# The Role of Special Interest Groups in the Debate over Prescription Drug Importation

## By Mike Adams[1]

*This paper examines the major interest groups in the debate over allowing the importation of prescription drugs through the Pharmaceutical Market Access Act. The interest groups that are focused on are pharmaceutical and biotech companies, HMO's, and senior citizens. The effects of the lobbying efforts of pharmaceutical and biotech companies and HMO's are seen through their financial contributions to individual Congressmen. The effect of senior citizens is seen through their voting presence in an individual Congressman's district. By making use of the logit probability model, I predict the results that each group's lobbying efforts had on the voting behavior of the 108th Congress, which voted to pass the Pharmaceutical Market Access Act. Evidence is found to support a theory claiming that Congressmen cater to these special interest groups in an effort to maximize their electoral returns.*

The role of interests groups in legislative activity has received a great deal of attention in recent years. Previous studies have shown that the increasing presence of political action committees lobbying before Congress has amplified the effect of interest groups on the Congressional policy progress (Loomis 1983, Schlozman and Tierney 1986, Sorauf 1988, Walker 1983). The purpose of this paper is to examine what role campaign contributions and voter presence from interest groups play in the voting behavior of Congress.

The analysis focuses on the Pharmaceutical Market Access Act (H.R. 2427), a bill passed by the 108th Congress 243-186 on July 25th, 2003. Proposed as a way to alleviate the high costs that Americans are forced to pay for their prescription drugs, it would allow individuals and wholesalers to import prescription drugs from countries where they are substantially cheaper. This issue was chosen because of the intense lobbying that was done by interest groups involved in the debate.

In order to examine the role of campaign contributions and voter presence in this vote, I decided what groups were the key players in the issue, collected campaign contribution data for each group and demographic data for each Congressional district, and used a logit probability model to predict the effect that changes in each of the independent variables would have on the probability of a vote for or against the bill.

**Campaign Contributions and Voting Behavior**

The increase focus on the role of interest groups in Congressional policymaking has produced a number of studies on the issue. So far the results have been mixed (Smith 1995). Some authors claim that contributions have significantly affected votes (Langbein

2

and Lotwis 1990, Kau and Rubin 1982, Schroedel 1986, Frendreis and Waterman 1985, Saltzman 1987) while others maintain that contributions have no effect (Chappell 1981, Welch 1982).

Along with the conflicting results, there are also several different theories as to exactly how campaign contributions affect members of Congress. One popular theory is that contributions buy access to Congressmen rather than directly buying votes (Magleby and Nelson, Langbein 1986). Due to the difficulty in quantitatively measuring this result, much of the evidence to support this theory is based on the statements of interest group officials, lobbyists, and members of Congress (Smith 1995). However, Langbein (1986) performed a study in which she examined the relationship between contributions and the number of minutes Congressmen spent with representatives from a contributor. She found evidence suggesting that money does provide access to Congressmen.

While there is some evidence supporting the previous theory, I chose to employ the following one because it fits with the groups that I found to be the important players in this debate. This will be explained further in a following section which describes the groups.

This theory assumes that policy outcomes are endogenous. Elected officials supply the policies while organized interest groups demand them. Politicians consider which positions will maximize electoral returns by balancing the votes gained and lost from informed and uninformed voters. (Baldwin and Magee, 1999)

Informed voters are those who know and understand candidate's position on the relevant issues. They cast their votes based on which candidate will offer them the highest utility. Uninformed voters do not know or are unable to evaluate the position of

candidates on the relevant issues.  These voters are swayed much easier than informed voters by information they here through the course of a campaign. (Grossman and Helpman, 1996)

The next step in the theory is the role of the special interest groups.  Grossman and Helpman (1996) define these groups as "collections of voters who share a common interest in the pliable policies" (p. 270).  When the incentive is high enough for these groups to become organized and to partake in collective action, they often have the ability play a large part in the policy making procedure.  Interest groups have two ways of getting what they want.  The first way is to support the candidate who already shares the same view as they do.  The other way is to support candidates undecided about an issue with the expectation that the candidate will return the favor by voting in the interest of the contributor.

In considering whether to cater to special interest groups in order to maximize electoral returns, the candidate must balance the support gained from uninformed voters with the loss of support from informed voters.  Since uninformed voters are more easily swayed by campaign rhetoric, any additional money that can be used for campaigning on behalf of a candidate will likely earn that candidate more votes.  On the other hand, any concessions made by a candidate to special interests will come at the expense of informed voters who previously supported the candidate. (Baldwin, 1989)


**The Issue**

The rising cost of prescription drugs in America is a crisis that has become a big concern for politicians.  In a prepared statement given by Dan Burton, the Chairman of

the House Government Reform Subcommittee on Human Rights and Wellness, he noted that American consumers pay a higher average price for prescription drugs than consumers in any other country. He goes on to explain that drug costs have been increasing by more than 17% annually from 1998 to 2001. This is approximately 5 times the growth rate of inflation and has created a situation in this country where more than 1 in 5 American adults are unable to afford their prescription drugs. (Burton, 2003)

The Pharmaceutical Market Access Act, championed by Representatives Gil Gutknecht and Rahm Emanuel, would authorize pharmacists, wholesalers, and qualified individuals to import pharmaceuticals from 26 countries back to the United States for distribution to consumers ("The Rx Debate in Congress" 2003). The goal of this is to "give all Americans immediate relief from the outrageously high cost of pharmaceuticals" and to "reverse the perverse economics of the American pharmaceutical markets" (H.R. 2427, 2003, Sec. 3).

Supporters of the bill claim that it would accomplish this goal by granting American consumers access to drugs in foreign countries where they are much cheaper. On average, Americans currently pay 30% to 300% more than consumers in other industrialized countries do for the same prescription drugs (Gutknecht 2003). Americans pay more because so many of them pay for their prescriptions individually, while the centralized health care systems of other countries, such as Canada, France, and Germany, can use the bargaining power of an entire population to negotiate prices (Brink 2003).

Leading up to the vote in Congress, there was a heated debate centered around two major criticisms of the bill. The first of these is whether or not it is safe to import prescription drugs from other countries where they are outside the jurisdiction of the

Food and Drug Administration. Mark McClellan, the Commissioner of the FDA, said, "We still can't assure safety and quality because the products are outside of our authority. The situation remains 'Buyer Beware' and that's not a good way to insure public health" ("What You Should Know…Gutknecht-Emerson Bill" 2003, 1).  One fear is that this bill has included countries where counterfeit drugs are a problem.  Rep. Jim Gibbons notes that it has been reported in South Africa that up to 20% of the medicines sold are fakes or stolen (Gibbons 2003).  Another concern is that improper shipping and storage of drugs may cause them to lose their potency ("The Gutknecht 'Drug Importation' Legislation Poses Immediate and Incalculable Risk to American Patients" 2003).

The second major criticism of the Pharmaceutical Market Access Act is that it would hurt pharmaceutical research and development (Krauss 2003).  The bargaining power of foreign countries allows them to set drug prices which are just above the marginal cost of production (Krauss 2003).  These prices are much lower than the

Those in favor of the bill argue that steps can be taken to insure that there is no risk in importing American drugs.  In the bill, it states that the United States can only import FDA approved drugs that have been produced at home, and requires that "imported prescription drugs be packaged and shipped using counterfeit-resistant technologies approved by the Bureau of Engraving and Printing similar to those used to secure United States currency" (H.R.2427, 2003, Sec. 505B).  This would help insure that drugs could only be shipped back to the United States in their original packaging.  Rep. Jo Anne Emerson, a strong supporter of the bill said, "We can uphold the integrity of the product.  These are just bogus issues that they've created to make people nervous about these drugs" (Moyers, 2003, ¶ 19)

average cost of production, which includes all the research and development that it requires to develop new prescription drugs. Since a majority of the pharmaceutical research is done in the United States, foreign countries free-ride off of American consumers, who end up covering more than their fair share of the cost of R&D (Krauss 2003). The fear is that if Americans stop paying higher prices for drugs, the incentive to invest in the future research and development of new drugs will decrease, eventually leading to a slow down in the pace of medical innovation (Krauss 2003).

Defenders of the bill argue that pharmaceutical companies are more than making up for this problem of free-riding, and that lower prices would not hurt research and development. Emerson says, "This bill is fair to everybody. If a pharmaceutical company that has a 27% profit margin only sees 20% after this law is passed, they'll still be doing pretty good" (Moyers, 2003, ¶ 20). The pharmaceutical industry argues that high returns from successful products are needed to encourage investment because of the risks associated with spending huge amounts of money on products that may never make it to the market (Comanor 1986).

### The Groups

I identified three major groups with an interest in the battle of H.R. 2427. The first group is comprised of pharmaceutical manufacturers and bio-tech companies. The U.S. pharmaceutical industry currently enjoys a situation where they are able to charge Americans enough to cover their research and development costs and still profit from foreign countries who pay prices that are just above marginal costs. If the bill were to pass, pharmaceutical manufacturers would either have to let U.S. prices fall in line with

the rest of the world or limit exports of their product. Either way, their profits would ne pinched.

Clearly there was a lot at stake for the U.S. pharmaceutical industry, and as such, their lobbying efforts were aimed at defeating the bill. The Pharmaceutical Research and Manufacturers of America (PhRMA) represents many of the largest pharmaceutical manufacturing and bio-tech companies. They are in strong opposition to Bill H.R. 2427 and have a statement posted on their website proclaiming that, "the Gutknecht importation bill is dangerous legislation that jeopardizes the safety of our nation's medicine supply and imports foreign governments' price controls" ("House of Representatives Action on HR 2427, the Gutknecht-Emerson Bill", 2003, ¶ 2).

The second group that I identified as having an interest in this issue is U.S. health insurance providers. I predict that they lobby for the bill because if U.S. drug prices were to decrease, it would cost them less to supply their clients with the medicines that they are covered for.

The third group with an interest in this battle is senior citizens. On average, people over the age of 65 fill five times as many prescriptions as working Americans (Brink 2003). Richard Evans, senior analyst at Sanford C. Bernstein, an investment research firm, says "But they do it on health benefits that are half as good and incomes that are half as large" (Brink 2003, ¶ 4).

Many elderly people have already had to make the choice between not taking their drugs because they can't afford them or breaking the law and importing them at an affordable price. Senior bus trips have been organized in states close to Canada and Mexico for this very purpose. Although technically illegal, customs officials have been

allowing people to fill personal prescriptions for up to a 3 month supply (Brink 2003).

Chellie Pingree, a former Senator of Maine said, "The last bus trip I was on six months

ago had 25 seniors.  Those 25 people saved $19,000 on their supplies of drugs" (Brink

2003 ¶ 2).

Since the result of this debate is so closely tied to the lives of so many senior

citizens, they have a lot of incentive to follow what is going on and to lobby for the

passing of the bill.  Referring back to the theory of campaign contributions employed in

this paper, seniors are considered the informed voters.  Since this group makes up

approximately 20% of the voting population, their voice is very powerful (Brink 2003).

The average working American, who doesn't notice the high drug prices because they

only pay small co-payments for their drugs, has less incentive to follow the debate and is

considered to be an uninformed voter on the issue (Brink 2003).

**Method**

In order to explore Congressional voting behavior on this bill, I used a logit

probability model according to:

Pr (VOTE=1) = $1/(1+e^{-\beta x})$

This model was employed because the dependant variable (VOTE) could only take two

values, 0 for a nay vote and 1 for an aye vote (aye votes registering a preference for

allowing importation).  This model allows us to obtain the probability of an aye vote as a

function of independent economic, political, and demographic variables.

The independent variables were all things that I believed would play a role in

influencing the vote of a particular candidate.  These variables include campaign

contributions from the major players in this debate, party affiliation, whether a Congressman represented a district within a state that shared a border with Canada, the median income of each district, and the percent of the population of each district that was 65 years or older.

Campaign contributions from pharmaceutical manufacturers and bio-techs [2] (PHARM) and HMO's[3] (HMO) were added as independent variables. In the following regressions, I used contributions from the 2002 election cycle combined with contributions from the 2004 election cycle (up to Oct. 15, 2003). The contributions used were scaled as average yearly contributions to account for the fact that not all the members of the 108th Congress were running for election during the 2002 election cycle. In addition, the contributions only represent hard money contributions to specific candidates. These contributions are summarized in Table 1.

Since the AARP, the group lobbying hardest for seniors, does not contribute money to campaigns, seniors were not a factor as far as campaign contributions are concerned. I considered using contributions from anyone whose occupation was listed as retired but decided this was not appropriate. The seniors who would be financially capable of contributing to a campaign are most likely not the same ones who are in dire need for the Pharmaceutical Market Access act to pass and may not even support it at all.

Rather than use campaign contributions from seniors, we used the percent of the population that was 65 or older for each Congressional district (PEROVER65)[4]. As

---

[2] This data comes from opensecrets.org and includes all contributions from PACs and companies that they list under their "Pharmaceutical and Health Products" category.

[3] This data comes from opensecrets.org and includes contributions from American Assn of Health Plans, Wellpoint Health Networks, Aetna Inc. Three of the largest contributing HMOs.

[4] This data was obtained from UScensus.gov (2000).

stated in the previous section, seniors are the informed voters on this issue. Congressmen know that voting against this bill may cause them to lose support from the population of seniors. This variable is an attempt to see how powerful the presence of voters who support an issue is on the stance taken by their representative.

In an attempt to control for political party affiliation I include a dummy variable (PARTY) that takes the value 1 for Republicans and 0 for Democrats. It appears that the ideological views of each party suggest that Democrats are more in favor of the bill than Republicans are. Therefore it is predicted that being Democrat would increase the probability of an aye vote.

I included a dummy variable (BORDER) which was equal to 1 if the Congressman represented a district within a state that shared a border with Canada and equal to 0 if not. I predict that people living in a district with easy access to Canada would be more in favor of passing a bill allowing drug importation. Not necessarily because once the bill is passed they would benefit the most, since pharmacies all over the country could import the drugs directly, but because they are most aware of the price inequalities and are the most likely to have either already crossed borders to save money or have heard stories of others who have done so. In effect, this creates another group of informed voters who support the issue. Similar to the variable measuring the percent of the population over the age of 65, this variable is an attempt to see if this favorable attitude towards the bill by voters in a district carries over to its Congressional representatives.

Since I believed that the income level of each district may affect the way a particular Congressman votes, a variable (MEDINC) measuring the median income of each district was added[5]. We predict that Congressman representing poorer districts would be more likely to favor the passage of this bill.

**Results**

The logit model uses PARTY, BORDER, PHARM, HMO, MEDINC, and PEROVER65 as the independent variables. Table 2 presents the estimated coefficients for each independent variable. In order to discuss the results, I must give several definitions. An "Average Congressman" is meant to be representative of the average member of Congress. For each of the independent variables, I simply added up the values and divided them by the number of Congressmen who voted. For an "Average Republican", the only changes are that PARTY is equal to 1 and the contributions used represent the averages that Republicans received. For an "Average Democrat", party is set equal to 0 and the contributions used are the averages that Democrats received. See Table 2 for a detailed list of the exact values used in the computations.

The coefficient on the independent variable PARTY is significant at a 1% level. In order to show what the effect of being a Republican or Democrat was on the vote of this bill, I computed the change in probability of voting aye for this bill given a change in party representation. When an "Average Republican" becomes a Democrat, the probability of an aye vote increases from 37.16% to 54.31%, a change of 17.15%. When an "Average Democrat" becomes a Republican, the probability of an aye vote decreases

[5] This data was obtained from USCensus.gov (2000).

from 73.15% to 46.66%, a change of -26.49%. This result supports the prediction that Democrats are more likely to favor this bill than Republicans are.

The coefficient on the independent variable BORDER is significant at a 5% level. To show the change in the probability of a vote in favor of allowing importation, I used the definitions made above, except that the BORDER value was initially zero and then switched to 1. For an "Average Congressman" the probability of an aye vote increased from 52.57% to 67.02%, a change of 14.45%. For an "Average Republican" the probability of an aye vote increased from 34.92% to 49.99%, a change of 15.07%. For an "Average Democrat" the probability of an aye vote increased from 70.84% to 81.84%, a change of 11.00%. This result supports the prediction that the increase awareness and support for an issue within a district is shown in the voting behavior of its representatives.

The coefficient on the independent variable PHARM is significant at a 1% level. To see the effects of campaign contributions from pharmaceutical manufacturers and bio-tech companies, I computed the change in probability of a yes vote given a $1000 increase in yearly contributions. For an "Average Congressman", who starts with $6,121.32 in yearly contributions, the probability of an aye vote decreases from 55.19% to 52.37%, a change of -2.82%. For an "Average Republican" starting with $8,172.56 in yearly contributions, an increase of $1000 decreases the probability of an aye vote from 37.16% to 34.55%, a change of -2.61%. For an "Average Democrat" starting with $3,901.62 in yearly contributions, an increase of $1000 decreases the probability of an aye vote from 73.15% to 70.86%, a change of -2.29%. This result supports the prediction that campaign contributions from pharmaceutical manufacturers and bio-tech companies encouraged Congressmen to vote against the bill.

The coefficient on the independent variable HMO is significant at a 1% level. In order to show the effects of contributions made from HMOs, I computed the change in the probability of an aye vote given a $1000 increase in yearly contributions. For an "Average Congressman" starting with $326.41 in yearly contributions, the probability of an aye vote increases from 55.19% to 65.41%, a change of 10.22%. For an "Average Republican" starting with $453.31 in yearly contributions, the probability of an aye vote increases from 37.16% to 47.58%, a change of 10.42%. For an "Average Democrat" starting with $189.27 in yearly contributions, the probability of an aye vote increases from 73.15% to 80.70%, a change of 7.55%. This result supports the prediction that contributions from HMOs encouraged support for the bill.

The coefficient on the independent variable MEDINC is not significant at any standard level of significance. As a result, I will not go through the effect on the vote in this section, but it is shown in Table 2. The coefficient was positive, going against the prediction that districts with lower median income levels would be more in favor of this bill. However, because of the lack of significance of this variable, this should not be considered substantial evidence refuting my prediction.

The coefficient on the independent variable PEROVER65 is significant at a 1% level. I computed the effect of this variable on voting behavior by increasing, by one percent, the population in a Congressional district over the age of 65 from 12.46% to 13.46%. For an "Average Congressman" this increased the probability of an aye vote from 55.19% to 58.37%, a change of 3.18%. For an "Average Republican" this increased the probability of an aye vote from 37.16% to 40.24%, a change of 3.08%. For an "Average Democrat" this increased the probability from 73.15% to 75.76%, a change of

2.47%.  This supports the prediction that increasing the presence of voters in support of the issue would encourage Congressman to vote for the bill.

The next calculation I performed was to see how accurately the model predicted the outcome of the vote.  In order to do this, I multiplied the probability of an aye vote from an "Average Congressman" by the number of voters.  The model yielded 237.85 aye votes.  This is 97.88% of 243, the actual number of aye votes.

Using the equation generated by the logit probability model I predicted what the vote would have been had there been no contributions from either pharmaceutical manufacturers and bio-techs or HMOs.  To do this, I used the definition of an "Average Congressman" but set the values of the contributions equal to 0.  The model predicted 293.95 aye votes, an increase of 23.59% from the predicted number of aye votes when contributions were allowed.  It makes sense that the number of aye votes would increase as campaign contributions were taken away.  Pharmaceutical manufacturers and bio-tech companies spent substantially more money fighting this bill than HMOs did to support it.

The last calculation was to predict how much contribution money it would take to overcome the ideological differences between Republicans and Democrats and make them vote the same.  In order to make an "Average Republican" vote like an "Average Democrat", contributions from HMOs would have to be increased so that the probability of an aye vote increases from 37.16% to 73.15%.  It would take an increase of $3,563.83 per year, bringing total contributions from HMO's up to $4,016.97 per year.  This is 886.47% of the mean contribution received by an average Republican each year.  In order to make an "Average Democrat" vote like an "Average Republican", contributions from pharmaceutical manufacturers and bio-techs would have to increase so that the

probability of an aye vote decreases from 73.15% to 37.16%. It would take an increase of $13,375.70 per year, bringing total contributions from pharmaceutical manufacturers and bio-techs up to $17,277.30 per year. This is 442.82% of the mean contribution received by an average Democrat each year.

## Conclusion

The results of this paper provide evidence to suggest that campaign contributions affected the vote taken by the 108th Congress on the Pharmaceutical Market Access Act. Both variables measuring the effect of contributions were significant at a 1% level. Party ideology, whether a candidate represents a district within a state sharing a border with Canada, and the percentage of the population within a district over the age of 65 also appear to have played a roll in the vote.

The results fit well in the context of the theory on the effect of campaign contributions used in this paper. In particular, Congressmen maximize electoral returns by balancing the acceptance of contributions, which translates into support from uninformed voters, in return for a certain position on an issue at the expense of losing support from voters who are informed, and have an opposing stance on the issue. This tradeoff is shown by the positive relationship between the presence of informed voters, who support the bill, and the negative relationship between contributions from pharmaceutical manufacturers, who oppose importation, and votes in favor of the bill.

The other theory, which says that campaign contributions only affect policy making by providing donators with access to Congressman, can not be rejected. The only lobbying efforts that this paper accounts for is campaign contributions and the presence

of informed voters.  An interesting extension to this paper would be to add variables that measure the amount of time that lobbyists spent with each member of Congress.  This would add clarity to exactly how campaign contributions were used in the lobbying efforts that surrounded this issue.

## References

Baldwin, R. 1989. "The Political Economy of Trade Policy." *The Journal of Economic Perspectives* 3:119-135.

Baldwin, R. and C. Magee. 2000. "Is Trade Policy for Sale? Congressional Voting on Recent Trade Bills." *Public Choice* 105:79-101.

Burton, D. 2003. "Low Cost and Safety of Imported Drugs". *Congressman Dan Burton*. Available at: http://www.house.gov/burton/.

Brink, Susan. 2003. "Health on the Border." *U.S. News and World Report*. 9 June.

Chappell, Henry W., Jr. 1981. "Campaign Contributions and Voting on the Cargo Preference Bill: A Comparison of Simultaneous Models." *Public Choice* 36:301-12.

Comanor, William S. 1986. "The Political Economy of the Pharmaceutical Industry." *Journal of Economic Literature* 24:1178-1217.

Frendreis, John P., and Richard W. Waterman. 1985. "PAC Contributions and Legislative Voting Behavior: Senate Voting on Trucking Deregulation." *Social Science Quarterly* 66:401-12.

"Gibbons Wants to Ensure Patient Safety." 2003. *Congressman Jim Gibbons*. Available at:http://www.house.gov/apps/list/press/nv02_gibbons/reimportdrugs0724.html.

Grossman, G. and E. Helpman. 1996. "Electoral Competition and Special Interest Politics." *The Review of Economic Studies* 63: 265-286.

Gutknecht, Gil. 2003. "Canadian Drug Importation." Statement of Rep. Gil Gutknecht to the House Government Reform Committee Subcommittee on Human Rights and Wellness. 25 June.

"House of Representatives Action on HR 2427, the Gutknecht-Emerson Bill." 2003. *Pharmaceutical Research and Manufacturers Association*. Available at: http://www.phrma.org/publications/quickfacts/25.07.2003.810.cfm

H.R. 2427 Pharmaceutical Market Access Act of 2003. (Bill in the House of Representatives June 11, 2003). Available at: http://www.dhmh.state.md.us/pharmacyboard/legislation/hr2427.htm.

Kau, James B., and Paul H. Rubin. 1982. *Congressmen, Constituents, and Contributors*. Boston, MA: Martinus Nijhoff.

Krauss, M. 2003. "Just Say No to Drug Re-Importation." *Foxnews.com*. Available at: http://www.foxnews.com/story/0,2933,92767,00.html.

Langbein, Laura I. 1986. "Money and Access: Some Empirical Evidence." *Journal of Politics* 48:1052-62.

Langbein, Laura I., and Mark A. Lotwis. 1990. "The Political Efficacy of Lobbying and Money: Gun Control in the U.S. House, 1986." *Legislative Studies Quarterly* 15:413-40.

Loomis, Burdette A. 1983. "A New Era: Groups and the Grass Roots." *Interest Group Politics*, ed. Allan J. Cigler and Burdette A. Loomis. Washington: Congressional Quarterly Press.

Magleby, David B., and Candice J. Nelson. 1990. *The Money Chase: Congressional Campaign Finance Reform*. Washington, DC: Brookings Institute.

Moyers, S. "Emerson backs bill to allow 'reimport' of U.S. drugs." *U.S. Representative Jo Anne Emerson*. Available at: http://www.house.gov/apps/list/press/mo08_emerson/morenews/PhRMAVisit.html

Saltzman, Gregory M. 1987. "Congressional Voting on Labor Issues: The Role of PACs." *Industrial and Labor Relations Review* 40:163-79.

Schlozman, Kay L., and John T. Tierney. 1986. *Organized Interests and American Democracy*. New York: Harper & Row.

Schroedel, Jean Reith. 1986. "Campaign Contributions and Legislative Outcomes." *Western Political Quarterly* 34:371-89.

Smith, Richard A. 1995. "Interest Group Influence in the U.S. Congress." *Legislative Studies Quarterly* 20:89-139.

Sorauf, Frank J. 1988. *Money in American Elections.* Boston: Scott, Foresman/Little, Brown.

"The Gutknecht 'Drug Importation' Legislation Poses Immediate and Incalculable Risk to American Patients." 2003. *Biotechnolgy Industry Organization*. Available at: http://www.bio.org/reg/impfacts.asp.

"The Rx Debate in Congress." 2003. *Common Cause*. Available at: http://www.commoncause.org/action/action.cfm?artid=74&topicid=1.

Walker, Jack L. 1983. "The Origins and Maintenance of Interest Groups in America." *American Political Science Review* 77:390-406.

Welch, William P. 1982. "Campaign Contributions and Legislative Voting: Milk Money and Dairy Price Supports." *Western Political Quarterly* 35:478-95.

"What You Should Know…Gutknecht-Emerson Bill." *Pharmaceutical Research and Manufacturers Association*. Available at: www.phrma.org/publications/policy/2003-07-18.796.pdf.

*Table 1*. Summary of the campaign contributions used in the regression

| Contributor and Recipient | Total Amount of Hard Money Contributions Received By Members of the 108th Congress During the 2002 and 2004 election cycles | Percent Received of Total Amount Given | Average Amount Received Per Year by Members of the 108th Congress During the 2002 and 2004 election cycles. |
|---|---|---|---|
| **Pharmaceutical Manufacturer and Bio-Tech Contributions to Congress** | **$6,745,497** | **100%** | **$6,121.32** |
| To Republicans | $4,589,278 | 68.03% | $8,172.56 |
| To Democrats | $2,156,219 | 31.97% | $3,901.62 |
| **HMO Contributions to Congress** | **$377,600** | **100%** | **$326.41** |
| To Republicans | $278,600 | 73.78% | $453.14 |
| To Democrats | $99,000 | 26.22% | $189.27 |

*Table 2.* Logit model maximum likelihood estimates

| Variable | Coefficient (standard error) | p-value | Odds Ratio | One Unit Change (dX) | dP/dX[1] | | |
|---|---|---|---|---|---|---|---|
| | | | | | Avg. Congress.[2] | Avg. Rep.[3] | Avg. Dem.[4] |
| Constant | -0.432399 (.7300) | .5537 | | | | | |
| PARTY (0=Dem,1=Rep) | -1.135801 (.2294) | .0000 | .321165 | Switch Party | | 17.15% | -26.49% |
| BORDER[5] (0=No,1=Yes) | 0.622047 (.3099) | .0447 | 1.86274 | Switch from Not on the Border to On the Border | 14.45% | 15.07% | 11.00% |
| Pharmaceutical and Biotech Contributions (PHARM) | -0.114193 (.0200) | .0000 | .89274 | Increase of $1000 per year | -2.82% | -2.61% | -2.29% |
| HMO Contributions (HMO) | 0.428588 (.1651) | .0094 | 1.53509 | Increase of $1000 per year | 10.22% | 10.42% | 7.55% |
| Median Income by District (MEDINC) | 0.001546 (.0108) | .8866 | 1.00155 | Increase of $1000 | .04% | .04% | .03% |
| Percent of Population over 65 by district (PEROVER65) | 0.1298000 (.0385) | .0008 | 1.1386 | Increase of 1% | 3.18% | 3.08% | 2.47% |

1. The dP/dX's are all computed at the means.
2. Average Congressman is defined as follows: PARTY=.519722, BORDER=.169374, PHARM=6.121321, HMO=.326407, MEDINC=43.48223, PEROVER65=12.46089.  P=.55186 Odds Ratio=1.23145.
3. Average Republican is defined as follows: PARTY=1, BORDER=.15625, PHARM=8.17256, HMO=.453139, MEDINC=43.48223, PEROVER65=12.46089. P=.371591 Odds Ratio=.59132.
4. Average Democrat is defined as follows: PARTY=0, BORDER=.183575, PHARM=3.90162, HMO=.189267, MEDINC=43.48223, PEROVER65=12.46089. P=.731456 Odds Ratio=2.72378.
5. When computing the effect of border on the probability of a yes vote, the definition of average is changed so that border starts equal to 0.