# The Wealth Elasticity of Political Contributions by the Forbes 400

# Very Preliminary Draft: Not for Citation or Further Distribution!

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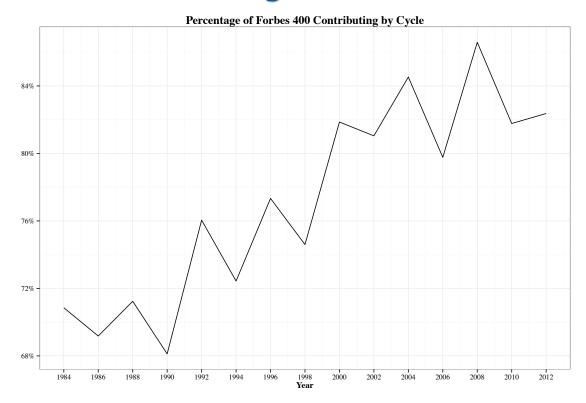
#### **Abstract**

Inequality in campaign contributions in the American plutocracy has grown hand in hand with the growth in economic inequality. We report on the campaign contributions of the *Forbes* 400 wealthiest individuals from 1983 to 2012. We find that the wealth elasticity of individual contributions is around 1.0 without statistical controls but remains around 0.6 even with fixed effects for individuals and election cycles. The results suggest that the inequality in campaign contributions is largely driven by the increase in economic inequality. The sensitivity of contributions to individual wealth mainly benefits Republicans.

Over the past 40 years, contributions to political campaigns have grown much faster than the American economy. Contributions from individuals, as against organizations such as political action committees, have come to dominate (Bonica, McCarty, Poole, and Rosenthal, 2013). The growth in individual contributions has come about in part by a growth in participation, with over 3,100,000 citizens making itemized contributions in the presidential-year cycle of 2011-12 as against less than 130,000 in the 1979-80 cycle. The participation of those designated by *Forbes* as the 400 wealthiest Americans has risen with that of the general population. Figure 1 shows that only about two-thirds of the 400 contributed in the 1980s but over four-fifths have contributed in the twenty-first century,

<sup>\*</sup> We thank Bill Zame for spurring us to do the research reported here. We thank participants at a seminar at NYU Abu Dhabi for comments. We thank Emmanuel Saez for sharing an Excel file with Forbes 400 data from 1982-2003.

Figure 1

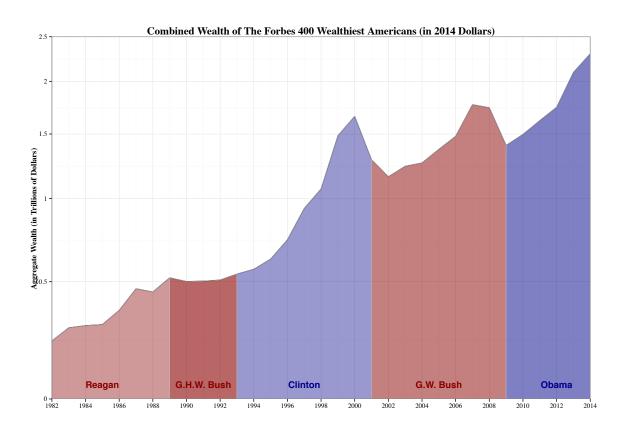


The general rise in participation has not offset the increased participation of the wealthy. The amount of dollars contributed has become increasingly concentrated through large contributors. The top 0.01% of the Voting Age Population contributed over 40% of the total money contributed in 2012 as against only 15% in 1980.

At the same time both income (Piketty and Saez, 1998) and wealth (Saez and Kopcuk, 2004; Saez and Guzman, 2014) have become increasingly concentrated in the top 1 % or 0.01%. For 1982, *Forbes* magazine reported that the 400 wealthiest Americans represented a total wealth of \$0.2 trillion, in 2014 dollars. The 400 of 2014 had a total wealth of \$2.3 trillion. Membership in the 400 fluctuates rapidly, as we discuss in detail later. Nonetheless, we do observe that as the wealth of the 400 grows, this wealth has become increasingly concentrated within the 400, as have campaign contributions.

A persistent question in political science is whether political contributions are just ideological consumption or directed at achieving policy benefits. (See Ansolebehere, de Figeurido, and Snyder, 2003 and Gordon, Hafer and Landa, 2007.) A suggestion of some ideological orientation in the Forbes 400 is provided in figure 2. There we plot the growth of wealth, with each president's term of office shaded. The 400 prospered under Reagan but also did very well under the two Democrats, Clinton and Obama. They did not do well under either Bush. The results could suggest a hypothesis that contribution is mainly ideologically, rather than self-interest, motivated. Alternatively, one could see contributions directed at preventing the redistribution of wealth generated by policies of Democratic administrations.

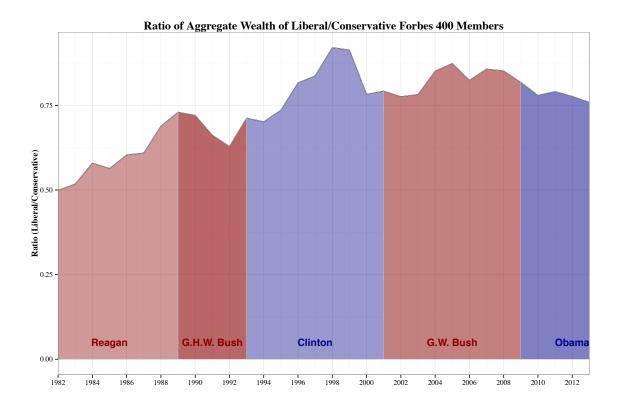
# Figure 2



The 400 do tilt to the Republicans, consistent with a self-interest perspective. On the other hand, there is a substantial cadre of Democratic contributors from Wall Street to Hollywood. Figure 3 shows the ratio of wealth of liberal contributors to that of

conservative contributors. (Liberals are those with a negative Bonica (2014) CF score. Conservatives have positive scores.) Liberal wealth was only 50% of conservative wealth in 1982 but has gradually increased and is currently 75% after peaking before the collapse of the dot.com bubble.

# Figure 3

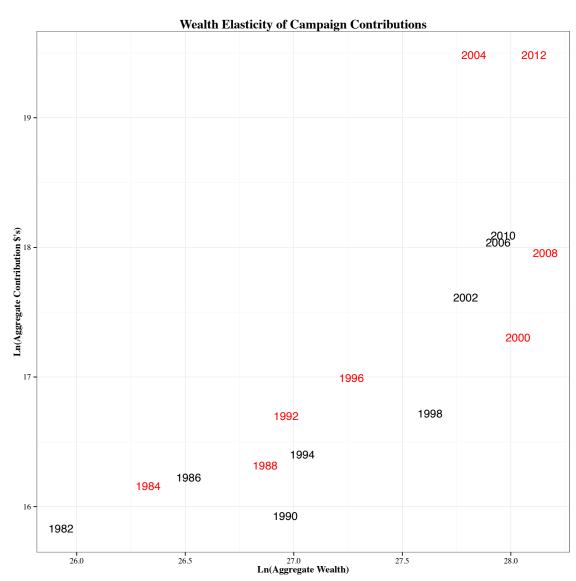


The campaign contributions of the 400 have grown hand-in-hand with their wealth. *Forbes* started the 400 series in 1982. In this paper, we report mainly on contributions in federal elections from the 1983-84 election cycle through the 2011-12 election cycle. Figure 4 plots logged total contributions of 400 members in each election cycle against logged wealth. (Observe that the figure shows very large contributions in two recent presidential years, 2004 and 2012. To check that the figure was not distorted by a few large contributions, we redid the figure with the five largest contributions trimmed from each year. Results are similar. See the

Appendix.) Although the figure shows a strikingly positive correlation at the aggregate level, the paper focuses on studying the contributions of individuals.

Figure 4. Wealth and Campaign Contributions

Presidential Years in Red



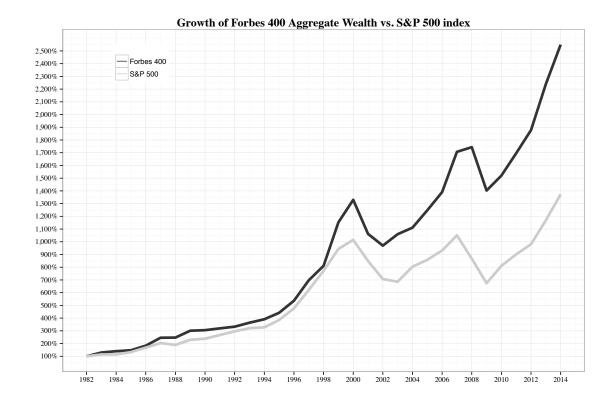
Our objective is to explore how the increasing concentration of campaign money relates to the increasing concentration of wealth. Privacy of tax returns means that we cannot link contributions to individual incomes. In contrast, we do have wealth estimates from *Forbes*. The *Forbes* estimates are noisy. Saez and Kopcuk (2004) refer to them as "educated guesses." Nonetheless, the data have been shown to closely track IRS-based measures of the wealthiest 400 taxpayers (Saez and Zucman 2014). Indeed, cross-sectional variation among the 400 is likely to swamp

measurement error. While we can debate whether #1 Bill Gates, with his \$80.3 billion in 2014, is truly richer than #2, Warren Buffet, Gates surely has more wealth than any of the bottom 100, who have at most a mere \$2.1 billion. In the time series, variations in individual wealth should be positively correlated with variations in contributions. Our estimation with fixed effects for individuals shows that changes in contributions respond to changes in the *Forbes* estimation of individual wealth, increasing our confidence that the wealth estimates have some accuracy.

We find that there is a strong positive elasticity of contributing with respect to wealth. This elasticity is not more than 1.0, however, so the wealthy are not so interested in politics that they are contributing an increasing percentage of their wealth over time. Thus, the concentration of contributions largely reflects the growth of wealth inequality.

From this perspective, it is interesting to track how the wealth of the 400 corresponds to that of the non-entrepreneurial upper middle class that have followed the advice of Princeton economist Burton Malkiel (2015) and socked away their savings (other than real estate) in indexed funds. Figure 5 plots the aggregate wealth of the 400 against the S&P 500 index. It is striking that until 1998 the index tracked the aggregate wealth of the 400 closely, but since then the aggregate wealth of the 400 increased much faster than the S&P 500. It is precisely in this last period that campaign contributions of the 400 also skyrocketed. Of course, selection has much to do with the prosperity of the 400. (More on this below.) Facebook wealth has generated 6 members who have replaced older members. On the other hand, selection also operates in the upper middle class. There has undoubtedly been selection among those maintaining steady investments in indexed funds over the past 30 years.

# Figure 5 (Nominal \$)



The paper proceeds as follows. In the next section, we discuss our data sources. (All the data is adjusted for inflation in our statistical analyses.) Importantly, we have data on campaign contributions even when an individual is not in the 400 for a given cycle. When an individual is deceased, the individual is obviously not a member of the panel nor is an individual a member before the age of 18.

The 400 are hefty contributors but are far from dominating the set of large contributors. They account for only 40 of the 155 individuals who contributed \$1 million or more to state and federal elections during the 2012 election cycle. This observation suggests that wealth alone does not drive contribution and that individual fixed effects, perhaps ideological in nature, may be important.

Our first analysis covers only contributions for an unbalanced panel consisting of all election cycles for which the individual was in the 400. If the individual was in for

both years of the cycle, wealth is averaged over the two years. Further work will deal with membership or non-membership on the list in a year through a dummy for non-membership and a dummy interacted with the threshold amount for entry into the list (\$1.3 Billion in 2014). We could include covariates for age, gender, and inherited wealth, and years of membership in the 400.

We first present a tobit estimation without fixed effects. We then include either election cycle fixed effects or a dummy for presidential year cycles. Cycle fixed effects control not only for the salience of specific elections but also for changes in campaign finance law that facilitate or impede individual contributions. They also control for potential macroeconomic circumstances, such as the financial crisis, that may, independent of wealth, influence contribution. Importantly, we also report regressions with individual fixed effects. This analysis subsumes the cohort, gender, economic sector, and inherited wealth covariates.

#### Data

#### **Contributions**

Our data is represented as an unbalanced panel of individuals across election cycles. Our dependent variable is contributions by individuals, aggregated over the two-year election cycles. We include federal election contributions to candidates, party committees, and to partisan 527s and 501c(3)s. We do not include undisclosed contributions made possible by *Citizens United*. Before 2013-14, these were relatively small. In addition, small, unreported contributions, typically below \$200 to an organization or candidate in an election cycle have not been included. For more details see Bonica, Rosenthal, and Rothman (2014). The original data was drawn from the FEC and IRS web sites. The data is maintained in the DIME database at Stanford. (data.stanford.edu/dime). We include contributions for 400 members for all years from 1983-84 through 2011-12 where the individual had reached voting age (18) and was not deceased.

#### Wealth

Our principal independent variable is wealth. We obviously can typically not measure wealth for all years in which the individual does not appear in the 400 list. For some years, *Forbes* also lists the wealth of "drop offs", those individuals who were in the list the preceding year but whose wealth no longer suffices to put them in the 400. We use this information where available. Otherwise, we adapt our methods to recognize that we have an upper bound (subject to *Forbes*'s measurement error) on the wealth of the individual.

### Record Linkage

Linking contribution records to 400 members is complicated by variations in name and address. (To start, *Forbes* introduces variation in name across years.) We used a combination of automated and directed matching to create our dataset. It remains possible that the data contains errors. The entire dataset will be posted on a web site. Corrections are welcome.

#### **Covariates**

We have information on the gender and age of the individual and rough measures of the source of wealth (finance, technology, oil, etc.)

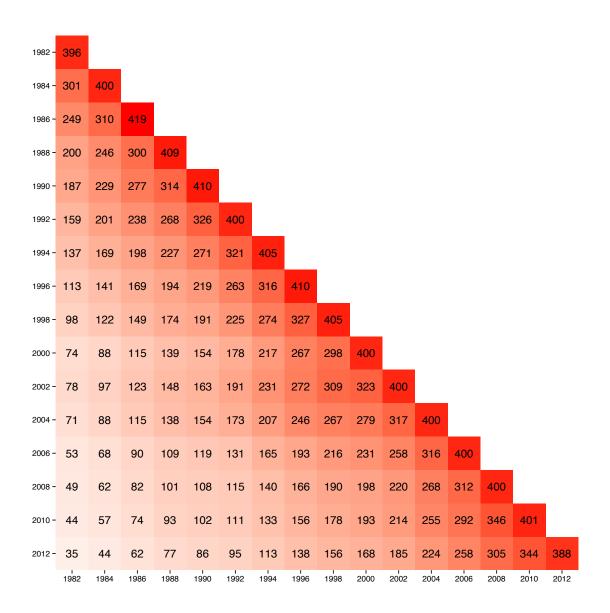
### The Forbes 400: Potential Selection Effects

Membership in the Forbes 400 evolves extremely rapidly. Table 1 cross-tabulates membership by year. Only 35 members of the 1982 list also appear in 2012. Over half of the 2002 membership is no longer in the 2012 list. Death (details to be added) is a much less important part of the story than is entrepreneurial mobility. Death does generate dynastic turnover as, for example, when Sam Walton is

succeeded by his children. Longer dynasties, such as Du Ponts, Rockefellers, Fords, and Mars, appear, but relatively young new entrepreneurial blood (Bill Gates, Mark Zuckerberg, Michael Bloomberg, George Soros, Larry Ellison) is constantly entering. Winners, like John Paulson, stick, and losers, like Raj Rajurtanam exit. As such, the wealth of the 400 increases by selection.

To see if the aggregate wealth elasticity represents more than selection, we investigate individual wealth elasticity as well. We can also study age and year of initial membership effects to see if new blood is more politically engaged.

Table 1. Turnover in the 400. The row entries for each column show members in a given year who were members in the year marking the column.



## Heterogeneity of Contributions

There is considerable heterogeneity in contribution within the 400. In 2012, the

two largest donors both in the 400 and overall were Sheldon and Miriam Adelson, who gave \$56.8 million and \$46.6 million, respectively. The Adelsons' money may not have been well spent, since most of it went to the presidential nomination bid of Newt Gingrich. (We treat households like the Adelsons as a single household identified by the main source of wealth. In this case, we treat Sheldon Adelson as contributing \$103.4 million.) But, as said previously, only 39 other members gave over \$1 million.

We need to deal not onlt with strong variation in contributions across individuals who do contribute but also with the variation in participation disclosed in Figure 1. To deal with non-participation, our basic regression specification is tobit, as used by Gordon, Hafer, and Landa (2007). The tobit is standard practice in studies of charitable giving, of which campaign contributions can be though of as a special case (Joulfaian 2000, Greene and McClelland ??, Wooldrige 2002, 518-19). The censoring problem is much less severe here than is typically the case in related studies. We observe non-zero contributions in 74 percent of cases compared to 35 percent for the sample used by Gordon, Hafer, and Landa (2007). Heterogeneity of contribution is captured by individual fixed effects.

Our first set of results pertains to an unbalanced panel of members of the 400 during their period of membership. We thus exclude, for the moment, contribution data for when these individuals are non-members. We also, to estimate fixed effects, include only individuals who have been members for three election cycles.

Our basic results appear in table 2. The first model, with no fixed effects, suggests that campaign contributions are a superior good since the estimated elasticity, 1.52, is significantly greater than 1.0. [All reported results are raw Tobit coefficients without computation of marginal effects which take into account the probability of contribution.] Superiority goes away with fixed effects. Models 2, 3, and 4, which alternate cycle and individual fixed effects and presidential year dummy all have elasticity estimates that are not significantly different from 1.0. If we replace cycle

fixed effects with a presidential year dummy, we get the expected result that more is given in presidential years although the coefficient is not statistically significant by conventional canon. The elasticity drops to 0.66 with both individual and cycle fixed effects. Still, the estimate, given measurement error, is impressive and likely to be enough, given the high rate of growth of wealth in the 400, to propel the 400 to a greater share of total campaign giving.

Table 2. Wealth Elasticity Estimates: Tobit

	Model 1	Model 2	Model 3	Model 4	Model 5
Intercept	-24.85	-17.51	-10.42	-10.69	-6.15
	(1.74)	(2.16)	(1.88)	(1.89)	(2.39)
log.wealth	1.52	1.12	0.89	0.91	0.66
	(80.0)	(0.11)	(80.0)	(80.0)	(0.11)
Table 3.Presid. year				0.32	
				(0.22)	
AIC	35229.27	35178.21	28741.15	28740.94	28608.27
BIC	35249.64	35300.41	36133.93	36140.51	36102.88
Cycle Fixed Effects	No	Yes	No	No	Yes
Individual Fixed Effects	No	No	Yes	Yes	Yes
Log Likelihood	-17611.64	-17571.11	-13281.58	-13280.47	-13200.13
Deviance	8557.55	8550.80	6857.26	6856.94	6851.93
Num. obs.	6559	6559	6559	6559	6559

Dependent variable: log contributions

#### Robustness

We next report on three robustness checks. The first includes the wealth of individuals dropped off the 400. The second limits the time period. The third checks for panel bias by using only individuals on the 400 for five or more election cycles.

In recent years, *Forbes* has been reporting estimates of wealth of individuals who dropped off the list in a given year. Including these estimates generates another 300 observations. As the change in observations is small, the estimates reported in table

3 show little change except for a significant coefficient on presidential year. (But the difference between the presidential year estimates in table 2 and table 3 does not appear to be significant.) A dummy for dropoff is positive but insignificant.

Table 3. Wealth Elasticity Estimates with Dropoffs: Tobit

	Model 1	Model 2	Model 3	Model 4	Model 5
(Intercept)	-25.26	-17.44	-10.34	-10.67	-5.77
	(1.73)	(2.17)	(1.86)	(1.87)	(2.37)
log.wealth	1.54	1.11	0.89	0.90	0.64
	(80.0)	(0.11)	(0.07)	(0.07)	(0.11)
Dropoff	0.64	0.33	0.22	0.01	0.18
	(0.35)	(0.36)	(0.23)	(0.24)	(0.23)
Pres				0.51	
				(0.18)	
AIC	36858.02	36806.48	29990.62	29984.95	29848.43
BIC	36885.36	36936.33	37439.89	37441.05	37400.21
Cycle Fixed Effects	No	Yes	No	No	Yes
Individual Fixe Effects	ed No	No	Yes	Yes	Yes
Log Likelihood	-18425.01	-18384.24	-13905.31	-13901.48	-13819.22
Deviance	8959.38	8952.78	7182.42	7181.57	7175.83
Num. obs.	6865	6865	6865	6865	6865

Dependent variable: log contributions

Because campaign finance may have been changed by the *Citizens United* decision in 2010, we also report results restricted to the 1983-84 through 2007-08 cycle. Again, results are robust, although the elasticity drops a bit with individual and cycle fixed effects included, as shown in table 4.

Table 4. Wealth Elasticity Estimates, 1984-2008: Tobit

	Model 1	Model 2	Model 5
(Intercept)	-24.64	-17.97	-4.52
	(1.90)	(2.34)	(2.53)
log.wealth	1.51	1.14	0.57
	(0.09)	(0.12)	(0.12)
AIC	30788.39	30747.82	24926.57
BIC	30808.37	30867.69	32278.73
Cycle Fixed Effects	No	Yes	Yes
Individual Fixed Effects	No	No	Yes
Log Likelihood	-15391.19	-15355.91	-11359.29
Deviance	7537.65	7530.59	5954.14
Num. obs.	5765	5765	5765

Dependent Variable: log contributions

Our final robustness check limits the analysis to those on the 400 for five or more cycles (generally 10 years) as against table 2, where the sample includes those present in three or more cycles. Again the results, shown in Table 5, are robust.

Table 5. Wealth Elasticity Estimates, 5 Cycles: Tobit

	Model 1	Model 2	Model 3	Model 4	Model 5
Intercept	-21.26	-14.81	-10.30	-10.34	-5.70
	(1.86)	(2.24)	(1.94)	(1.95)	(2.50)
log.wealth	1.36	0.99	0.89	0.89	0.64
	(0.09)	(0.11)	(80.0)	(80.0)	(0.11)
Presid. Year				0.06	
				(0.26)	
Cycle Fixed Effects	No	Yes	No	No	Yes
<b>Individual Fixed Effects</b>	No	No	Yes	Yes	Yes
Log Likelihood	-13884.89	-13853.71	-10754.48	-10754.46	-10695.14
Deviance	6659.83	6655.67	5538.33	5538.32	5535.10
Num. obs.	5137	5137	5137	5137	5137

Dependent Variable: log contributions

## Partisan Giving

If increases in individual wealth lead to substantial increases in individual giving, the increases appear mainly to the benefit of Republicans. In table 6, we report separate estimates for Democratic and Republican contributions. So if an individual gave only to Democrats, the individual would be recorded as a zero contributor to Republicans. Note that the number of observations is identical to that in Table 2. The results show that the elasticity is much higher for Republican donations than for those to Democrats. In fact, the Democrat coefficient is not significantly greater than zero.

Table 6. Wealth Elasticity Estimates by Party

	Democrats (Ind. & Cycle FEs)	Republicans (Ind. & Cycle FEs)
Intercept	-2.45	-15.28
	(3.96)	(3.23)
log.wealth	0.22	0.84
	(0.18)	(0.15)
AIC	23714.45	26847.97
BIC	31209.06	34342.58
Log Likelihood	-10753.23	-12319.98
Deviance	5772.08	6479.89
Num. obs.	6559	6559

Dependent Variable: log contributions

An even sharper (if not statistically significantly so) difference occurs if we analyze contributions to Liberals and Conservatives by separating candidates on the basis of their CF score, with a score of 0 being the separator (Bonica, 2014). Even with fixed effects, contributions to conservatives have an elasticity of nearly 1.0. The results are in table 7. The results are robust to restricting the sample to those in the 400 for five or more cycles (Results not shown, available on request.)

Table 7. Wealth Elasticity Estimates by CF Score

	Liberals (Ind. & Cycle FEs)	Conservatives (Ind. & Cycle FEs)
Intercept	0.18	-16.99
	(4.00)	(3.20)
log.wealth	0.06	0.92
	(0.18)	(0.15)
AIC	23631.68	27147.31
BIC	31125.95	34641.92
Log Likelihood	-10711.84	-12469.65
Deviance	5747.90	6529.76
Num. obs.	6559	6559

Dependent Variable: Log contribution

We explore the partisan differences further by running separate regressions for individuals in the sample grouped into ideological camps based on their past giving. Individuals with strong partisan leanings, defined as those who have given more than 90 percent of their contribution dollars to a single party during their lifetimes (including years they were not 400 members), are placed in the liberal and conservative groups. A third group of "bi-partisan" donors is made up individuals who split their donations more evenly between the parties. Non-donors and donors who have never given to a candidate or committee affiliated with a major party are excluded from the analysis. Breaking out donors by partisan leanings allows us to rule out concerns that the lower estimated elasticity for giving to Democrats might be dragged down by zeros generated by conservatives who rarely support Democrats. The results are similar to those reported in Tables 6 and 7.

**Table 8. Wealth Elasticity Estimates For Partisan Donors** 

	<u>Liberal Donors</u>			<u>Bi</u> r	<b>Bipartisan Donors</b>			<b>Conservative Donors</b>		
	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3	
(Intercept)	-8.11	7.06	6.53	-9.71	-6.61	-5.88	-22.89	-18.40	-5.21	
	(4.16)	(5.11)	(5.87)	(2.00)	(2.42)	(3.21)	(2.60)	(3.24)	(3.82)	
Ln(Wealth)	0.73	-0.14	0.20	0.87	0.69	0.64	1.47	1.22	0.85	
	(0.20)	(0.26)	(0.30)	(0.10)	(0.12)	(0.15)	(0.12)	(0.16)	(0.18)	
AIC	5868.75	5856.04	4845.29	13624.01	13616.72	11759.80	13332.27	13330.81	11905.79	
BIC	5883.68	5945.63	5860.66	13641.50	13721.64	14207.91	13349.75	13435.71	14324.26	
Log Likelihood	-2931.38	-2910.02	-2218.65	-6809.01	-6790.36	-5459.90	-6663.14	-6647.41	-5537.89	
Deviance	1402.90	1397.45	1150.44	3212.49	3210.94	2833.30	3126.85	3125.31	2886.50	
Cycle FEs	No	Yes	Yes	No	Yes	Yes	No	Yes	Yes	
Individual FEs	No	No	Yes	No	No	Yes	No	No	Yes	
Num. obs.	1072	1072	1072	2512	2512	2512	2509	2509	2509	

Dependent Variable: Log contribution

#### To Do

Contributions before and after membership, covariates. Marginal Effects. First differences.

#### Conclusion

We have shown the campaign contributions by members of the 400 are sensitive to changes in the wealth of the individuals. One might be concerned about the endogeneity of wealth with respect to contributions. This is only a partial concern. Entrepreneurs such as Bill Gates, Sergey Brin, George Soros, and Mark Zuckerberg got wealthy before they became contributors. On the other hand, established wealth may contribute to preserve or increase wealth by items like the carried interest deduction, the diminished estate tax, and special treatment for the fossil fuels sector. The question must be left to future research.

The increasing concentration of campaign contributions is likely to be responsive to the increase in economic inequality. On the other hand, the wealth elasticity is largely a matter that affects Republican or conservative candidates.

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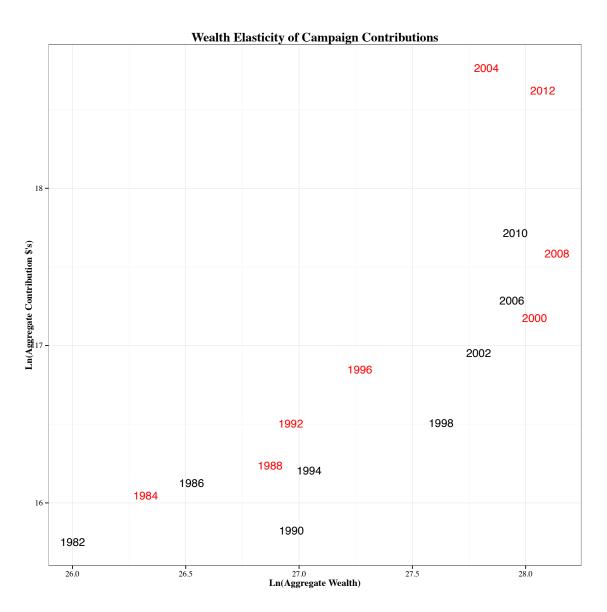
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## **Appendix**

Aggregate Campaign Contributions vs. Aggregate Wealth, Top 5 Contributors Dropped Each Year



<sup>&</sup>lt;sup>1</sup> See Bonica, McCarty, Poole, and Rosenthal (2013).

<sup>&</sup>lt;sup>2</sup> See the data section for information on contributions.