which corresponds to the 2008 farm bill vote. Note too that contributions fall dramatically in 113th Congress for members of the agricultural committee. Also, note too that non-local contributions vary less than contributions to local candidates. Figure 5 shows the average per capita contribution made to members of the House Committee on Agriculture. Here, it can be seen that in nearly every congress, farmers contribute more per capita to non-local agricultural committee members within their state than to their local legislator. However, they contribute comparatively little per person to out of state members of the agricultural committee. Also, while figure 2 suggests that total contributions went down in the 113th congress, the per capita amount contributed to members of the agricultural committee increased. While farmers in general contributed less, the individual farmers themselves who continued to contribute contributed more.

The most surprising contribution trends are shown in figure 3, which shows the sums of contributions made by farmers to members of the House Committee on Appropriations. Here, there is a huge spike in contributions in the 109th congress. Also, the drop off in the 113th Congress is less severe than with agricultural committee contributions or contributions in general. Note that the spike does not affect out of state contributions, but does affect out of district contributions within the same state. The trend for fewer contributions during congresses in which farm bill votes take place is still present with appropriations committee contributions. Figure 6 shows the mean of per capita contributions made to members of the appropriations committee. The spike seen in figure 3 is also present in per capita contributions, indicating that farmers contributed substantially more per person to members of the appropriations committee when the legislator was local.

Results

Estimation results are presented in tables 8 and 9. For each estimation, the dependent variable for contributions, the received subsidies variable and the variable for the total number of subsidy receiving farmers residing within the congressional district are rescaled in terms of thousands.

Model one considers only local contributions. In this case, as expected, the amount of subsidies received by the donating farmers and the number of farmers within the congressional district have a positive and statistically significant impact on campaign contributions. Farmers contribute significantly more to Democrats, while the impact of liberalism interacted with Democratic Party membership is negative and statistically significant, implying a propensity to contribute to moderates.

Agricultural committee membership likewise has a positive and statistically significant impact on contributions, as does appropriations committee membership. However, the impact of seniority on these committees is not statistically different from zero. The effect of chamber seniority is negative and statistically significant, as is the percentage of the popular vote received in the prior election cycle. This suggests a propensity to contribute more to legislators in more competitive congressional races, in keeping with Gimpel et al (8). It is probable that legislators are more likely to serve on the House Committee on Agriculture if they represent heavily agricultural districts. If this is the case, then the statistical significance of the agricultural committee indicator is likely driven by the fact that the agricultural committee members are local, rather than strategic contribution behavior intended to foster influence over agricultural programs.

Model two widens the scope to all contributions made to legislators within the same state as the campaign contributors. Farming population and received subsidies maintain the same signs and statistical significance as in model one. The only change in the partisanship variables is that the measure of ideology, expressed as liberalism on a percentage scale, is significantly negative, indicating a propensity against contributing to liberals. Again, this suggests a propensity to contribute to more moderate democrats.

When considering contributions within the same state as the donor, farmers contribute substantially more to legislations representing their district than out of district contributions within the same state. Also, as expected, the interactions of the local indicator and the committee membership variables are positive and statistically significant. These results also suggest a propensity to contribute less to the more senior members of the agricultural and appropriations committees.

Of primary interest is whether or not farmers prefer contributing to members of the relevant committees when the legislators represent different congressional districts. These results suggest that farmers do choose to contribute more to non-local legislations within the same state if they are members of the agricultural or appropriations committees. This increased propensity is evidence in support of the political investment hypothesis.

Model three shows the naive case, estimating the model over the entire dataset without controlling for the geographic relationship between legislators and campaign donors. The unit of observation is the quantity of contributions from one district to a legislator. All districts and incumbent legislators are included in the sample. The partisanship variables have similar coefficients to the prior models, as does received subsidies. Interestingly, the number of subsidy receiving farmers has a negative and statistically significant coefficient.

These results suggest that, when failing to control for geographic relationships, that membership on both the agricultural and appropriations committee membership has a positive and statistically significant impact on campaign contributions. However, seniority on these committees does not have a significant effect.

However, controlling for geographic relationships results in a stark contrast in results. Model four is the primary focus of this paper, estimating the impact of geographic relationships on campaign contributions by farmers from each congressional district to each incumbent legislator. As with models one and two, both subsidies received and the farming population of the district have positive and statistically significant impacts on how much farmers contribute to House campaigns. Likewise, the coefficients on the partisanship variables maintain the same interpretation as before.

As in model two, the indicator for a local election is highly significant, as are the interactions of this indicator with the committee variables. These results suggest a high propensity to contribute to local legislators in general, and an even higher propensity to contribute to them if they are on the agricultural or appropriations committees. Both committee seniority variables have a negative and significant impact on the propensity to contribute. Likewise, there is also a strong propensity to contribute to out of district legislators from the same state as the donor. These results also indicate that legislators in the same state as the donor who are on the relevant committees receive significantly more in contributions than legislators within the same state who are not on these committees. As with local contributions, the impact of seniority on this contribution decision is negative and statistically significant.

After controlling for geographic relationships, the coefficients on the committee variables are substantially different from the prior models. Agricultural and appropriations committee membership lose statistical significance once geographic relationships are controlled for. This suggests that farmers are not significantly contributing to agricultural and appropriations committee members from different states. However, the coefficients on the committee tenure and chamber tenure variables are positive and statistically significant. This suggests different contribution strategies based upon aggregation. The farmers, while not contributing significantly to out of state legislators, do appear to contribute significantly more to the more senior members of these committees if they are in a different state. If farmers are strategically contributing to influence agricultural legislation and funding, then we would expect to see positive and significant coefficients for these variables.

The remaining models focus on non-local contributions. If farmers use different contribution strategies based upon geography, estimating these decisions separately might be a superior alternative to the joint model. Model five looks at out of district contributions only, controlling for whether the legislator represents the same state as the donor. As can be seen, similar to model four, the coefficients for committee membership are not statistically significant. And also similarly to model four, the committee seniority on the agricultural committee has a positive and highly significant impct on the contribution decision of the farmers. Likewise, chamber seniority also has a positive and statistically significant impact on contributions.

Also, like model four, there is a significant propensity to contribute to legislators in the same state, even when the within district contributions are dropped from the model. Likewise, committee membership plays a significant role in determining contributions to legislators in the same state as the farmers, while committee seniority has a significant and negative effect on these contributions. In this case, the number of farmers residing in the donor's district does not have a significant impact on the amount of contributions being made.

Model six considers only out of state contributions. Partisanship variables maintain the same signs and levels of significance as previous models, suggesting that the propensity to contribute to members of the Democratic Party are not driven by local legislators being predominantly Democrats. Interestingly, districts with more farmers seem to contribute less to out of state legislators. This result is at first surprising. However, it is well known that farmers are not a cohesive political block. It is known that the amount of favors received by the government is dependent on what crop is being farmed. Gardner (1987) finds that farmers that are more geographically concentrated receive more government support (6). This is likely due to reduced transactions costs in organizing politically. If this is the case, we might expect that a small number of farmers concentrated in certain regions will contribute more than farmers in general, which would cause this farming population coefficient to be negative and statistically significant. Further research is needed to explore this issue.

In model six, all of the committee membership and seniority variables lose statistical significance, which is somewhat surprising given the results of model five.

In every model presented here, the coefficient for the indicator denoting a Congress in which a farm bill vote takes place is negative and highly statistically significant. If the political investment hypothesis is true, this coefficient is expected to be positive and statistically significant. If the alternative hypothesis that farmers simply contribute to local elections or other legislators whom they agree with on a partisan basis, we would expect this coefficient to be zero. Based on figure 1, it appears that contributions peak in the Congress prior to the farm bill vote. In other words, contribution levels increase during the election cycle in which the legislators who will vote for the farm bill are running, rather than aiding their reelection campaigns while the farm bill is being drafted and passed. It is also true that contributions increase in the Congress following the farm bill vote. However, it is unlikely that this is due to a reward mechanism for the vote, because each farm bill vote coinciding with this time series occurs in the second year of the congress, prior to campaign season. If legislators were being rewarded for their work on the farm bill, we would expect for these contributions to occur after the vote, but during the same Congress as the vote to aid in the upcoming election.

Now the analysis shifts to models seven through twelve. Again, these models are the same as the prior ones, except that the dependent variable and the received subsidies variable are expressed in per capita terms rather than in terms of levels. These models should help us better understand the motivations behind the contribution decision, rather than the flow of money itself. For the coefficients on received subsidies, partisanship variables, chamber seniority, vote shares, geographic indicators and the farm bill vote indicator, the signs are the same as in models one through six. The committee membership and seniority variables differ substantially.

In model seven, which examines only local per capita contributions, agricultural committee membership and seniority are not statistically different from zero. These results imply that the average contribution made by a farmer does not depend on whether or not the local legislator is on the House Committee on Agriculture. However, contributions to the local legislator do appear to increase if the legislator is a member of the House Committee on Appropriations. This suggests that the statistical significance of the agricultural committee membership variable in model one is driven by the number of farmers making contributions, rather than by their incentives.

Model eight analyzes contributions per capita made within the same state as the donors. Here, the impacts of the agricultural and appropriations committee variables are positive and highly statistically significant. However, the impact of local agricultural committee membership is negative. These variables are constructed such that the base variables values are not changed when the local indicator equals one. Taking this into account, these results imply, as in model one, that agricultural committee membership is not a significant driver of per capita contributions at the local level, while membership has a significant and positive effect on contributions made to other legislators representing the same state. Results for model nine, where geographic relationships are not controlled for, imply the same conclusions as model three.

Model ten is the joint model in terms of per capita contributions and subsidies. For out of state contributions, committee membership coefficients are not statistically different from zero. Like the case in model four, agricultural committee seniority has a positive and statistically significant impact on contribution behavior towards out of state legislators, supporting the political investment hypothesis. Likewise, the coefficients on the same state indicator and the interaction of this indicator with committee membership and seniority variables have the same implications as in model four. Legislators receive on average more contributions if they represent the same state as the donor and are on the agricultural or appropriations committees. However, increased tenure on these committees reduces contributions. At the local level, results differ. Agricultural committee membership has a negative and weakly significant impact on contributions per capita, while appropriations committee membership has a positive and statistically significant impact, with the same interpretation as before.

Model eleven looks at out of district contributions, controlling for when a legislator represents the same state as the donor. The implications from this model are the same as for model five. Model twelve looks at out of state per capita contributions. There is one major difference in results between models twelve and six. In model twelve, the effect of agricultural committee seniority has a positive and statistically significant effect, suggesting that agricultural committee seniority does increase the average level of contributions made by farmers to legislators out of state.

Conclusion

These results suggest the existence of different strategies based in part on the geographic relationship between politically active farmers and legislators. Strong evidence suggests that farmers contribute substantially to the incumbent legislators who represent their district. Evidence also suggests that these contributions depend on committee membership and seniority depending upon geography. The difference in results between the first set of models and the second suggest that agricultural committee membership is endogenous. When looking at total contribution levels, agricultural committee members receive substantially more in contributions from local farmers than non members. However, when looking at contributions per capita, there is no statistically significant difference in local contribution behavior. This suggests that there are simply more politically active farmers in districts represented by agricultural committee members, and that the individual farmers don't increase their personal contributions amounts when their local representative is on the agricultural committee. However, we do see that appropriations committee members receive more money from local farmers both in total and per capita. Due to the importance of the appropriations committee to virtually all interests, there is no reason to believe they would disproportionately represent farming districts, suggesting investment motivations pertaining to campaign contributions directed towards the legislators with power over funding. At the same time, the negative coefficients on the chamber seniority and vote share variables suggest that farmers are more likely to contribute, both in total and per capita, to more competitive local races, in line with the work by Gimpel et al (8).

Results also suggest that, while the majority of campaign funding is flowing to local legislators, the allocation of the remainder of this funding by farmers possesses characteristics favoring the political investment hypothesis. For example, when it comes to out of district contributions made to legislators in the same state as the donor, agricultural and appropriations committee membership has a positive and significant effect on contributions, suggesting that relevant committee assignments matter both in terms of total contribution levels and in the individual contribution decision. However, seniority on these committees appear to reduce contributions made to legislators within the same state, again suggesting a propensity to contribute to more competitive congressional races at the state level. Thus, it appears that farmers follow different contribution strategies towards local legislators versus non local legislators within the same state.

Results for out of state contributions follow a different pattern than local and within state contributions. Here we see that, both in the comprehensive models and the separate estimations, that for out of state contributions, agricultural committee seniority has a positive effect on contribution amounts, as does chamber seniority. This implies that factors relevant to political investment behavior determine the contributions made out of state, both in total and per capita. Again, it is important to remember that out of state contributions represent a small minority of total campaign contribution expenditures made by farmers. The models that fail to take geographic relationships into account demonstrate the necessity of doing so. When these relationships are ignored, results indicate that farmers, both in total and per capita, strongly prefer to contribute to members of the House Committee on Agriculture and the House Committee on Appropriations, which does not appear to be true across the board. Further, in all specifications, the subsidies received by the politically active farmers, both in total and per capita, increase their propensity to contribute, suggesting that farm subsidy programs do play a role in campaign contribution behavior.

Another interesting result comes from the per capita contribution models. While the total number of subsidy receiving farmers has a positive impact on local and within state per capita contributions, it has a negative impact on out of state contributions. It is likely that farmers coordinate their activities in local and within state elections, with the aid of political action committees. However, the negative relationship between farming population and per capita contributions to out of state legislators suggests a free rider problem with regard to these contributions.

These results provide evidence of the effects of geographic relationships on the propensity of individual citizens with an identifiable special interest to contribute to federal campaigns. Evidence in support of the political investment theory is mixed. However, these results suggest that in some ways, both the political investment hypothesis and the political consumption hypothesis are partially correct. It appears that farmers have a strong preference for contributing to local incumbent legislators, and that these contributions occur regardless of agricultural committee membership on a per capita basis. However, contributions out of district appear to be driven by factors in line with the political investment hypothesis, suggesting that the behavior is highly dependent on relative geography. Further research should focus on taking into account spatial correlation among neighboring districts.

Appendix

Table 1. Summary statistics for model variables. All monetary variables are expressed as 2012 dollars.

Variable	N	Mean	Std. Dev.	Min	Max	Sum
Contributions	18644	$4,370.04	$14,794.76	$7.04	$1,130,328.00	$81,475,109.08
Contributions (Per Cap.)	18644	$1,156.10	$1,596.88	$7.04	$53,321.52	
Local Contributions	2759	$16,316.67	$34,154.95	$56.96	$1,130,328.00	$45,017,698.11
Local Don. (Per Cap.)	2759	$1,110.39	$953.52	$56.96	$25,689.27	
Samestate Contributions	8499	$3,056.45	$6,238.28	$21.45	$229,064.47	$25,976,741.63
Samestate Don. (Per Cap.)	8499	$1,191.31	$1,394.34	$21.45	$53,321.52	
Non-Local Contributions	7386	$1,418.99	$2,846.27	$7.04	$95,489.83	$10,480,669.34
Non-Local Don. (Per Cap.)	7386	$1,132.65	$1,964.15	$7.04	$53,300.70	
Received Subsidies	17676	$21,035.53	$27,559.91	-$17,138.81	$428,875.43	
Farming Population	4320	3965.95	6996.02	1	56110	
Democrat	4136	0.49	0.5	0	1	
Liberal	4136	58.15	23.83	0	97.77	
Chamber Seniority	4136	5.58	4.23	1	30	
Vote Percentage	4013	65.15	11.47	28.68	100	
Ag. Committee	4136	0.11	0.32	0	1	
Ag. Com Seniority	471	3.12	2.52	1	16	
App. Committee	4136	0.14	0.35	0	1	
App. Com Seniority	588	5.53	4.39	1	21	

Table 2. Correlation coefficients for all contributions, committee assignments and other model variables.

Variable	Don	Sub	Ag com.	Ag com. Sen.	App com.	App com. Sen.	Chamber Sen.	Vote pct.
Contributions	1	0.22	0.01	0.01	0	0	-0.01	-0.01
Subsidies	0.22	1	0.02	0.03	0	0	-0.01	-0.01
Ag com.	0.01	0.02	1	0.76	-0.14	-0.11	-0.19	-0.1
Ag com. Sen.	0.01	0.03	0.76	1	-0.11	-0.08	-0.02	-0.02
App com.	0	0	-0.14	-0.11	1	0.76	0.17	0.09
App com. Sen.	0	0	-0.11	-0.08	0.76	1	0.36	0.07
Chamber sen.	-0.01	-0.01	-0.19	-0.02	0.17	0.36	1	0.22
Vote pct.	-0.01	-0.01	-0.1	-0.02	0.09	0.07	0.22	1

Table 3. Correlation coefficients for all contributions, along with geographic indicator variables.

Variable	Don.	Rec. Sub.	Local	NL-SS	DS	Farm Pop.
Contributions	1	0.22	0.32	0.04	-0.11	0.02
Received Subsidies	0.22	1	0.17	0.12	-0.16	0.04
Local	0.32	0.17	1	-0.01	-0.22	0
Non-Local Same State	0.04	0.12	-0.01	1	-0.97	-0.05
Different State	-0.11	-0.16	-0.22	-0.97	1	0.05
Farming Population	0.02	0.04	0	-0.05	0.05	1

Table 4. Correlation coefficients for all contributions, with committee assignments interacted with an indicator for local races.

Variable	Don	Sub	L-ag com.	L-ag com. sen.	L-app com.	L-app com. Sen.
Contributions	1	0.22	0.31	0.23	0.17	0.11
Subsidy	0.2	1	0.15	0.12	0.06	0.03
Local ag com.	0.3	0.15	1	0.78	0.01	0
Local ag com. sen.	0.2	0.12	0.78	1	0	0
Local app com.	0.2	0.06	0.01	0	1	0.78
Local app com. Sen.	0.1	0.03	0	0	0.78	1

Table 5. Correlation coefficients for all contributions, with committee assignments interacted with an indicator for non-local races within the same state as the donor.

Variable	Don	Sub	SS ag com	SS ag com sen	SS app com	SS app com sen
Contributions	1	0.22	0.11	0.07	0.05	0.03
Subsidy	0.22	1	0.14	0.1	0.06	0.04
Samestate Ag. com. sen.	0.11	0.14	1	0.77	0	0
Samestate Ag. com. sen.	0.07	0.1	0.77	1	0	0
Samestate App. com. sen.	0.05	0.06	0	0	1	0.78
Samestate App. com. sen.	0.03	0.04	0	0	0.78	1

Table 6. Correlation coefficients for local contributions, committee assignments and other model variables.

Variable	Don	Sub	Ag com.	Ag com. Sen.	App com.	App com. Sen.	Chamber Sen.	Vote pct.
Contributions	1	0.24	0.24	0.17	0.05	0.01	-0.13	-0.07
Subsidies	0.24	1	0.27	0.23	-0.02	-0.05	-0.1	-0.04
Ag. com.	0.24	0.27	1	0.76	-0.14	-0.11	-0.19	-0.1
Ag. com. Sen.	0.17	0.23	0.76	1	-0.11	-0.08	-0.01	-0.02
App. com.	0.05	-0.02	-0.14	-0.11	1	0.76	0.18	0.09
App. com. Sen.	0.01	-0.05	-0.11	-0.08	0.76	1	0.37	0.07
Chamber sen.	-0.13	-0.1	-0.19	-0.01	0.18	0.37	1	0.23
Vote pct.	-0.07	-0.04	-0.1	-0.02	0.09	0.07	0.23	1

Table 7. Correlation coefficients for contributions made to all legislators representing the same state as the donor, committee assignments and other model variables.

Variable	Don	Sub	Ag com.	Ag com. Sen.	App com.	App com. Sen.	Chamber Sen.	Vote pct.
Contributions	1	0.23	0.08	0.05	0.01	0	-0.05	-0.02
Subsidies	0.23	1	0.12	0.09	0.01	-0.01	-0.06	-0.02
Ag. com.	0.08	0.12	1	0.76	-0.12	-0.1	-0.17	-0.1
Ag. com. Sen.	0.05	0.09	0.76	1	-0.09	-0.07	0.01	-0.05
App. com.	0.01	0.01	-0.12	-0.09	1	0.76	0.15	0.08
App. com. Sen.	0	-0.01	-0.1	-0.07	0.76	1	0.32	0.06
Chamber sen.	-0.05	-0.06	-0.17	0.01	0.15	0.32	1	0.19
Vote pct.	-0.02	-0.02	-0.1	-0.05	0.08	0.06	0.19	1

Table 8. Regression results for models one through six. Regression coefficients for the vote equation. *, and *** denote statistical significance at the 10%,5% and 1% level, respectively.**

Model	I		II		III		IV		V		VI	
Data	Local		Samestate		All		All		Non-Local		Different State	
Variable	Estimate	Std. Error	Estimate	Std. Error	Estimate	Std. Error	Estimate	Std. Error	Estimate	Std. Error	Estimate	Std. Error
Intercept	46.89693	(15.751)***	3.407905	(3.362)	-21.1547	(1.614)***	-10.825	(1.479)***	-4.31228	(0.574)***	-2.824594	(0.465)***
Received Subsidies	0.300292	(0.024)***	0.395302	(0.006)***	0.874091	(0.006)***	0.523	(0.004)***	0.237479	(0.002)***	0.221153	(0.003)***
Farmer Pop.	1.142271	(0.106)***	0.292351	(0.023)***	-0.04844	(0.010)***	0.034	(0.009)***	-0.00039	(0.003)	-0.019929	(0.003)***
Democrat	40.70932	(11.859)***	10.05294	(2.516)***	12.48803	(1.243)***	9.870	(1.185)***	3.368564	(0.458)***	1.508877	(0.379)***
Liberal	-0.12084	(0.090)	-0.07324	(0.020)***	-0.11732	(0.009)***	-0.100	(0.009)***	-0.03948	(0.003)***	-0.027027	(0.003)***
Dem/Lib	-0.60631	(0.168)***	-0.13293	(0.036)***	-0.12737	(0.018)***	-0.103	(0.017)***	-0.03246	(0.006)***	-0.01098	(0.005)**
Ag. Com.	10.71149	(2.772)***	2.539551	(0.590)***	1.549813	(0.277)***	-0.257	(0.316)	-0.02859	(0.121)	0.139741	(0.085)
Ag. Com. Sen.	-1.0533	(0.651)	0.129045	(0.129)	-0.03456	(0.065)	0.311	(0.067)***	0.093853	(0.026)***	-0.00167	(0.019)
App. Com.	10.89602	(2.515)***	1.020464	(0.583)*	0.877079	(0.276)***	-0.420	(0.330)	-0.1294	(0.125)	-0.031724	(0.086)
App. Com. Sen.	-0.08307	(0.376)	0.098315	(0.088)	0.004919	(0.040)	0.078	(0.044)*	0.022132	(0.017)	-0.005843	(0.012)
Chamber Sen.	-0.83842	(0.172)***	-0.24475	(0.036)***	0.055032	(0.018)***	0.113	(0.016)***	0.051045	(0.006)***	0.062697	(0.005)***
Vote Share	-0.89886	(0.439)***	-0.51003	(0.094)***	-0.44331	(0.045)***	-0.625	(0.042)***	-0.22989	(0.016)***	-0.156457	(0.014)***
Sq. Vote Share	0.004306	(0.003)	0.002683	(0.001)***	0.002702	(0.000)***	0.004	(0.000)***	0.001411	(0.000)***	0.000955	(0.000)***
Local	.	.	23.47136	(0.421)***	.	.	19.740	(0.331)***	.	.	.	.
L-Ag. Com.	.	.	11.53152	(1.521)***	.	.	13.652	(1.228)***	.	.	.	.
L-Ag. Com. Sen.	.	.	-0.88747	(0.365)**	.	.	-0.973	(0.297)***	.	.	.	.
L-App. Com.	.	.	10.30273	(1.460)***	.	.	10.728	(1.175)***	.	.	.	.
L-App. Com. Sen.	.	.	-0.57946	(0.206)***	.	.	-0.566	(0.166)***	.	.	.	.
Samestate	.	.	.	.	.	.	19.471	(0.188)***	7.801955	(0.075)***	.	.
SS-Ag. Com.	.	.	.	.	.	.	3.952	(0.550)***	1.806333	(0.206)***	.	.
SS-Ag.Com. Sen.	.	.	.	.	.	.	-0.688	(0.122)***	-0.24292	(0.046)***	.	.
SS-App. Com.	.	.	.	.	.	.	1.925	(0.567)***	0.892292	(0.212)***	.	.
SS-App. Com. Sen.	.	.	.	.	.	.	-0.226	(0.079)***	-0.11313	(0.030)***	.	.
Farmbill Cycle	-5.05916	(1.163)***	-1.38782	(0.246)***	-0.71213	(0.126)***	-1.033	(0.119)***	-0.35383	(0.046)***	-0.247025	(0.038)***
Appalachian	18.80636	(2.209)***	7.18308	(0.471)***	2.439376	(0.208)***	2.857	(0.192)***	0.924641	(0.075)***	0.505038	(0.059)***
North East	-16.9468	(2.198)***	-13.2117	(0.520)***	-8.63585	(0.256)***	-8.503	(0.250)***	-3.30979	(0.097)***	-1.797973	(0.077)***
South East	-0.14164	(2.308)	-2.04101	(0.476)***	-2.58828	(0.234)***	-2.281	(0.221)***	-0.95497	(0.085)***	-0.72828	(0.070)***
Delta	19.1842	(3.368)***	12.22928	(0.859)***	0.039786	(0.314)	2.102	(0.280)***	0.7279	(0.108)***	0.162658	(0.085)*
North Plains	-6.08454	(4.151)	8.611294	(1.261)***	1.370244	(0.421)***	2.332	(0.371)***	0.942565	(0.146)***	0.630857	(0.112)***
South Plains	6.001659	(2.383)**	-2.24467	(0.436)***	-0.30766	(0.230)	-1.558	(0.216)***	-0.77698	(0.084)***	-0.418031	(0.071)***
Mountain	-7.54614	(2.719)***	2.049981	(0.721)***	-3.60936	(0.307)***	-2.041	(0.290)***	-0.67591	(0.111)***	-0.904886	(0.092)***
Lakes	-5.17525	(2.526)**	-0.45696	(0.557)	-2.81268	(0.272)***	-2.898	(0.264)***	-1.09021	(0.102)***	-1.01593	(0.089)***
Pacific	-4.37571	(2.203)**	-10.4417	(0.433)***	-5.4532	(0.242)***	-7.833	(0.233)***	-3.22095	(0.091)***	-1.521578	(0.079)***
Sigma	32.32744	(0.453)***	18.07257	(0.127)***	18.2892	(0.108)***	14.624	(0.081)***	5.586641	(0.037)***	3.700584	(0.040)***
N	4036		76538		1746240		1746240		1742204		1669702	
Fit	0.221		0.178		0.006		0.113		0.038		0.013	

Table 9. Regression results for models seven through twelve. Regression coefficients for the vote equation. *, and *** denote statistical significance at the 10%,5% and 1% level, respectively.**

Model	VII		VIII		IX		X		XI		XII	
Data	Local		Samestate		All		All		Non-Local		Different State	
Variable	Estimate	Std. Error	Estimate	Std. Error	Estimate	Std. Error	Estimate	Std. Error	Estimate	Std. Error	Estimate	Std. Error
Intercept	2.658724	(0.581)***	0.37771	(0.368)	-3.63579	(0.253)***	-2.038	(0.245)***	-2.21591	(0.272)***	-2.323	(0.380)***
Rec. Sub. (Per Cap.)	0.021017	(0.002)***	0.069159	(0.001)***	0.171692	(0.001)***	0.123	(0.001)***	0.135952	(0.001)***	0.191019	(0.002)***
Farmer Pop.	0.005742	(0.004)	0.025123	(0.002)***	-0.00435	(0.002)***	0.002	(0.001)	-0.00041	(0.002)	-0.013	(0.002)***
Democrat	2.029602	(0.422)***	1.802829	(0.269)***	2.209737	(0.193)***	1.783	(0.191)***	1.785587	(0.214)***	1.263	(0.309)***
Liberal	-0.00976	(0.003)***	-0.00787	(0.002)***	-0.01915	(0.001)***	-0.017	(0.001)***	-0.01819	(0.002)***	-0.022	(0.002)***
Dem/Lib	-0.02681	(0.006)***	-0.02349	(0.004)***	-0.02319	(0.003)***	-0.019	(0.003)***	-0.01811	(0.003)***	-0.010	(0.004)**
Ag. Com.	0.07563	(0.100)	0.453534	(0.063)***	0.262458	(0.043)***	-0.044	(0.051)	-0.02906	(0.056)	0.089	(0.068)
Ag. Com. Sen.	-0.00735	(0.024)	0.003785	(0.014)	0.02085	(0.010)**	0.058	(0.011)***	0.059154	(0.012)***	0.037	(0.014)***
App. Com.	0.309883	(0.090)***	0.201907	(0.062)***	0.153814	(0.043)***	-0.037	(0.053)	-0.03688	(0.058)	0.040	(0.070)
App. Com. Sen.	0.009937	(0.013)	0.003132	(0.009)	-0.00183	(0.006)	0.011	(0.007)	0.009592	(0.008)	-0.009	(0.009)
Chamber Sen.	-0.0363	(0.006)***	-0.02699	(0.004)***	0.008453	(0.003)***	0.019	(0.003)***	0.02383	(0.003)***	0.051	(0.004)***
Vote Share	-0.03058	(0.016)*	-0.04674	(0.010)***	-0.06313	(0.007)***	-0.095	(0.007)***	-0.1041	(0.008)***	-0.132	(0.011)***
Sq. Vote Share	0.000146	(0.000)***	0.000231	(0.000)***	0.000381	(0.000)***	0.001	(0.000)***	0.000638	(0.000)***	0.001	(0.000)***
Local	.	.	2.478779	(0.048)***	.	.	3.028	(0.057)***	.	.	.	.
L-Ag. Com.	.	.	-0.47467	(0.171)***	.	.	-0.346	(0.205)*	.	.	.	.
L-Ag. Com. Sen.	.	.	-0.01638	(0.041)	.	.	0.012	(0.050)	.	.	.	.
L-App. Com.	.	.	0.246626	(0.164)	.	.	0.429	(0.198)**	.	.	.	.
L-App. Com. Sen.	.	.	-0.01437	(0.023)	.	.	-0.033	(0.028)***	.	.	.	.
Samestate	.	.	.	.	.	.	3.481	(0.034)***	3.742833	(0.038)***	.	.
SS-Ag. Com.	.	.	.	.	.	.	0.913	(0.088)***	0.980467	(0.096)***	.	.
SS-Ag.Com. Sen.	.	.	.	.	.	.	-0.124	(0.019)***	-0.13265	(0.021)***	.	.
SS-App. Com.	.	.	.	.	.	.	0.379	(0.091)***	0.418876	(0.099)***	.	.
SS-App. Com. Sen.	.	.	.	.	.	.	-0.042	(0.013)***	-0.0463	(0.014)***	.	.
Farmbill Cycle	-0.12145	(0.041)***	-0.14926	(0.026)***	-0.14194	(0.020)***	-0.174	(0.019)***	-0.18493	(0.022)***	-0.222	(0.031)***
Appalachian	0.357405	(0.080)***	0.609682	(0.052)***	0.328133	(0.033)***	0.405	(0.032)***	0.432569	(0.035)***	0.432	(0.048)***
North East	-0.85998	(0.078)***	-1.59411	(0.056)***	-1.44829	(0.041)***	-1.485	(0.041)***	-1.58865	(0.046)***	-1.461	(0.063)***
South East	-0.12654	(0.083)	-0.25253	(0.051)***	-0.36339	(0.036)***	-0.380	(0.036)***	-0.4326	(0.040)***	-0.563	(0.057)***
Delta	0.213123	(0.123)*	1.195403	(0.095)***	0.005659	(0.049)	0.316	(0.046)***	0.334757	(0.051)***	0.170	(0.069)**
North Plains	0.110985	(0.152)	0.702455	(0.141)***	0.072883	(0.067)	0.343	(0.062)***	0.413812	(0.069)***	0.494	(0.092)***
South Plains	0.146162	(0.086)*	-0.29427	(0.047)***	0.054013	(0.035)	-0.275	(0.035)***	-0.33025	(0.039)***	-0.260	(0.058)***
Mountain	-0.27301	(0.098)***	0.506622	(0.078)***	-0.5278	(0.047)***	-0.301	(0.046)***	-0.31141	(0.052)***	-0.719	(0.076)***
Lakes	-0.19384	(0.091)***	-0.1168	(0.060)*	-0.49194	(0.043)***	-0.515	(0.043)***	-0.55055	(0.048)***	-0.841	(0.073)***
Pacific	-0.31657	(0.078)**	-1.2769	(0.046)***	-0.73872	(0.037)***	-1.330	(0.038)***	-1.47546	(0.042)***	-1.141	(0.064)***
Sigma	1.186443	(0.018)***	2.02821	(0.016)***	2.978994	(0.021)***	2.448	(0.016)***	2.65347	(0.019)***	3.050	(0.034)***
N	4036		76538		1746240		1746240		1742204		1669702	
Fit	0.131		0.037		0.010		0.020		0.014		0.009	

Table 10. Marginal effects for each model. Marginal effects are calculated as the average of partial effects.

Model	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII
Data	Local	Samestate	All	All	Non-Local	Different State	Local	Samestate	All	All	Non-Local	Different State
Variable	Effect	Effect	Effect	Effect	Effect	Effect	Effect	Effect	Effect	Effect	Effect	Effect
Received Subsidies	0.09108	0.01966	0.00175	0.00088	0.00029	0.00010	.	.	.	.	.	.
Rec. Sub. (Per Cap.)	.	.	.	.	.	.	0.00880	0.00441	0.00175	0.00021	0.00017	0.00007
Farmer Pop.	0.34646	0.01454	-0.00010	0.00006	0.00000	-0.00001	0.00241	0.00160	-0.00010	0.00000	0.00000	0.00000
Democrat	14.71692	0.59431	0.04341	0.02293	0.00555	0.00079	0.93893	0.15925	0.04341	0.00451	0.00325	0.00061
Liberal	-0.03665	-0.00364	-0.00024	-0.00017	-0.00005	-0.00001	-0.00409	-0.00050	-0.00024	-0.00003	-0.00002	-0.00001
Dem/Lib	-0.18390	-0.00661	-0.00026	-0.00017	-0.00004	0.00000	-0.01123	-0.00150	-0.00026	-0.00003	-0.00002	0.00000
Ag. Com.	3.61548	0.13553	0.01016	-0.00043	-0.00003	0.00006	0.03227	0.03248	0.01016	-0.00007	-0.00004	0.00004
Ag. Com. Sen.	-0.31948	0.00642	-0.00007	0.00052	0.00011	0.00000	-0.00308	0.00024	-0.00007	0.00010	0.00007	0.00001
App. Com.	3.67072	0.05188	0.00183	-0.00070	-0.00015	-0.00001	0.13931	0.01355	0.00183	-0.00006	-0.00004	0.00002
App. Com. Sen.	-0.02519	0.00489	0.00001	0.00013	0.00003	0.00000	0.00416	0.00020	0.00001	0.00002	0.00001	0.00000
Chamber Sen.	-0.25430	-0.01217	0.00011	0.00019	0.00006	0.00003	-0.01520	-0.00172	0.00011	0.00003	0.00003	0.00002
Vote Share	-0.27263	-0.02536	-0.00089	-0.00105	-0.00028	-0.00007	-0.01281	-0.00298	-0.00089	-0.00016	-0.00013	-0.00005
Sq. Vote Share	0.00131	0.00013	0.00001	0.00001	0.00000	0.00000	0.00006	0.00001	0.00001	0.00000	0.00000	0.00000
Local	.	2.50013	.	0.11230	.	.	.	0.33446	.	0.01687	.	.
L-Ag. Com.	.	0.88074	.	0.05227	.	.	.	-0.02592	.	-0.00053	.	.
L-Ag. Com. Sen.	.	-0.04413	.	-0.00163	.	.	.	-0.00105	.	0.00002	.	.
L-App. Com.	.	0.67528	.	0.02756	.	.	.	0.01675	.	0.00082	.	.
L-App. Com. Sen.	.	-0.02881	.	-0.00095	.	.	.	-0.00092	.	-0.00006	.	.
Samestate	.	.	.	0.06922	0.02603	.	.	.	.	0.01513	0.01424	.
SS-Ag. Com.	.	.	.	0.00790	0.00273	.	.	.	.	0.00203	0.00160	.
SS-Ag.Com. Sen.	.	.	.	-0.00116	-0.00029	.	.	.	.	-0.00021	-0.00016	.
SS-App. Com.	.	.	.	0.00346	0.00121	.	.	.	.	0.00072	0.00058	.
SS-App. Com. Sen.	.	.	.	-0.00038	-0.00014	.	.	.	.	-0.00007	-0.00006	.
Farmbill Cycle	-1.51361	-0.06831	-0.00142	-0.00171	-0.00042	-0.00011	-0.05047	-0.00942	-0.00142	-0.00029	-0.00022	-0.00009
Appalachian	6.89207	0.44138	0.00542	0.00533	0.00124	0.00024	0.16360	0.04618	0.00542	0.00076	0.00059	0.00018
North East	-4.37480	-0.48537	-0.01262	-0.01116	-0.00303	-0.00061	-0.29924	-0.07165	-0.01262	-0.00189	-0.00145	-0.00045
South East	-0.04290	-0.09600	-0.00467	-0.00353	-0.00105	-0.00028	-0.05132	-0.01509	-0.00467	-0.00059	-0.00048	-0.00020
Delta	7.33560	0.95450	0.00008	0.00389	0.00097	0.00007	0.09514	0.11521	0.00008	0.00059	0.00045	0.00007
North Plains	-1.70386	0.58985	0.00297	0.00437	0.00130	0.00031	0.04810	0.05728	0.00297	0.00065	0.00058	0.00022
South Plains	1.94193	-0.10585	-0.00061	-0.00249	-0.00088	-0.00017	0.06362	-0.01757	-0.00061	-0.00044	-0.00038	-0.00010
Montain	-2.09201	0.10929	-0.00609	-0.00314	-0.00075	-0.00034	-0.10560	0.03820	-0.00609	-0.00047	-0.00035	-0.00024
Lakes	-1.46108	-0.02235	-0.00482	-0.00456	-0.00114	-0.00037	-0.07608	-0.00715	-0.00482	-0.00080	-0.00057	-0.00027
Pacific	-1.27160	-0.42393	-0.00891	-0.01056	-0.00309	-0.00054	-0.12323	-0.06568	-0.00891	-0.00178	-0.00143	-0.00037

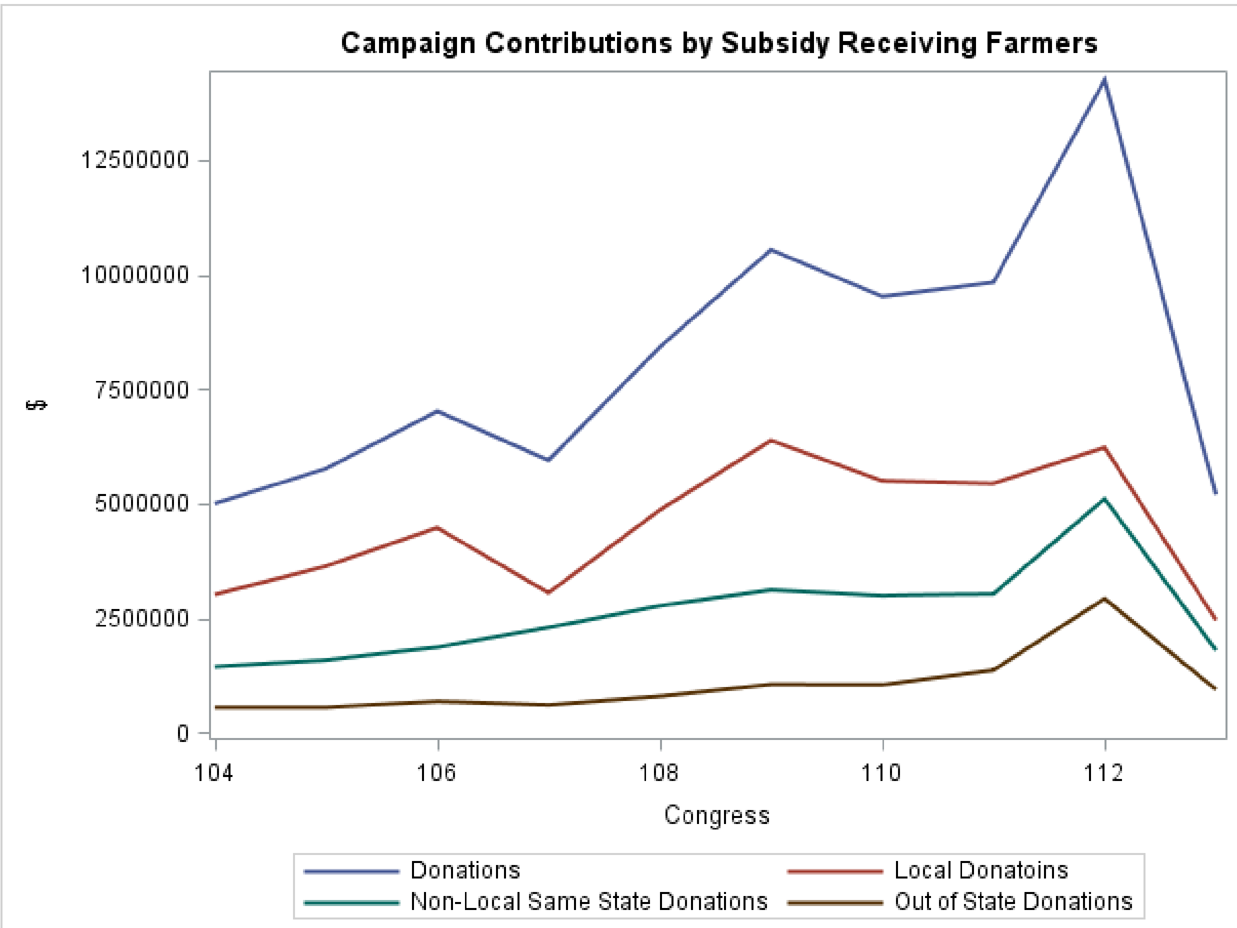

Figure 1. Graph of campaign contributions made by farmers by geography over time.

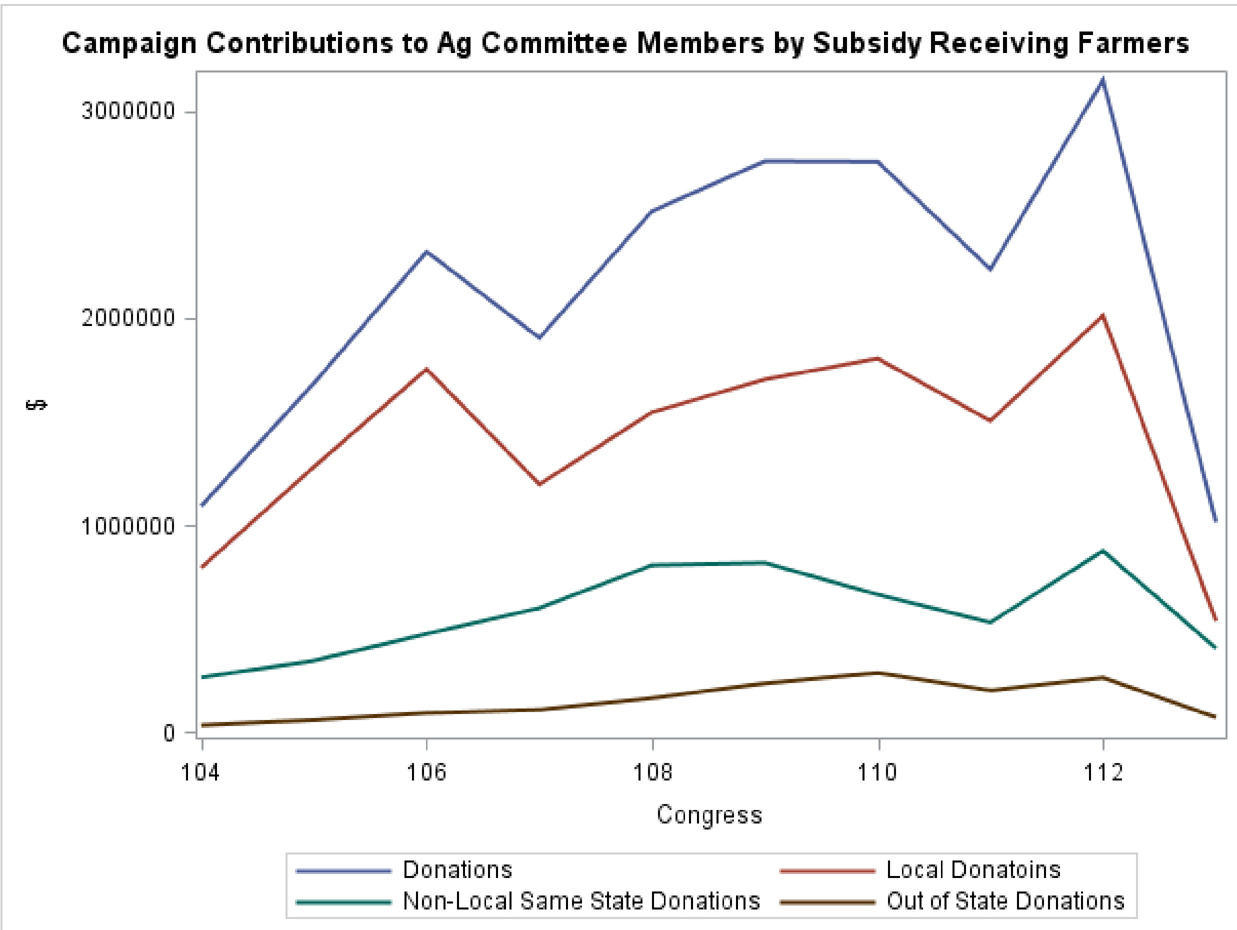

Figure 2. Graph of campaign contributions made by farmers to members of the House Committee on Agriculture by geography over time.

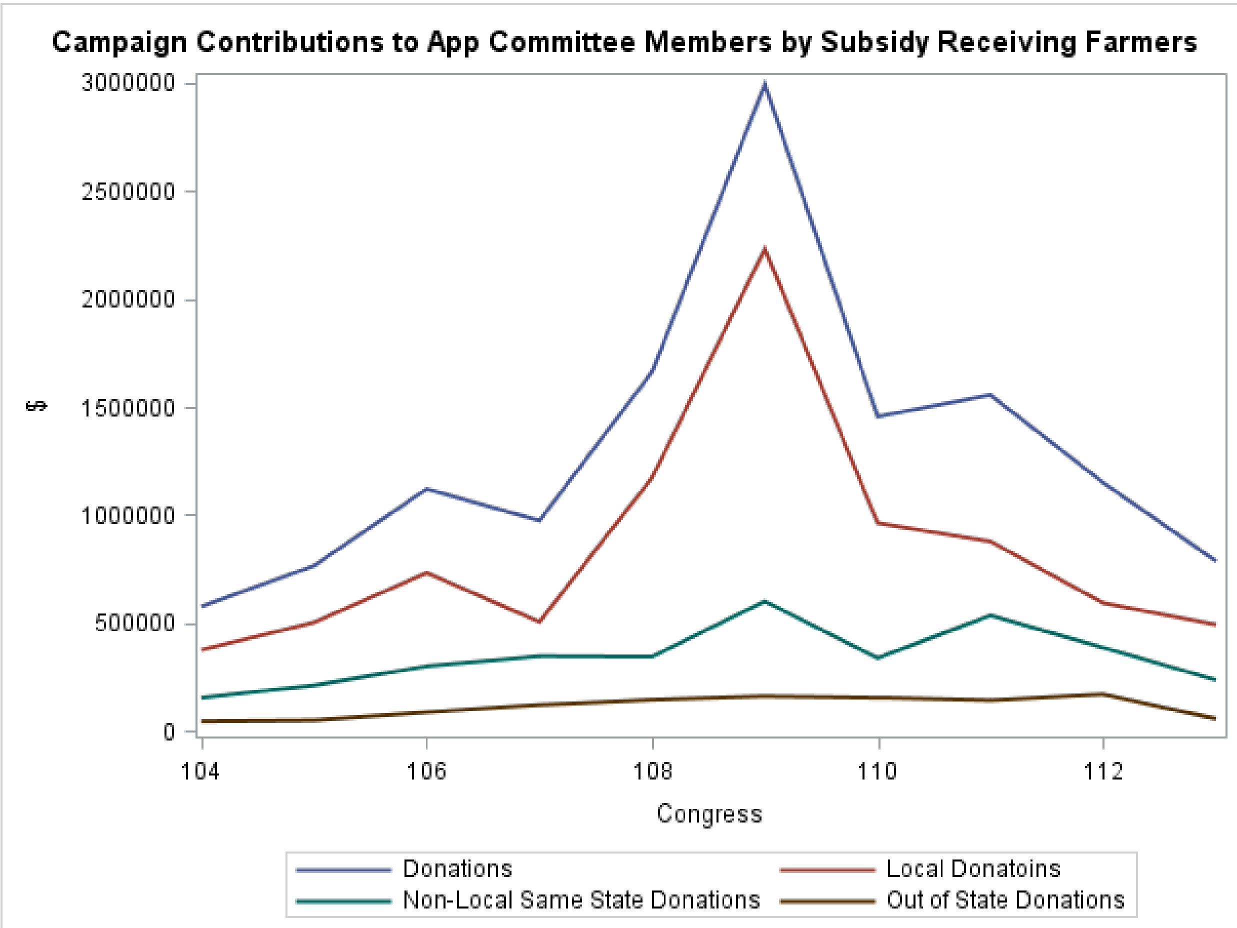

Figure 3. Graph of campaign contributions made by farmers to members of the House Committee on Appropriations by geography over time.

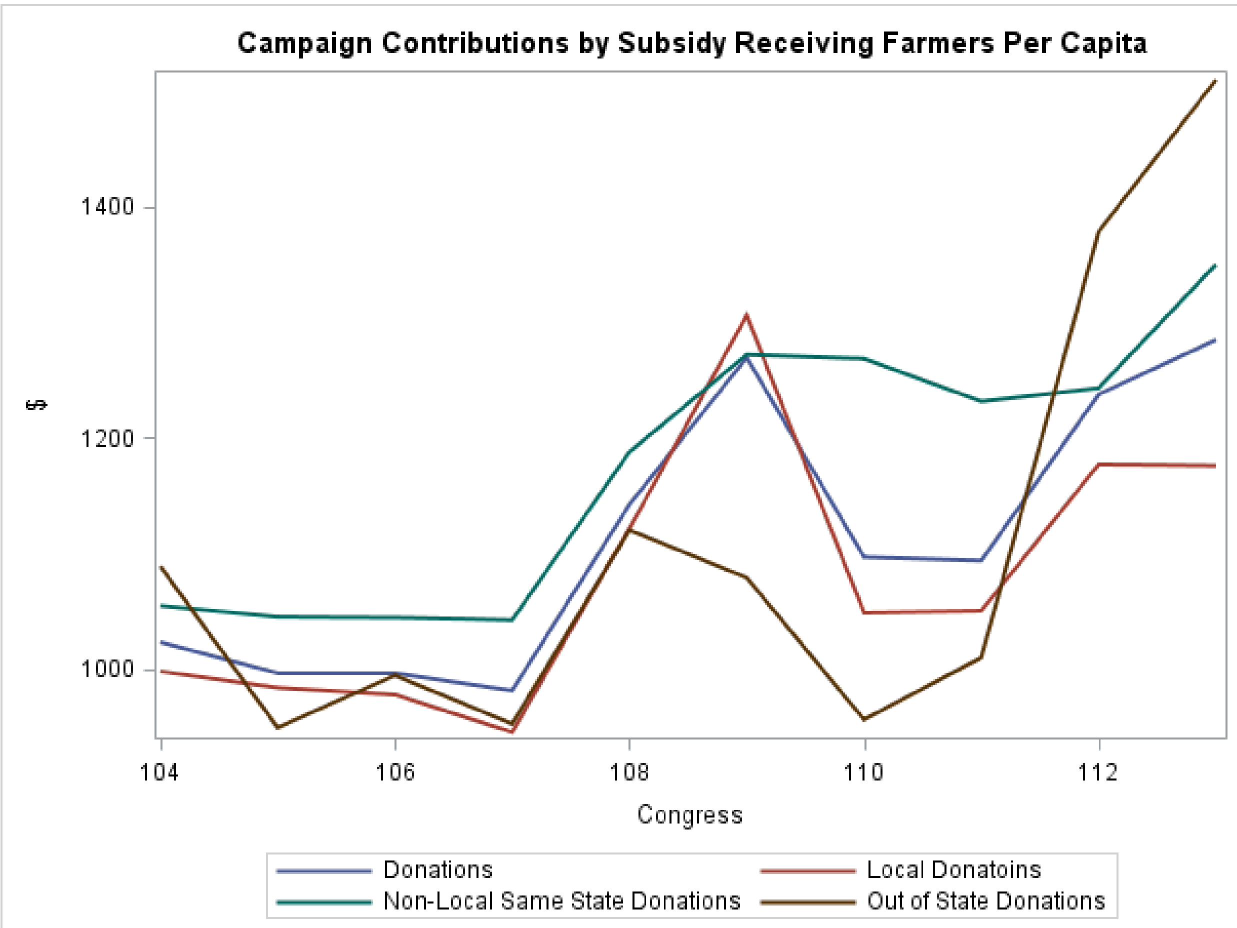

Figure 4. Graph of per capita campaign contributions made by farmers by geography over time.

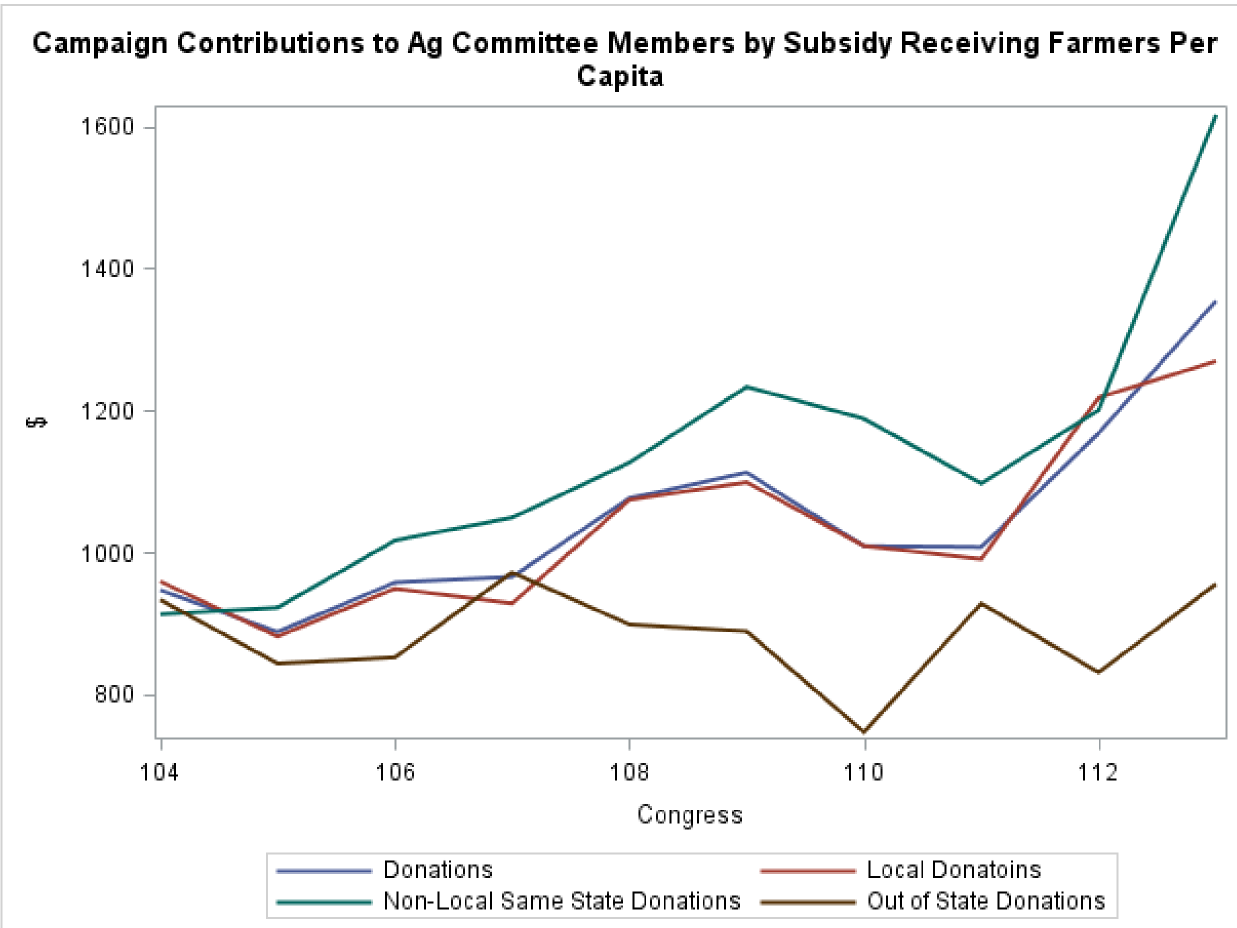

Figure 5. Graph of per capita campaign contributions made by farmers to members of the House Committee on Agriculture by geography over time.

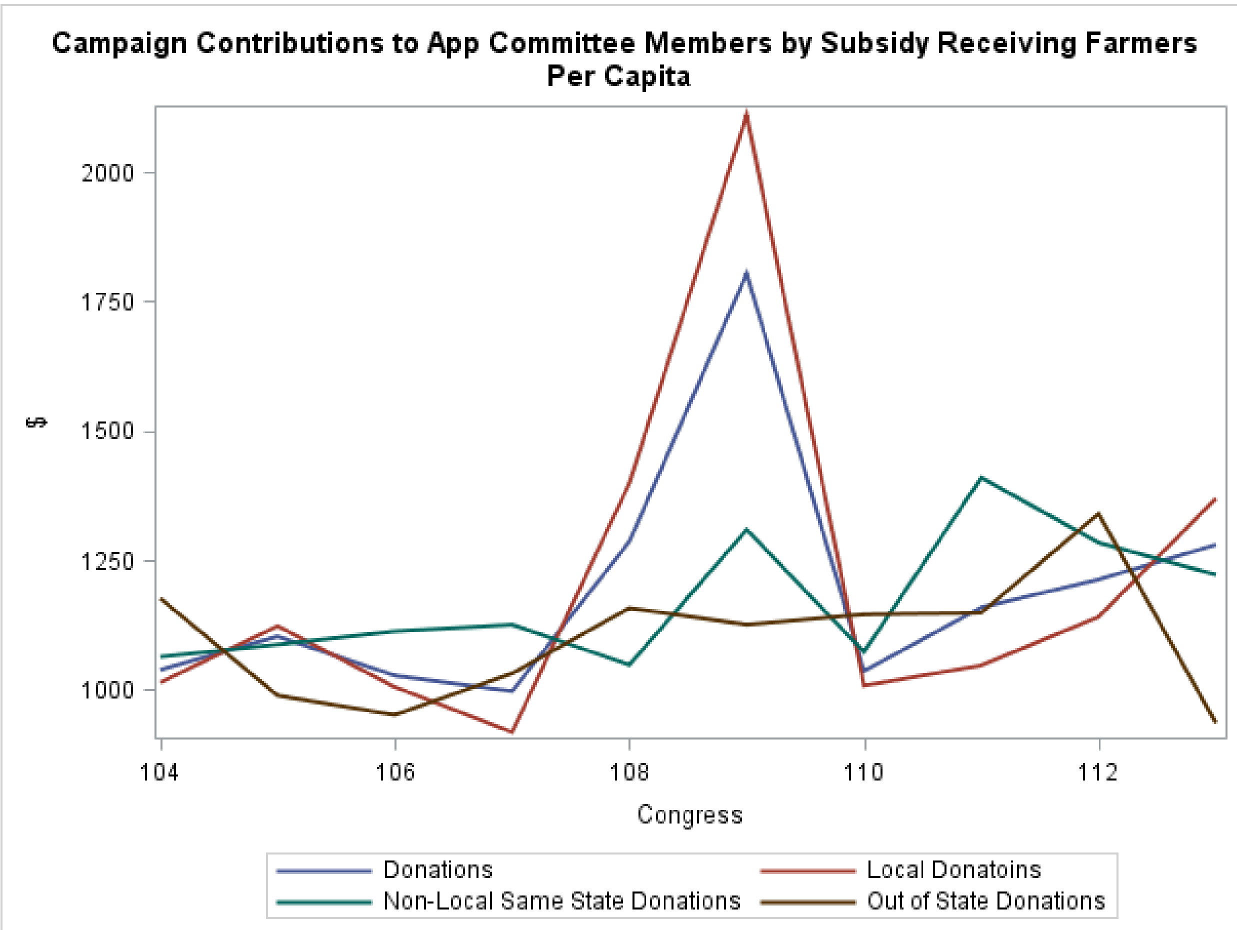

Figure 6. Graph of per capita campaign contributions made by farmers to members of the House Committee on Appropriations by geography over time.

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