**PROJECT ON ANALYIS OF EXPENDITURE OF CONGRESS REPRESENTATIVES**

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Members of the Congress and Congressional offices receive an annual budget to spend on staff, supplies, transportation and other expenses. Each quarter, representatives report the recipients of their expenditure. ProPublica compiles these reports into research-ready CSV files.

Data for this project was downloaded from the following website:

<https://www.propublica.org/datastore/dataset/house-office-expenditures>

All analysis for this project is based on detailed data (not summary data).

The dataset is described in “expenditures\_readme.txt” file.

NOTE: There is an updated version of the 2015Q2 file and so I have renamed "2015Q2-house-disburse-detail.csv" to

"2015Q2-house-disburse-detail-old.csv".

Then I renamed "2015Q2-house-disburse-detail-updated.csv" to

"2015Q2-house-disburse-detail.csv".

**Part 1: Analysis of total of all payments in the dataset.**

See part1\_analysis.ipynb or part1\_analysis.pdf file.

Total expenditure for all 35 quarters was $5570133308.79.

**Part 2: Calculation of standard deviation of ‘COVERAGE PERIOD’**

“COVERAGE PERIOD” is the difference in days between ‘START DATE’ and “END DATE’ for each payment.

See part2\_analysis.ipynb or part2\_analysis.pdf

Pooled standard deviation = 64.30441013192325

**Part 3 : Calculation of Average Annual Expenditure with a ‘START DATE’ between January 1, 2010 and December 31, 2016 (inclusive).**

See part3\_analysis.ipynb or part3\_analysis.pdf

Average Annual Expenditure = $110326284.85714209

**Part 4: Finding the ‘OFFICE’ with the highest total expenditure with a “START DATE’ in 2016, and then finding the ‘PURPOSE’ that accounts for the highest total expenditure. Calculation of the percentage of the total expenditure with a ‘START DATE’ in 2016 do these expenditures amount to.**

See part4\_analysis.ipynb or part4\_analysis.pdf

‘OFFICE’ with the highest expenditure is ‘GOVERNMENT CONTRIBUTIONS’

‘FERS’ is the ‘PURPOSE’ with the highest expenditure in ‘GOVERNMENT CONTRIBUTIONS’.

Note: ‘FERS’ stands for Federal Employees Retirement System.

**(Ref: https://www.opm.gov/faqs/QA.aspx?fid=735eda40-61a8-45df-b6ad-47185f4c91a5&pid=d12b23bc-c379-43a6-be03-e2219b8bd488)**

Percentage of total expenditure = 4.384917852847192

**Part 5 : Calculation of the highest average staff salaries among all representatives in 2016 (assuming staff size = number of unique payees in the ‘PERSONNEL COMPENSATION’ category for each representative.**

See part5\_analysis.ipynb or part5\_analysis.pdf

Highest Average Staff Salary is $17,481.22

**Part 6: Calculation of median rate of annual turnover in staff between 2011 and 2016 (inclusive)**

Assumption is that turnover for 2010 is calculated as the percentage of the staff that did not carry over to 2011. Also, we are considering only representatives who served for at least 4 years and had a staff size of at least 5 every year they served.

See part6\_analysis.ipynb or part6\_analysis.pdf

The median annual turnover rate is 23.549454676646503 percent.

**Part 7: Calculation of Percentage of the expenditures of the top 20 spenders in 2016 from the Democratic Party.**

Representatives are identified by the ‘BIOGUIDE\_ID’ and ProPublica’s Congress API has the party affiliation. For the “Top 20 Spenders”, I got the “BIOGUIDE\_ID” and downloaded the corresponding json file for each representative from ProPublica website. From the json file for each representative, I have extracted the party affilication.

Assumption is expenditure incurred in 2016 has its ‘START DATE’ in 2016.

See part7\_analysis.ipynb or part7\_analysis.pdf

Percentage of top 20 Spenders in the Democratic party = 35