Database Assignment

*Note: For the purposes of this assignment, an alternate universe version of myself is working for a Democratic Congressional candidate for U.S. House District 1 in Maryland. I am using a subset of a dataset from the Federal Election Commission provided for this assignment* (Federal Election Commission, 2018)*.*

# Area for Improvement 1: Donations from Committees

I am interested in seeing what the average donation is from committees for Democratic candidates, compared to candidates from other parties. Specifically, I would be interested to see whether there is a difference between average committee support for Democrats and average committee support for candidates from the state of Maryland. This would fulfill two goals. The first is for my candidate to have an average donation that is equal or greater than the average for other Democratic candidates. Although I think that many factors could influence the amount a committee donates to a candidate (e.g., how competitive the race is), I see the average donation as a basic indicator of how well fundraising is going. I suspect that if committees are donating less than the average amount donated to other candidates (either nationwide or in Maryland), it could indicate a lack of support or ineffective outreach. The second is to get an idea of overall willingness to donate to Democratic candidates by committees. For instance, if Democratic candidates from Maryland tend to get less support on average than other Democrats (or candidates from other parties), then it may be necessary to reach out to committees that tend to donate to Democrats to see how support can be increased. Furthermore, if Democratic candidates tend to get less support than Republican ones overall, then that could be an indicator that my candidate may be starting at a disadvantage from a fundraising perspective.

## Queries and Query Results

To figure out the average donation from committees for candidates from each party, I executed the following query to do the inner join and calculate the averages:

# SELECT candidate.CAND\_PTY\_AFFILIATION, AVG(committee2candidate.TRANSACTION\_AMT)

# FROM candidate

# INNER JOIN committee2candidate ON candidate.CAND\_ID = committee2candidate.CAND\_ID

# GROUP BY candidate.CAND\_PTY\_AFFILIATION

# ORDER BY AVG(TRANSACTION\_AMT) DESC

This is my result:

| **CAND\_PTY\_AFFILIATION** | **AVG(committee2candidate.TRANSACTION\_AMT)** |
| --- | --- |
| REP | 1846.1764 |
| UNK | 1787.5524 |
| DFL | 1714.2857 |
| DEM | 1642.6896 |
| IND | 1380.0000 |
| LIB | 1000.0000 |

Key: LIB = Libertarian Party, DFL = Democratic-Farmer-Labor, IND = Independent, UNK = Unknown, DEM = Democrat, REP = Republican (Federal Election Commission, n.a.).

Here we see that Democratic candidates get less support from committees, on average, than Republican candidates. I was also interested in the average donation for candidates in Maryland, by political party, to find this information, I ran the following query:

SELECT candidate.CAND\_ST, candidate.CAND\_PTY\_AFFILIATION, AVG(committee2candidate.TRANSACTION\_AMT)

FROM candidate

INNER JOIN committee2candidate ON candidate.CAND\_ID = committee2candidate.CAND\_ID

WHERE CAND\_ST="MD"

GROUP BY candidate.CAND\_PTY\_AFFILIATION

ORDER BY AVG(TRANSACTION\_AMT) DESC

This is the result:

|  |  |  |
| --- | --- | --- |
| **CAND\_ST** | **CAND\_PTY\_AFFILIATION** | **AVG(committee2candidate.TRANSACTION\_AMT)** |
| MD | REP | 1700.0000 |
| MD | DEM | 1407.4074 |

Key: DEM = Democrat, REP = Republican (Federal Election Commission, n.a.).

The average donation for Democrats in the state of Maryland is over $200 less than the average donation to Democrats in the United States as a whole. In addition, the difference in average donation levels for Democrats compared to Republican candidates in Maryland is greater than on the national level (with a difference of almost $300 on average). The reason for this may be because that Maryland has a Congressional delegation that is almost all Democrats; the only Republican in the delegation is in House District 1 which is expected to stay Republican held (Ballotpedia, 2018; Five Thirty Eight, 2018). Therefore, if we want a higher average donation or to catch up with the Republican candidate, our campaign may want to conduct additional outreach to convince donors that the candidate could compete in the district.

# Area for Improvement 2: Donations from Maryland Residents

As of June 2018, almost 60 percent of eligible Maryland voters are registered Democrats (Maryland State Board of Elections, 2018). Since my fictional candidate is running for a U.S. House of Representative seat in Maryland, Maryland residents could also be a good source of donations and support for my fictional candidate. I am interested in comparing the average amount donated to committees affiliated with Democratic candidates with the amount donated to committees affiliated with Republican candidates as well as committees that are not affiliated with a political party. I am also interested in the total number of donations to committees that are below $250, because just calculating averages may mask small donations (which are also important). I chose $250 as a cutoff point, because according to a Pew Research report, most people who donate to political campaigns donate $250 or less (Hughes, 2017, para. 9). Although the analysis will not specify whether they are donating to a candidate from Maryland, I think that the results could be used as an indicator of willingness to donate to Democratic affiliated committees (and potentially the candidate I am working for), which is ultimately the goal. If Maryland residents are donating to Republican affiliated or unaffiliated organizations on average (or more are making small donations to those committees), it could indicate a problem with fundraising and enthusiasm. Conversely, if more Maryland residents are donating to committees affiliated with Democrats (or more are making small donations), it indicates that there is a sizable population of Maryland residents who may interested in donating to my candidate. This would merit further outreach to those residents by the campaign. However, we do not want to assume that donations to unaffiliated committees mean that the donation is unlikely to go to Democrats. In this case, I also want to look at the average donation by Maryland residents to labor unions (and to see if they are listed as having a party affiliation). This is because labor unions are traditionally a financial supporter of Democratic candidates, and therefore another possible source of support for my candidate (Center for Responsive Politics, 2018).

## Queries and Query Results 2

Because the table marylandcontibutions does not show the name of the committee or candidate that is being donated to, we need to find a way to get information from the committee table (specifically CMTE\_NM and CMTE\_PTY\_AFFILIATION) to the marylandcontributions table. First, I had to fill something in where the Committee Party Affiliation (CMTE\_PTY\_AFFILIATION) is blank. To do this, I did the following:

UPDATE committee

SET CMTE\_PTY\_AFFILIATION='Not Available'

WHERE CMTE\_PTY\_AFFILIATION = "";

After looking at the results below, I realized I should merge ‘Not Available” and “Unknown” because they mean the same thing for the purposes of this dataset (e.g., we do not know the party affiliation). I ran the following query to do this:

UPDATE committee

SET CMTE\_PTY\_AFFILIATION='UNK'

WHERE CMTE\_PTY\_AFFILIATION = "Not Available";

To find out the average contribution from Maryland voters to committees with different party affiliations, I ran the following query:

# SELECT committee.CMTE\_PTY\_AFFILIATION, AVG(marylandcontributions.TRANSACTION\_AMT)

# FROM committee

# INNER JOIN marylandcontributions ON committee.CMTE\_ID = marylandcontributions.CMTE\_ID

# GROUP BY committee.CMTE\_PTY\_AFFILIATION

ORDER BY AVG(TRANSACTION\_AMT) DESC

This is the result:

| **CMTE\_PTY\_AFFILIATION** | **AVG(marylandcontributions.**  **TRANSACTION\_AMT)** |
| --- | --- |
| DFL | 995.8333 |
| DEM | 525.2265 |
| REP | 437.4341 |
| OTH | 421.4286 |
| IND | 400.0000 |
| NPP | 375.0000 |
| UNK | 286.2232 |
| NAT | 206.5000 |
| LIB | 116.3019 |
| NNE | 95.1473 |
| PAC | 50.0000 |
| GRE | 49.0000 |

Key: IND = Independent, DFL = Democratic-Farmer-Labor, LIB = Libertarian, OTH = Other, NPP = New Progressive Party, GRE = Green Party, NNE = None, REP = Republican, UNK = Unknown, and DEM = Democrat (Federal Election Commission, n.a.).[[1]](#footnote-1)

In this case, Democrats have a higher average donation than all other parties, except the Democratic-Farmer-Labor Party.

The second query is to get a count of the number of donations under $250. To find this I ran the following query:

SELECT committee.CMTE\_PTY\_AFFILIATION, COUNT(marylandcontributions.TRANSACTION\_AMT)

FROM committee

INNER JOIN marylandcontributions ON committee.CMTE\_ID = marylandcontributions.CMTE\_ID

WHERE TRANSACTION\_AMT <= 250

GROUP BY committee.CMTE\_PTY\_AFFILIATION

ORDER BY TRANSACTION\_AMT DESC

This is the result:

| **CMTE\_PTY\_AFFILIATION** | **COUNT(marylandcontributions.**  **TRANSACTION\_AMT)** |
| --- | --- |
| UNK | 25081 |
| DEM | 9270 |
| REP | 3417 |
| NNE | 1378 |
| LIB | 50 |
| GRE | 10 |
| OTH | 4 |
| PAC | 4 |
| NAT | 3 |
| DFL | 3 |
| IND | 2 |
| NPP | 1 |

Key: IND = Independent, DFL = Democratic-Farmer-Labor, LIB = Libertarian, OTH = Other, NPP = New Progressive Party, GRE = Green Party, NNE = None, REP = Republican, UNK = Unknown, and DEM = Democrat (Federal Election Commission, n.a.).[[2]](#footnote-2)

In this case, Democrats have a higher count of donations that are under $250 than other political parties (the only one with a higher count is where the party affiliation is listed as unknown).

The final query is finding out the average donation by Maryland residents to labor unions. I used the following query (because the count of transactions under $250 is very high for organizations with an unknown affiliation, I also wanted to know the number of donations as well):

SELECT committee.ORG\_TP, committee.CMTE\_PTY\_AFFILIATION, committee.CMTE\_NM, COUNT(marylandcontributions.TRANSACTION\_AMT), AVG(marylandcontributions.TRANSACTION\_AMT)

FROM committee

INNER JOIN marylandcontributions ON committee.CMTE\_ID = marylandcontributions.CMTE\_ID

WHERE ORG\_TP = "L"

GROUP BY committee.CMTE\_NM

ORDER BY AVG(marylandcontributions.TRANSACTION\_AMT)

The results are provided on the next page. The results could be used to provide a list of unions that my candidate’s campaign may want to investigate reaching out to for their support. From the results we can see that the average donation size for all the unions listed are small (e.g., all but four have an average donation of less than $250), there are donations to a large list of unions (e.g., over 50 unions are listed on this table), and that the unions are listed as not having a political affiliation.

Here is my result:

| **ORG\_**  **TP** | **CMTE\_PTY\_**  **AFFILIATION** | **CMTE\_NM** | **COUNT(marylandcontributions.**  **TRANSACTION\_AMT)** | **AVG(marylandcontributions.**  **TRANSACTION\_AMT)** |
| --- | --- | --- | --- | --- |
| L | UNK | AMALGAMATED TRANSIT UNION - COPE | 110 | 13.9455 |
| L | UNK | BROTHERHOOD OF LOCOMOTIVE ENGINEERS & TRAINMEN PAC FUND | 3 | 16.6667 |
| L | NNE | UNITED STEELWORKERS POLITICAL ACTION FUND | 58 | 19.7241 |
| L | UNK | UNITED MINE WORKERS OF AMERICA - COAL MINERS POLITICAL ACTION COMMITTEE | 2 | 20.0000 |
| L | UNK | WORKERS UNITED FOR POLITICAL POWER | 14 | 21.7857 |
| L | UNK | NATIONAL ELEVATOR CONSTRUCTORS PAC/ INTN'L  UNION OF ELEVATOR CONSTRUCTORS (NEC PAC) | 49 | 21.8980 |
| L | UNK | BROTHERHOOD OF RAILROAD SIGNALMEN POLITICAL ACTION COMMITTEE | 6 | 23.3333 |
| L | UNK | ROAD SPRINKLER FITTERS LOCAL UNION NO. 669, UA, AFL-CIO PAC | 10 | 25.0000 |
| L | UNK | INTERNATIONAL LONGSHOREMEN'S ASSOCIATION AFL-CIO COMMITTEE ON POLITICAL EDUCATION             ILA-COPE | 3 | 25.3333 |
| L | UNK | MASON TENDERS DISTRICT COUNCIL OF GREATER NEW YORK & LI PAC | 1 | 30.0000 |
| L | UNK | NATIONAL ASSOCIATION OF LETTER CARRIERS OF U.S.A. POLITICAL FUND (LETTER CARRIER POLITICAL FUND) | 104 | 34.3846 |
| L | UNK | PLASTERERS' AND CEMENT MASONS' ACTION COMMITTEE | 18 | 40.0000 |
| L | UNK | NATIONAL POSTAL MAIL HANDLERS UNION - DIVISION OF LABORERS' INT'L UNION OF NORTH AMERICA | 10 | 41.0000 |
| L | NNE | D.R.I.V.E. - DEMOCRAT, REPUBLICAN, INDEPENDENT VOTER EDUCATION (THE PAC OF THE INTERNATIONAL BROTHERHOOD OF TEAMSTERS) | 131 | 41.3740 |
| L | UNK | INT'L. ASSOCIATION OF BRIDGE, STRUCTURAL, ORNAMENTAL & REINFORCING IRON WORKERS (IPAL) | 12 | 43.3333 |
| L | UNK | SEAFARERS POLITICAL ACTIVITY DONATION - SEAFARERS INTERNATIONAL UNION OF NA-AGLIWD/NMU | 53 | 46.1132 |
| L | UNK | MID-ATLANTIC LABORERS' POLITICAL LEAGUE - LABORERS' INTERNATIONAL UNION OF N.A. | 3 | 46.6667 |
| L | UNK | 1199 SERVICE EMPLOYEES INT'L UNION FEDERAL POLITICAL ACTION FUND | 1 | 47.0000 |
| L | UNK | COMMITTEE FOR GOOD GOVERNMENT INTERNATIONAL UNION UAW | 9 | 48.8889 |
| L | UNK | LOCAL 32BJ SERVICE EMPLOYEES INTERNATIONAL UNION AMERICAN DREAM POLITICAL ACTION FUND | 15 | 49.0000 |
| L | UNK | BAKERY, CONFECTIONERY, TOBACCO WORKERS AND GRAIN MILLERS INTERNATIONAL UNION PAC | 67 | 51.4627 |
| L | UNK | IUOE OPERATING ENGINEERS | 28 | 52.0714 |
| L | UNK | AIR LINE PILOTS ASSOCIATION PAC | 52 | 55.0192 |
| L | UNK | TRANSPORTATION TRADES DEPARTMENT AFL-CIO POLITICAL ACTION COMMITTEE (TTD/PAC) | 11 | 55.4545 |
| L | UNK | AMERICAN FEDERATION OF STATE COUNTY & MUNICIPAL EMPLOYEES  P E O P L E | 598 | 58.3980 |
| L | UNK | COMMUNICATIONS WORKERS OF AMERICA-COPE POLITICAL CONTRIBUTIONS COMMITTEE | 42 | 61.3333 |
| L | UNK | INTERNATIONAL BROTHERHOOD OF ELECTRICAL WORKERS POLITICAL ACTION COMMITTEE | 42 | 62.2619 |
| L | UNK | INTL UNION OF BRICKLAYERS & ALLIED CRAFTWORKERS PAC | 64 | 62.6406 |
| L | UNK | POLITICAL ACTION COMMITTEE OF THE INTERNATIONAL ALLIANCE OF THEATRICAL STAGE EMPLOYEES | 38 | 63.5526 |
| L | UNK | AMERICAN FEDERATION OF GOVT. EMPL. POLITICAL ACTION COMMITTEE | 135 | 75.0000 |
| L | UNK | OFFICE AND PROFESSIONAL EMPLOYEES INTERNATIONAL UNION (OPEIU) JB MOSS VOICE OF THE ELECTORATE (VOTE) | 18 | 77.5000 |
| L | NNE | CARPENTERS LEGISLATIVE IMPROVEMENT COMMITTEE UNITED BROTHERHOOD OF CARPENTERS AND JOINERS | 87 | 80.2069 |
| L | UNK | UNITED FOOD AND COMMERCIAL WORKERS INTERNATIONAL UNION ACTIVE BALLOT CLUB | 78 | 82.2564 |
| L | UNK | NEA FUND FOR CHILDREN AND PUBLIC EDUCATION | 410 | 82.8659 |
| L | NNE | MACHINISTS NON PARTISAN POLITICAL LEAGUE OF THE INTERNATIONAL ASSOCIATION OF MACHINISTS & AEROSPACE WORKERS | 1036 | 95.1834 |
| L | UNK | DISTRICT NO. 1-PCD, MARINE ENGINEERS' BENEFICIAL ASSOC. - POLITICAL ACTION FUND (MEBA-PAF) | 45 | 98.5333 |
| L | UNK | LABORERS' INTERNATIONAL UNION OF NORTH AMERICA (LIUNA) PAC | 27 | 99.7778 |
| L | UNK | NATIONAL RURAL LETTER CARRIERS' ASSOCIATION POLITICAL ACTION COMMITTEE | 3 | 108.3333 |
| L | UNK | AMERICAN FEDERATION OF MUSICIANS OF THE UNITED STATES AND CANADA - TEMPO POLITICAL ACTION COMMITTEE | 3 | 110.3333 |
| L | UNK | AMERICAN FEDERATION OF TEACHERS STAFF UNION COMMITTEE ON POLITICAL EDUCATION | 8 | 113.7500 |
| L | UNK | MASTERS, MATES AND PILOTS POLITICAL CONTRIBUTION FUND | 41 | 128.9512 |
| L | UNK | INTERNATIONAL UNION OF PAINTERS AND ALLIED TRADES POLITICAL ACTION TOGETHER POLITICAL COMMITTEE | 161 | 129.6211 |
| L | UNK | AMERICAN MARITIME OFFICERS VOLUNTARY POLITICAL ACTION FUND | 18 | 144.3333 |
| L | UNK | SEIU COPE (SERVICE EMPLOYEES INTERNATIONAL UNION COMMITTEE ON POLITICAL EDUCATION) | 72 | 145.8472 |
| L | UNK | PLUMBERS & PIPEFITTERS LOCAL NO 9 POLITICAL ACTION COMMITTEE | 5 | 146.6000 |
| L | UNK | NETJETS ASSOCIATION OF SHARED AIRCRAFT PILOTS PAC; NJASAP PAC | 6 | 151.6667 |
| L | UNK | NATIONAL AIR TRAFFIC CONTROLLERS ASSOCIATION PAC | 58 | 166.9483 |
| L | UNK | NORTH AMERICA'S BUILDING TRADES UNIONS POLITICAL EDUCATIONAL FUND | 2 | 181.0000 |
| L | UNK | INTERNATIONAL ASSOCIATION OF FIREFIGHTERS INTERESTED IN REGISTRATION AND EDUCATION PAC | 161 | 203.2671 |
| L | UNK | SHEET METAL WORKERS' INTERNATIONAL ASSOCIATION POLITICAL ACTION LEAGUE | 19 | 260.5263 |
| L | UNK | UAW - V - CAP (UAW VOLUNTARY COMMUNITY ACTION PROGRAM) | 2 | 300.0000 |
| L | UNK | PROFESSIONAL AVIATION SAFETY SPECIALISTS PAC | 2 | 312.5000 |
| L | UNK | AFL-CIO COPE POLITICAL CONTRIBUTIONS COMMITTEE | 14 | 367.5714 |

# Potential Issues with Data

In the candidate table, I noticed that the variable names CAND\_ST (which shows the candidate’s state) and CAND\_ST1 and CAND\_ST2 (which shows the street address of the office) are very similar. Therefore, there is the potential for an analyst to get the variables mixed up if they are not paying attention.

There appears to be an issue with miscoding in the “committee” table, in the column CMTE\_PTY\_AFFILIATION. As indicated in footnotes 1 & 2, the FEC Party Code webpage did not have entries for NAT and PAC. From my queries, I noticed that the “NAT” code did not appear to be affiliated with any committee, with two possible exceptions (Citizens for Rush and Friends of John LaFalce). In addition, for “PAC” the only entry that came up in my query was a PAC for the 3M company. In both cases, UNK or NNE would be more appropriate.

# Word Count

2,562

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1. The FEC Party Code webpage did not have entries for NAT and PAC. I used the query SELECT \* FROM committee; WHERE CMTE\_PTY\_AFFILIATION = "NAT" (or = “PAC”). There does not appear to be a pattern to the list of committees that came up for “NAT”, but most did not appear to be affiliated with a specific campaign (except Citizens for Rush and Friends of John LaFalce). For “PAC” the only entry that came up was a PAC for the 3M company. [↑](#footnote-ref-1)
2. The FEC Party Code webpage did not have entries for NAT and PAC. I used the query SELECT \* FROM committee; WHERE CMTE\_PTY\_AFFILIATION = "NAT" (or = “PAC”). There does not appear to be a pattern to the list of committees that came up for “NAT”, but most did not appear to be affiliated with a specific campaign (except Citizens for Rush and Friends of John LaFalce). For “PAC” the only entry that came up was a PAC for the 3M company. [↑](#footnote-ref-2)