

PAC Contributions and US House Votes on Pharmaceutical Regulations

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Many Americans are concerned that federal policymakers are making public policy that benefits corporate industries, such as the pharmaceutical industry. However, studies have not explicitly examined the relationship between congressional campaign contributions in the House of Representatives and voting behavior on legislation affecting the pharmaceutical industry. This study investigates the relationship between Political Action Committee (PAC) contributions and congressional roll-call voting on pharmaceutical legislation in the House during the 116th session of Congress using contribution data and voting records on pharmaceutical-impacting legislation. We find no statistically significant effect of the total PAC contributions received on voting actions pertaining to legislation that affects the pharmaceutical industry when controlling for other factors, including party identification, tenure, and committee membership. Though there were only three relevant bills that made it to the floor for a vote in the House of Representatives in this session and none in the sessions before or after, further studies should expand the scope to include more bills across multiple congressional sessions, consider the earlier legislative actions that precede roll-call votes on these bills, and utilize better measurements of PAC political activity.

Keywords: Pharmaceutical Regulations, Congressional Voting, PAC Contributions

Introduction

The pharmaceutical industry is one of the most prominent businesses in the US, given that a significant proportion (66%) of the population requires prescription drugs (Health Institute Policy 2019). A study conducted in 2018 by the Centers for Disease Control and Prevention (CDC) found that 48.6% of Americans had used at least one prescription drug within the last 30 days (CDC 2023). For Americans with chronic conditions, prescription drugs are necessary for survival and well-being. For example, 98% of people with diabetes use prescription drugs (Health Policy Institute 2019). Pharmaceuticals comprise a large part of the US Gross Domestic Product (GDP). In 2018, 17.6% of the country's GDP was spent on prescription drugs sold in retail pharmacies (Sisko et al. 2019). Per-person spending on prescription drugs almost doubled between 1999 and 2017 (Hernandez et al. 2021). Affordable insulin is one example of a drug central to many recent political debates about affordable health care (Meiri et al. 2020). Affordable medication's role in society cannot be overstated, and much of prescription accessibility is determined by legislation passed by the US Congress.

Many Americans are concerned that federal policymakers are making public policy that benefits corporate industries, such as the pharmaceutical industry (DeSilver and von Kessel 2020; Primo and Milyo 2020). However, studies have not examined the relationship between congressional campaign contributions and voting behavior on pharmaceutical industry legislation in the House of Representatives. Given the importance of pharmaceuticals in the US and the perception that campaign finance plays a role in public policy decisions made by members of Congress, this paper seeks to examine the relationship between campaign contributions and congressional voting actions by estimating the association between PAC campaign contributions and congressional roll-call voting on pharmaceutical legislation during the 116th session of Congress.

Review of the Literature

The US campaign finance system forces electoral candidates to raise contributions from individual citizens and PACs to fund their electoral activities. This private campaign finance system leads to concerns over the corrupting influence of political contributions on elected officials, especially the contributions donated by organizations connected to corporate interests (DeSilver and Kessel 2020). The long-standing concern over money in

politics has led to the growth of research that attempts to study the effects of political contributions from PACs on congressional roll-call votes on legislation related to these groups. These studies indicate that the influence of campaign contributions is challenging to validate, given that elected officials are not legally required to justify or explain their votes. However, most agree that organizations and PACs contribute to electoral campaigns to influence members of Congress, the laws passed, and government oversight.

Wawro (2001) and Powell (2014) point out that it is difficult to prove what causes a legislator's vote on legislation. Many factors likely influence a legislator's decision-making, including their constituent's preferences, party preferences, and political ideology. Furthermore, most legislators are not inclined to reveal their true motivations for their votes on legislation. Esterling (2007) and Maniadis (2009) argue that the influence of PAC contributions on legislative decision-making is not necessarily a negative function for democracy. After all, the campaign finance system in the US allows interest groups to advance their agenda in this manner because it is a democratic method of policymaking (Esterling 2007), and this system forces government representatives to be responsive to their constituents and the groups that represent them, leading to economic efficiency in the marketplace (Maniadis 2009). Ansolabehere, de Figueiredo, and Snyder (2003) argue that if PACs gave contributions to influence public policy, more Fortune 500 companies would operate PACs, and more of these groups would maximize their contribution limits. At the time of their study, only 60% of Fortune 500 companies had PACs, and only 4% of these groups met the maximum contribution limits. However, De Figueiredo and Edwards (2007) believe that it is evident that PACs give campaign contributions to influence legislative decision-making and wonder why these groups would give this money otherwise. These arguments highlight that the relationship between campaign contributions and legislative decision-making is complicated and requires a thorough examination to make generalizable conclusions.

Earlier studies attempt to understand the nature of campaign contributions and their influence on roll-call votes and find differences in when and how PAC contributions appear most effective and influential. Constant (2006) and De Figueiredo and Edwards (2007) find that campaign contributions influence voting on bills most important to a group's policy agenda. Welch (1982), Austen-Smith (1987), Hall and Wayman (1990), and Bronars and Lott (1997) argue that most groups give campaign contributions as reciprocity for prior legislative support and not in exchange for future support. Grier, Gier, and Mkrtchian (2023) believe this is true even when controlling for district-level and individual-level factors and a more

extended period of contributions. Mayhew (1974) found that a legislator uses roll-call votes to signal their direction and intensity to groups. This is more important to the groups than the legislator's ability to affect the outcome of any particular bill. However, Box-Steffensmeir and Grant (1999) found that the most effective legislators attract more donations from PACs. Esterling (2007) also finds that members of Congress receive greater campaign support from groups when they embody higher levels of latent policymaking skills and engage in greater analytical discourse in committees. This supports Bronars and Lott's (1997) findings that last-term Representatives (retiring or running for different positions) receive fewer PAC contributions as a percent of their total fundraising and smaller PAC contributions.

Roscoe and Jenkins (2005) argue that these prior studies produced significant findings between corporate-funded PAC campaign contributions and roll-call votes because their models often focused on a singular measurement of campaign support, the direct contribution. However, there are many methods for a corporation or organization to indicate support for a legislator. For instance, Lowery et al., (2009) find that PACs often contribute in conjunction with their lobbying efforts. Tripathi, Ansolahahehere, and Snyder (2017) also discovered that direct PAC contributions employ lobbyists, operate PACs, and make independent expenditures. These groups pay more attention to a legislator's position of power in Congress and less to their electoral chances or partisanship.

One related study examines the impact of PAC contributions and narrows its analysis to the tobacco industry and related legislation. Luke and Krauss (2004) examined donations from tobacco-related PACs to elected members in the 106th Congress and how these contributions affected their tendency to vote for pro-tobacco policies – this period included 1997-1998, a significant period of national debate regarding tobacco policy. They find that over two-thirds of legislators accepted PAC donations from the tobacco industry. There was a significant difference between political party identification and the amount received, with Republicans receiving more and tending to vote more pro-tobacco than Democrats. The amount of money received was positively associated with pro-tobacco votes, even with statistical controls for party, state, and tobacco acreage within the state. The relationship between money and pro-tobacco voting was stronger for Democrats, however. For every \$10,000 contribution received, Democrats were 9.8% more likely to vote pro-tobacco, while Republicans were only 3.5% more likely.

Wouters (2020) analyzed the political spending of the pharmaceutical industry by looking at their campaign contributions to federal and state governments, as well as federal lobbying efforts. The study examined spending from 1999-2018, concluding that the pharmaceutical and health product industry recorded \$4.7 billion, averaging \$233 million annually. Out of over 100 pharmaceutical and health product PACs, the top 20 accounted for over half of the industry's lobbying expenditures. This study also found that 39 of the 40 congressional candidates who received the most contributions had some committee jurisdiction over health-related legislation. This included the Energy and Commerce Committee, the Ways and Means Committee, and the Finance Committee. The total amount contributed to congressional candidates was \$214 million across the period. State-level spending was primarily focused on ballot measure committees. Most of these measures were intended to reduce drug costs and were ultimately voted down. This is a significant finding regarding pharmaceutical spending, partisanship, and political actions.

Hypothesis

The mixed results are why previous scholars have emphasized considering multiple factors to establish causation or achieve generalized results. As such, this study examines the relationship between PAC contributions to members of the House of Representatives and congressional roll-call voting on pharmaceutical legislation. Given previous work, the following hypotheses were established:

- H1: There will be a positive correlation between Democratic Party identification and pro-regulation votes.
- H2: There will be a negative correlation between the amount of money received and pro-regulation votes.
- H3: The effect of money received on pro-regulation votes will be more vital within the Democratic Party than the Republican Party.

Testing the validity of these hypotheses will add to the existing literature on PAC campaign contributions and legislative decision-making. If true, then action should be taken to reduce the effect of money in politics or better understand why these trends exist to improve democracy within the US. If false, then concerns about corruption in politics should be partially alleviated, or it should provide support that it is difficult to prove the causal relationship between PAC campaign contributions and roll-call votes in Congress (Wawro 2001; Powell 2014).

Methodology

Contribution data was collected from OpenSecrets, formerly the Center for Responsive Politics (CRP), and voting records on pharmaceutical-impacting legislation from The Library of Congress. Roll-call votes collected for the House of Representatives were limited to the 116th Congress (2019-2020) and PAC campaign contributions to the representatives to the 2019-2020 election cycle. This Congress was selected because it was the most recent complete session during the data collection period. Using records from the Library of Congress (2023), legislation was searched for using the keyword *pharmacy*. All documents except legislation were excluded from the review. Furthermore, only legislation that made it to the floor for a roll call vote was included to match individual representatives' voting records to their individual PAC donations. Legislation that increased regulations on the pharmaceutical industry was selected, with a *Nay* vote indicating a pro-pharmaceutical approach and a *Yea* vote indicating a pro-regulation approach. Only three bills met these qualifications. There were none in the sessions before or after.¹

HR 3, The Elijah E. Cummings Lower Drug Costs Now Act, established several programs to lower the cost of prescription drugs. This bill attempted to increase the negotiating power of the Department of Health and Human Services (HHS) for brand-name drugs without generic alternatives that account for the most significant portions of national and Medicare spending. Price comparisons to other Western countries limited negotiated prices. The bill was introduced in the House of Representatives in the 116th Congress and passed with a vote of 230 – 192. It was then sent to the Senate but never referred to a committee. It was reintroduced in the 117th Congress but did not make it out of the House of Representatives.

HR 1425, The Patient Protection and Affordable Care Enhancement Act, sought to implement the Fair Drug Pricing Program, which would also direct HHS to negotiate with pharmaceutical manufacturers to set prices on the costliest drugs under Medicare. The bill also would establish an excise tax on manufacturers who did not comply with the negotiated fair price. The House of Representatives passed HR 1425 with a vote of 234 – 179, but it was never sent to a Senate committee.

Finally, HR 987, The Strengthening Health Care and Lowering Prescription Drug Costs Act, aimed to impose several oversight measures on

¹ The search was widened to include similar healthcare-associated bills, but most were passed as part of an omnibus bill, which complicates the analysis, therefore these bills were not included.

the pharmaceutical industry. Barriers to market entry for generic drugs were decreased through this legislation. Additionally, the bill would give the federal government more jurisdiction over the drug development process, seeking to obtain accurate data on how expensive drug development is and average profits and revenue from drug sales. The bill passed the House of Representatives with a vote of 234 – 183, was sent to the Senate, and referred to the Committee on Health, Education, Labor, and Pensions, but was never brought to the floor for a third reading.

Member data was collected from Congress.gov. Data collection was limited to the House of Representatives in the 116th Congress (2019-2020). Every individual's name, state, gender, race, and party identification were collected from the Congressional or individual campaign websites. Additionally, years of service in the House of Representatives, committee membership, and committee leadership positions were recorded.

Finally, pharmaceutical PAC data was collected in 2023 from OpenSecrets for the 2019-2020 electoral cycle. Contributions of each PAC to individual representatives were collected and then summed up for the total amount of money received by each congressional member. PAC Contributions were collected for the top five pharmaceutical and health products PACs were Amgen, Pfizer, Abbott, AbbVie, and Johnson & Johnson (J&J). Amgen was founded in 1980 and is in over 100 countries, focusing on biological solutions to severe diseases (Amgen 2023). Pfizer has recently become a recognizable pharmaceutical company due to the development and distribution of a COVID-19 vaccine. The company was founded in 1849 and has continued to grow by merging with other companies (Pfizer 2023). Abbott mainly produces health devices and products like glucose monitoring and cardiovascular pumps and is also a pharmaceutical leader (Abbott 2023). AbbVie is best known for producing Humira, a drug used to treat rheumatoid arthritis (AbbVie 2023). Johnson and Johnson also produces health products and pharmaceuticals and, relevant to the study period, was also a leader in producing a COVID-19 vaccine (Johnson and Johnson 2023).

Findings

The demographic makeup of the 116th Congress House of Representatives was slightly more Democratic than Republican and significantly more male and whiter than female and non-white. As seen in Table 1, 53.6% of the House of Representatives identified as Democrats and 46% as Republicans. The remaining two members were independent and

Libertarian. Over three-fourths of the House of Representatives were white, and three-fourths were male. Tenure in the House of Representatives was

Table 1: Frequency Table

Variable	<i>n</i>	Category	
Party	446	Republican (46.0%)	Democrat (53.6%)
Race	448	White (76.3%)	Non-White (23.7%)
Gender	448	Male (76.3%)	Female (23.7%)
HR 3	421	Nay (42.9%)	Yea (51.1%)
HR 1425	413	Nay (40.0%)	Yea (52.2%)
HR 987	416	Nay (40.6%)	Yea (52.2%)

calculated by subtracting the election year from 2020. The average time members had served was 9.57 years (+/- 9.03 years). There was a wide range of tenure, ranging from 0 years (those elected in special elections in 2020) to

Table 2: Summary Statistics

Variable	<i>n</i>	Minimum	Maximum	Mean	Std. Deviation
Tenure	448	0	47	9.57	9.03
Amgen	448	0	20,000	1,451.00	2,594.00
Pfizer	448	0	10,000	1,398.00	2,325.00
Abbott	448	0	10,000	1,311.00	3,008.00
AbbVie	448	0	10,000	1,045.00	2,226.00
J & J	448	0	10,000	936.40	2,161.00
Money	448	0	48,500	6,142.00	9,666.00
Yes Votes	448	0	3	1.56	1.46

47 years. As mentioned, all three pieces of legislation passed the House of Representatives but did not make it through the Senate. Voting tended to occur along party lines, with some variation of individual representatives' votes. A sum of all *Yea* votes was taken for each member and used as the dependent variable for regression analyses. The values ranged from 0 to 3, representing three votes against regulations to three votes in favor of them.

Table 2 indicates that the top five PACs had similar spending patterns, with some discrepancies. They spent over \$2.7 million in expenditures to representatives between 2019 and 2020. Each member averaged \$6,141 in contributions, with a standard deviation of \$9,666 and a significant deviation of about one and a half the average. Total amounts received by each member ranged from \$0 to \$48,500. Each PAC spent the following amount: Amgen - \$650,000; Pfizer - \$626,500; Abbott - \$587,500; AbbVie - \$468,000; J&J - \$419,500. Amgen contributed an average of \$1,450 per member (+/- \$2,594). On the opposite end, J&J contributed an average of only \$936 per member (+/- \$2,161).

Table 3: Abbot Doantions

Amount	Frequency	Percent	Cumulative Percent
\$ -	356	79.5	79.5
\$ 1,000	7	1.6	81
\$ 1,500	2	0.4	81.5
\$ 2,000	5	1.1	82.6
\$ 2,500	8	1.8	84.4
\$ 3,500	5	1.1	85.5
\$ 4,000	3	0.7	86.2
\$ 4,500	4	0.9	87.1
\$ 5,000	10	2.2	89.3
\$ 5,500	1	0.2	89.5
\$ 6,000	2	0.4	90
\$ 7,500	5	1.1	91.1
\$ 8,000	2	0.4	91.5
\$ 9,000	1	0.2	91.7
\$ 10,000	37	8.3	100

Tables 3-7 display each PAC's contribution patterns, and Table 8 displays the total contribution frequency. The total contribution amount was calculated by summing up the money received across all five PACs. These tables also indicate the top five PACs had similar spending patterns, with some discrepancies. About 40% of congressional members received no contributions from the five PACs examined, explaining the significant deviation of average contributions.

Table 4: Amgen Doantions

Amount	Frequency	Percent	Cumulative Percent
\$ -	288	64.3	64.3
\$ 500	1	2	64.5
\$ 1,000	28	6.3	70.8
\$ 1,500	3	0.7	71.4
\$ 2,000	23	5.1	76.6
\$ 2,500	11	2.5	79
\$ 3,000	15	3.3	82.4
\$ 3,500	7	1.6	83.9
\$ 4,000	6	1.3	85.3
\$ 4,500	2	0.4	85.7
\$ 5,000	21	4.7	90.4
\$ 5,500	3	0.7	91.1
\$ 6,000	9	2	93.1
\$ 6,500	3	0.7	93.8
\$ 7,000	2	0.4	94.2
\$ 7,500	10	2.2	96.4
\$ 8,000	3	0.7	97.1
\$ 8,500	5	1.1	98.2
\$ 9,000	2	0.4	98.7
\$ 10,000	4	0.9	99.6
\$ 12,500	1	0.2	99.8
\$ 20,000	1	0.2	100

Table 5: AbbVie Donations

Amount	Frequency	Percent	Cumulative Percent
\$ -	335	74.8	74.8
\$ 1,000	19	4.2	79
\$ 1,500	2	0.4	79.5
\$ 2,000	6	1.3	80.8
\$ 2,500	23	5.1	85.9
\$ 3,000	2	0.4	86.4
\$ 3,500	7	1.6	87.9
\$ 4,000	2	0.4	88.4
\$ 4,500	8	1.8	90.2
\$ 5,000	15	3.3	93.5
\$ 5,500	1	0.2	93.8
\$ 6,000	4	0.9	94.6
\$ 6,500	2	0.4	95.1
\$ 7,000	3	0.7	95.8
\$ 7,500	10	2.2	98
\$ 8,500	1	0.2	98.2
\$ 10,000	8	1.8	100

Table 6: Pfizer Donations

Amount	Frequency	Percent	Cumulative Percent
\$ -	2880	62.5	62.5
\$ 1,000	36	8	70.5
\$ 1,500	1	0.2	70.8
\$ 2,000	24	5.4	76.1
\$ 2,500	10	2.2	78.3
\$ 3,000	12	2.7	81
\$ 3,500	14	3.1	84.2
\$ 4,000	6	1.3	85.5
\$ 4,500	7	1.6	87.1
\$ 5,000	20	4.5	91.5
\$ 5,500	6	1.3	92.9
\$ 6,000	7	1.6	94.4
\$ 6,500	2	0.4	94.9
\$ 7,000	6	1.3	96.2
\$ 7,500	8	1.8	98
\$ 8,000	1	0.2	98.2
\$ 9,000	2	0.4	98.7
\$ 9,500	1	0.2	98.9
\$ 10,000	5	1.1	100

Table 7: J&J Donations

Amount	Frequency	Percent	Cumulative Percent
\$ -	344	76.8	76.8
\$ 1,000	15	3.3	80.1
\$ 1,500	6	1.3	81.5
\$ 2,000	11	2.5	83.9
\$ 2,500	13	2.9	86.8
\$ 3,000	9	2	88.8
\$ 3,500	7	1.6	90.4
\$ 4,000	8	1.8	92.2
\$ 4,500	1	0.2	92.4
\$ 5,000	5	1.1	93.5
\$ 5,500	1	0.2	93.8
\$ 6,000	8	1.8	95.5
\$ 6,500	5	1.1	96.7
\$ 7,000	1	0.2	96.9
\$ 8,000	1	0.2	97.1
\$ 8,500	2	0.4	97.5
\$ 10,000	11	2.5	100

Regression results are displayed in Table 9. The dependent variable was pro-regulation votes overall, with higher values representing more *Yea* votes across the three pieces of legislation. Five steps of regression were modeled. Model 1 examined the effects of demographic characteristics on voting behavior. Model 2 examined the impact of committee placement, House leadership, and tenure. Model 3 focused on the added effects of party identification. Model 4 examined total contributions. Finally, Model 5 examined the role of party and money while controlling for other variables discussed in the previous models.

Table 8: Total Donations

Amount	Frequency	Percent	Cumulative Percent
\$ -	215	48	38
\$ 1,000	27	6	54
\$ 1,500	6	1.3	55.4
\$ 2,000	10	2.2	57.6
\$ 2,500	9	2	59.6
\$ 3,000	9	2	61.6
\$ 3,500	6	1.3	62.9
\$ 4,000	6	1.3	64.3
\$ 4,500	7	1.6	65.8
\$ 5,000	8	1.8	67.6
\$ 5,500	3	0.7	68.3
\$ 6,000	2	0.4	68.8
\$ 6,500	4	0.9	69.6
\$ 7,000	9	2	71.7
\$ 7,500	5	1.1	72.8
\$ 8,000	5	1.1	73.9
\$ 8,500	4	0.9	74.8
\$ 9,000	3	0.7	75.4
\$ 9,500	7	1.6	77
\$ 10,000	5	1.1	78.1
\$ 10,500	4	0.9	79
\$ 11,000	5	1.1	80.1
\$ 11,500	3	0.7	80.8
\$ 12,000	3	0.7	81.5
\$ 12,500	3	0.7	82.1
\$ 13,000	3	0.7	82.8
\$ 14,000	2	0.4	83.3
\$ 15,000	3	0.7	83.9
\$ 15,500	3	0.7	84.6
\$ 16,000	1	0.2	84.8
\$ 16,500	1	0.2	85
\$ 17,000	3	0.7	85.7
\$ 17,500	5	1.1	86.8
\$ 18,500	1	0.2	87.1
\$ 19,000	3	0.7	87.7
\$ 19,500	1	0.2	87.9
\$ 20,000	4	0.9	88.8

\$ 21,000	1	0.2	89.1
\$ 21,500	3	0.7	89.7
\$ 22,000	2	0.4	90.2
\$ 22,500	4	0.9	91.1
\$ 23,000	2	0.4	91.5
\$ 23,500	1	0.2	91.7
\$ 24,000	1	0.2	92
\$ 25,000	3	0.7	92.6
\$ 25,500	1	0.2	92.9
\$ 26,000	2	0.4	93.3
\$ 26,500	5	1.1	94.4
\$ 27,000	1	0.2	94.6
\$ 28,000	1	0.2	94.9
\$ 29,000	1	0.2	95.1
\$ 29,500	2	0.4	95.5
\$ 30,000	3	0.7	96.2
\$ 30,500	1	0.2	96.4
\$ 31,000	2	0.4	96.9
\$ 32,000	1	0.2	97.1
\$ 32,500	1	0.2	97.3
\$ 33,000	1	0.2	97.5
\$ 33,500	1	0.2	97.8
\$ 34,500	1	0.2	98
\$ 35,000	1	0.2	98.2
\$ 37,500	1	0.2	98.4
\$ 38,000	2	0.4	98.9
\$ 39,000	2	0.4	99.3
\$ 40,000	1	0.2	99.6
\$ 43,500	1	0.2	99.8
\$ 48,500	1	0.2	100

Table 9: Regression Results

	Dependent Variable: Pro-Regulation Votes				
Independent Variable	Model 1	Model 2	Model 3	Model 4	Model 5
Party*Money					-0.024
Money				0.019	0.035
Party (1 = Democrat)			0.878***	0.880***	0.890***
Tenure		0.032	-0.076**	-0.075**	-0.075**
Foreign Affairs (1 = Yes)		0.109**	0.031	0.031	0.031
House Administration (1 = Yes)		0.039	0.012	0.010	0.010
Education and Workforce (1 = Yes)		0.006	-0.024	-0.022	-0.024
Judiciary (1 = Yes)		0.022	-0.015	-0.014	-0.014
Natural Resources (1 = Yes)		0.045	0.022	0.023	0.023
Energy Commerce (1 = Yes)		0.100	0.009	0.002	0.000
Financial Services (1 = Yes)		0.038	-0.039	-0.038	-0.041
Appropriations (1 = Yes)		0.050	-0.009	-0.009	-0.010

Armed Services (1 = Yes)		0.045	-0.033	-0.032	-0.034
Ethics (1 = Yes)		-0.032	-0.024	-0.023	-0.024
Intelligence (1 = Yes)		0.047	0.007	0.007	0.007
Small Business (1 = Yes)		0.000	-0.009	-0.007	-0.007
Oversight and Accountability (1 = Yes)		0.008	-0.031	-0.030	-0.030
Agriculture (1 = Yes)		0.082	0.031	0.031	0.031
Homeland Security (1 = Yes)		0.033	0.029	0.029	0.030
Rules (1 = Yes)		0.048	-0.001	-0.001	-0.002
Ways and Means (1 = Yes)		0.105	-0.012	-0.019	-0.023
Transportation and Infrastructure (1 = Yes)		0.039	-0.024	-0.023	-0.025
Budget (1 = Yes)		0.070	0.027	0.030	0.030
Science, Space, Technology (1 = Yes)		0.076	-0.016	-0.014	-0.014
Veterans Affairs (1 = Yes)		0.020	-0.049	-0.049	-0.050

Committee Leadership (1 = Ranking Member; 2 = Chair)		0.043	0.005	0.004	0.003
Race (1 = Non-white)	-0.246***	-0.245***	0.089***	0.091***	0.090***
Gender (1 = Female)	0.251***	0.257***	0.023	0.022	0.021
<i>F</i>	40.2***	3.797***	41.06***	39.5***	38.04***
Adjusted <i>R</i> ²	0.150	0.136	0.701	0.700	0.700
<i>n</i>	445	445	445	445	445

** $p < 0.05$; *** $p < 0.01$

** $p < 0.05$; *** $p < 0.01$

The analysis examined the role of demographic factors, including race and gender, on voting tendencies. As seen in the results of Model 1, race and gender were strong predictors of voting actions. Non-white members were significantly more likely to vote in favor of regulations than white members ($-0.246, p < 0.01$). Female members also voted for regulations ($+0.251, p < 0.01$). Model 2 did not find significant relationships between House membership and positions and voting tendencies, except for a slight correlation between membership on the Foreign Affairs Committee and pro-regulation votes. It is important to note that this correlation is not systematic but spurious. However, this relationship disappears when considering other variables like money and party. When these variables are considered in Models 3, 4, and 5, the statistical significance of this Foreign Affairs dummy variable disappears.

Model 3 reveals that the strongest predictor of voting behavior is party identification. Democrats are more likely to vote pro-regulation than Republicans ($+0.878, p < 0.01$). This finding aligns with traditional Republican Party values of small government and Democratic Party values of supporting government regulations to ensure affordable healthcare. Tenure was also a significant predictor. Those who have been in Congress longer tend to vote against regulations than freshman representatives (-

0.076, $p < 0.05$). Money was not a significant predictor of voting behavior, nor was there an interaction between money and party, as hypothesized. Model 5, which considered all variables, found a significant relationship between the following variables on voting actions: race (+0.090, $p < 0.01$), tenure (-0.075, $p < 0.05$), and party (+0.890, $p < 0.01$).

Discussion and Conclusion

The results of this study support only one of the three predictions, the first hypothesis. The first hypothesis predicted that Democrats tend to vote more for regulations and price controls than Republicans. The second and third hypotheses were not supported. The amount of money donated by pharmaceutical PACs did not explain members' tendencies to vote for or against increased regulations. Similarly, no effect was observed with money within parties explaining voting records. The findings show that PACs target more senior members of the House of Representatives and those with positions on committees influencing pharmaceutical regulations and support earlier studies (Hall and Wayman 1990; Grier, Gier, and Mkrтчian 2023). This might indicate the trust and relationship built over a politician's terms between the individual representatives and lobbyists. Rather than induce individual members of Congress to do their bidding, lobbyists ensure that the relationships and information they have spent time and money on will continue to impact future legislation. Similarly, these senior members may tend to vote against regulations because of continuous relationships with industry and lobbyists. This supports earlier scholars' reciprocity argument for the motivation for PAC campaign contributions (Welch 1982; Austen-Smith 1987; Hall and Wayman 1990; Bronars and Lott 1997).

These findings also support the arguments made by Wawro's (2001) and Powell's (2014) argument that proving the correlation between campaign contributions and legislative support is difficult because it is almost impossible to establish a causal relationship. They argue that lobbyists operate in a reciprocal system with other non-interested lobbyists who contribute to causes outside their purview, and they then reciprocate the donations to their causes. Therefore, it is imperative to assess the content of legislation and the decisions that shape the bill as it comes to the floor. Lastly, there are many methods for supporting a legislator beyond direct donations; thus, a comprehensive and long-term analysis is required to establish a causal relationship. Despite the shortcomings of this limited study, it provides value in its attempt to assess the intersection of factors that explain legislative decision-making. Future research should expand on the

years of roll-call votes and PAC campaign contributions to combat these limitations.

References

- Abbott. n.d. "Abbott at a Glance." *Abbot* [website], March 24, 2023. <http://www.abbott.com/about-abbott/at-a-glance.html>.
- AbbVie. n.d. "Who We Are." *AbbVie* [website], March 24, 2023. <http://www.abbvie.com/who-we-are.html>.
- Amgen. n.d. "About Amgen." *Amgen* [website], March 24, 2023. <http://www.amgen.com/about>.
- Ansolabehere, Stephen, John M de Figueiredo, and James M Snyder. 2003. "Why Is There so Little Money in U.S. Politics?" *Journal of Economic Perspectives* 17 (1): 105-130.
- Austen-Smith, David. 1987. "Interest Groups, Campaign Contributions, and Probabilistic Voting." *Public Choice* 54 (2): 123-139.
- Box-Steffensmeier, Janet M., and J. Tobin Grant. 1999. "All in a Day's Work: The Financial Rewards of Legislative Effectiveness." *Legislative Studies Quarterly* 24 (4): 511-523.
- Bronars, Stephen G, and John R. Lott. 1997. "Do Campaign Donations Alter How a Politician Votes? Or, Do Donors Support Candidates Who Value the Same Things That They Do?" *The Journal of Law & Economics* 40 (2): 317-50.
- Center for Responsive Politics. n.d. "Pharmaceuticals/Health Products PACS Contributions to Candidates, 2019-2020." *OpenSecrets.org* [website], March 24, 2023. <http://www.opensecrets.org/political-action-committees-pacs/industry-detail/H04/2020>.
- Centers for Disease Control and Prevention. n.d. "FASTSTATS - Therapeutic Drug Use." *Centers for Disease Control and Prevention* [website]. February 23, 2023. <http://www.cdc.gov/nchs/fastats/drug-use-therapeutic.htm>.
- Constant, Louay M. 2006. "When Money Matters: Campaign Contributions, Roll Call Votes, and School Choice in Florida." *State Politics & Policy Quarterly* 6 (2): 195-219.

- De Figueiredo Jr, Rui J. P., and Geoff Edwards. 2007. "Does Private Money Buy Public Policy? Campaign Contributions and Regulatory Outcomes in Telecommunications." *Journal of Economics & Management Strategy* 16 (3): 547-76.
- DeSilver, Drew, and Patrick van Kessel. "As More Money Flows into Campaigns, Americans Worry about Its Influence." *Pew Research Center* [website], July 27, 2020. <http://www.pewresearch.org/fact-tank/2015/12/07/as-more-money-flows-into-campaigns-americans-worry-about-its-influence/>.
- Esterling, Kevin M. 2007. "Buying Expertise: Campaign Contributions and Attention to Policy Analysis in Congressional Committees." *The American Political Science Review* 101 (1): 93-109.
- Grier, Kevin, Robin Grier, and Gor Mkrtchian. 2023. "Campaign Contributions and Roll-Call Voting in the U.S. House of Representatives: The Case of the Sugar Industry." *The American Political Science Review* 117 (1): 340-46.
- Hall, Richard L., and Frank W. Wayman. 1990. "Buying Time: Moneyed Interests and the Mobilization of Bias in Congressional Committees." *The American Political Science Review* 84 (3): 797-820.
- Health Policy Institute. n.d. "Prescription Drugs." *Health Policy Institute* [website], Georgetown University. February 13, 2019 at <http://hpi.georgetown.edu/rxdrugs/>.
- Hernandez, Inmaculada, Alvaro San-Juan-Rodriguez, Chester B. Good, and Walid F. Gellad. 2020. "Changes in List Prices, Net Prices, and Discounts for Branded Drugs in the U.S., 2007-2018." *JAMA* 323 (9): 854.
- Johnson and Johnson (n.d.) "About Johnson & Johnson [website], *Johnson and Johnson*. March 24, 2023. <http://www.jnj.com/about-jnj>.
- Library of Congress. n.d. "Congress.gov" *Library of Congress* [website], March 24, 2023. <http://www.congress.gov/>.

- Luke, Douglas A., and Melissa Krauss. 2004. "Where There's Smoke There's Money: Tobacco Industry Campaign Contributions and US Congressional Voting." *American Journal of Preventive Medicine* 27 (5): 363-72.
- Lowery, David, Virginia Gray, Jennifer Benz, Mary Deason, Justin Kirkland, and Jennifer Sykes. 2009. "Understanding the Relationship Between Health PACs and Health Lobbying in the American States." *Publius* 39 (1): 70-94.
- Maniadis, Zacharias. 2009. "Campaign Contributions as a Commitment Device." *Public Choice* 139 (3/4): 301-15.
- Mayhew, David R. 1974. *Congress: the Electoral Connection*. New Haven: Yale University Press.
- Meiri, Amir, Fang Zhang, Dennis Ross-Degnan, and J. Frank Wharam. 2020. "Trends in Insulin out-of-Pocket Costs and Reimbursement Price among US Patients with Private Health Insurance, 2006-2017." *JAMA Internal Medicine* 180 (7): 1010.
- Pfizer. n.d. "Pfizer's Core Values of Social Responsibility and Philanthropy." *Pfizer* [website], March 24, 2023. <http://www.pfizer.com/about>.
- Powell, Lynda W. 2014. "The influence of campaign contributions on the legislative process." *Duke J. Const. L. & Pub. Pol'y* 9: 75.
- Primo, David M., and Jeffrey Milyo. 2020. *Campaign Finance and American Democracy: What the Public Really Thinks and Why It Matters*. Chicago: The University of Chicago Press.
- Roscoe, Douglas D., and Shannon Jenkins. 2005. "A Meta-Analysis of Campaign Contributions' Impact on Roll Call Voting." *Social Science Quarterly* 86 (1): 52-68.
- Sisko, Andrea M., Sean P. Keehan, John A. Poisal, Gigi A. Cuckler, Sheila D. Smith, Andrew J. Madison, Kathryn E. Rennie, and James C. Hardesty. 2019. "National Health Expenditure Projections, 2018-27: Economic and Demographic Trends Drive Spending and Enrollment Growth." *Health Affairs* 38 (3): 491-501.

- Tripathi, Micky, Stephen Ansolabehere, and James M. Snyder. 2002. "Are PAC contributions and lobbying linked? New evidence from the 1995 Lobby Disclosure Act." *Business and Politics* 4 (2): 131-155.
- Wawro, Gregory. 2001. "A Panel Probit Analysis of Campaign Contributions and Roll-Call Votes." *American Journal of Political Science* 45 (3): 563-579.
- Welch, William P. 1982. "Campaign contributions and legislative voting: Milk money and dairy price supports." *Western Political Quarterly* 35 (4): 478-495.
- Wouters, Olivier J. 2020. "Lobbying Expenditures and Campaign Contributions by the Pharmaceutical and Health Product Industry in the United States, 1999-2018." *JAMA Internal Medicine* 180 (5): 688-97.

