

How Money Drives US Congressional Elections:
More Evidence

Thomas Ferguson, Paul Jorgensen, and Jie Chen¹

Institute for New Economic Thinking Annual Conference
Paris, April 2015

¹ Thomas Ferguson is Professor of Political Science at the University of Massachusetts, Boston, Senior Fellow at the Roosevelt Institute, and Director of Research at the Institute for New Economic Thinking. Paul Jorgensen is Assistant Professor of Political Science at the University of Texas Rio Grande Valley. Jie Chen is University Statistician at the University of Massachusetts, Boston. The authors gratefully acknowledge support from the Working Group on the Political Economy of Redistribution of the Institute for New Economic Thinking for work on the database, but the paper represents the views of the authors, not the institutions with which they are affiliated. The entire Political Money Project database for this essay is to be freely available to the public when work on it is completed.

"Because many interests come into play in the financing of an election campaign and then they ask you to pay back. So the election campaign should be independent from anyone who may finance it."¹

Pope Francis

The protesters who swirled into parks, churches, and town squares around the world in the fall of 2011 to challenge the primacy of the “1%” hammered relentlessly on one theme above all others: that economic inequality has deep roots in the political system. Many social scientists and intellectuals who have picked up from where the Occupy movement left off share this conviction; they, too, have broken with the taboos that for so long segmented discussions of politics from economics. Piketty, in his monumental study, for example, avows that income distribution is a basically a question of “political economy” not pure economics. Stiglitz in *The Price of Inequality* is equally forthright – “increasingly, and especially in the United States, it seems that the political system is more akin to ‘one dollar one vote’ than to ‘one person one vote.’”²

But concrete analyses of how political power combines with economic forces to secure the interests of the wealthy are few and far between, not only in these exemplary works, but almost everywhere else. In the social sciences, old habits, especially if they derive from the Cold War, do not die simply because someone thinks they should; and it is dismaying to see how easily even very able economists confuse measures promoted by banks with responses to voter concerns or how economic historians keep repeating claims about Presidential decisions that archival research exploded years ago.³

But these cloudy discussions come with a silver lining. In our new Gilded Age, many features of the political landscape point so obtrusively to the dominance of the superrich that the real state of affairs is hard to miss: \$100,000 a plate fundraising dinners to kick off presidential campaigns, Secretaries of the Treasury whose pockets bulge with bonus payments from past

employers if they leave for “public service”; revolving doors between Congress and the private sector that whirl 24/7; or the surge in Congressional incomes, stock portfolios, campaign expenditures, and perks since the sixties – these are facts that no amount of spin can hope to efface.

Still, the absence of clear empirical accounts of how social class and big money translate into political dominance holds the door open to much mischief. In election years in particular, a kind of unholy alliance forms between the mainstreams of several social sciences, but especially political science and journalism. As spending on campaigns breaks all records, Super Pacs proliferate down to state and local levels, and corporations pour money into 527s and any numbers of other vehicles, the two groups keep insisting that seeing should not lead to believing.

Money, they protest, just does not matter very much in elections. A recent paper commissioned by the Campaign Finance Institute/BiPartisan Policy Center Working Group on the Money in Politics Research Agenda is representative:

There is something of a scholarly consensus at least for campaign spending in congressional races. However this consensus stands in stark contrast to the popular wisdom echoed by pundits, politicians, and reform advocates that elections are essentially for sale to the highest bidder (spender). Decades of social science research consistently reveal a far more limited role for campaign spending. Early studies tended to find that spending by challengers was far more effective than incumbent spending. More recent work argues that in principle campaign spending is equally productive across candidates, but that there are strongly diminishing marginal returns to campaign spending. Since most challengers spend less than incumbents, their spending is marginally more effective, even though the underlying “production function” that transforms money into votes is not different for challengers. Further, the best efforts at identifying the treatment effect of money in congressional races yield fairly similar substantive results: candidate spending has very modest to negligible causal effects on candidate vote shares.⁴

Such analysts are nothing if not consistent. Over the last few decades, their claims that American politics would be better off if more money flowed to political parties (rather than “outside” independent groups) have provided cover for leaders of both major parties as they dismantled one barrier after another to the political system’s equivalent of crack cocaine. Their efforts have also helped distract attention from the obvious question why all those nice people in expensive suits and dresses keep pouring money into the political system.⁵

Thus reassured, the journalists pitch in, sometimes after pausing to pat themselves on the back for courageously defying conventional wisdom. Often, our research suggests, at just about the point in campaigns where the size distribution of political contributions swells to elephantine levels, they extoll the importance of small donors to political campaigns.⁶ Recently a few, once again echoing social scientists who claim to know, add a new twist. Acknowledging that some large donors cluster at the extremes of the political spectrum, they nevertheless insist that these individuals are unrepresentative of the corporate mainstream. America's large firms, runs the line, tend to the political center. Supporting candidates of movements like, for example, the Tea Part, is not their thing; major corporations do not stoop to conquer.⁷

Two years ago we published research indicating that such views were badly mistaken.⁸ Drawing on a new data base that unified the separate reporting systems of the Federal Election Commission (FEC) and the U.S. Internal Revenue Service (IRS) we constructed – really for the first time – reliable measures of total spending in Congressional campaigns, including the burgeoning flows of outside “independent” spending. Inspired by an “investment” approach to political competition emphasizing the “money-driven” character of contemporary political systems, we broke with customary practices of sorting out how incumbents or challengers fared in favor of direct tests of the global relation of campaign expenditures to outcomes.

Our results surprised even us and we devoted considerable space to reciting the usual litanies about the pitfalls of confusing correlation and causality. We showed that in three widely spaced years – 1980, when Congress functioned very differently than it does today, 1996, and 2012 – the relation between major party candidates' shares of the two party vote and their proportionate share of total campaign expenditures were strongly linear – more or less straight lines, in fact.⁹ The relationship was strong for the Senate and almost absurdly tight for the House.¹⁰

We also exploited our new, unified dataset to identify contributors whose names and addresses differed, but who were in fact the same people, and linked them to businesses they managed or controlled to produce far more accurate estimates of the true concentration of

campaign contributions. We demonstrated, for example, that the 1% -- defined quite carefully -- dominated both major parties; at the same time, however, our results confirmed once again that major differences exist in the degree to which specific sectors and blocs of firms within big business support Democrats and Republicans. Suggestions that it is possible to understand American politics without reference to coalitions of specific sectors and firms were thus shown up yet again, while the broad investment approach to party competition was also strongly supported. We showed that the case of the Tea Party was no different by tracking the differential rates of support for its candidates within business as a whole but, most importantly, within big business. Claims that major American businesses do not financially support Tea Party candidates are simply false.¹¹

This paper extends and consolidates our work on Congress and campaign money. The discussion is in three parts. We begin with an overview of what is distinctive about our data. In the second section we show that the basic linear model we developed for analyzing our first sample of Congressional elections holds for all but one of them, both House and Senate, from 1980 to 2014.¹² (The single apparent exception, the 1982 Senate elections, is discussed below.) By itself this raises basic questions about social science discussions of campaign finance, which overlooked this relationship for more than a generation.

The third section of our paper discusses some implications of our findings and examines possible objections. We consider almost fifty years of strong relationships between money and Congressional outcomes to be very powerful evidence in favor of an investment approach to party competition -- something we believe no one would have expected from mainstreams views of the role money plays in elections. But there are, for sure, reasonable counterarguments. In particular, there is one last redoubt in which skeptics can take refuge: the possibility that money and votes are reciprocally related. As Jacobson artfully frames the conundrum that protects this escape hatch: "Money may help win votes, but the expectation that a candidate can win votes also brings in money. To the degree that (expected) votes influence spending, ordinary measures will exaggerate the effects of spending on votes."¹³

Our response to this challenge consists of two parts. Firstly, at least one clear natural experiment exists, in which it is possible to say with reasonable certainty that a tidal wave of money helped produce a shocking political upset that was anticipated by scarcely anyone: The famous 1994 election in which Newt Gingrich and a Golden Horde of donors stunned the world by seizing control of the House of Representatives for the Republicans for the first time since 1954 (and only the third time since 1932). Taking a leaf from recent studies in event analysis, we use published estimates of the change in the odds of a Republican takeover to rule out appeals to last minute shifts in expectations of victory as a major factor in the wave of money that drowned House Democrats that year.

But 1994 is only one case, though admittedly a striking one. In the hope of bypassing tedious debates over a host of less clear cut cases, we searched for more general approaches. Customary econometric techniques for resolving puzzles about reciprocal causation (one of several forms of statistical “endogeneity”) rely on so-called instrumental variables. Good instrumental variables, however, are elusive; the criteria are demanding and dismayingly uncertain – in the end, what decides is usually whether anyone can think of compelling reasons why the instrument might be contaminated.¹⁴ Given all the controversies, such a practice would make us uneasy in even the best of cases, but there are good reasons for thinking that elections pose peculiarly daunting challenges to applications of the method. Even analysts who once were optimistic express increasingly deep misgivings about the welter of claims and counter-claims in the journals.¹⁵

We suspect that where politics and money is concerned, the search for good instruments is in most instances akin to hunting the Snark. A better approach is to search for estimation methods that do not require us to lean so heavily on thin reeds. In the end, we have tried to make a virtue out of our ignorance. Building on work by Ebbes and his colleagues, we develop a latent variable instrumental model, where the instrument is unknown. These are relatively new and, of course, rely on assumptions for their validity, but they do not appear any more farfetched than other ways of tackling the question and they appear to work in practice: the solutions they give to some classical econometric puzzles appear reasonable and in line with work using more traditional methods.¹⁶ It is time to try them on the problem of money and politics.

Our data, however, differ from the cases to which such models have thus far been applied. As discussed below, strong spatial autocorrelation marks much of our data – many Senate elections and virtually all House contests. We, accordingly, cannot simply employ an off the shelf formulation; the task requires the development of a spatial latent variable instrumental variable model. Section 3 of the paper estimates such model using Bayesian methods. Our results suggest that the coefficients for money remain strong and, indeed, in many cases slightly increase in strength compared to results relying simply on spatial regressions.

Our conclusion looks briefly at the extent to which major American corporations support political extremes (on the right; claims about “left wing billionaires” can be brushed aside; essentially no major American corporations or members of the Forbes 400 support union drives or politicians like Vermont Senator Bernie Sanders). For reasons we lack the time to recount here, we are skeptical of published scales that purport to measure the left/right proclivities of major investors and corporations. We also believe that notions that major corporations are “centrists” are profoundly misleading. In this paper we accordingly look at how changing the focus from, for example, PACs to a wider notion of an “investing unit” that more fully reflects the range of ways corporations and the super-rich contribute to political campaigns alters these now familiar claims. Our test is very simple, but the results are dramatic: Far from reflecting idiosyncrasies of occasional eccentric billionaires, groups like the Tea Party are far more likely to win support from America’s large corporations than from members of the Forbes 400. Our test illustrates how relying on subsets of campaign finance data such as political action committees distort the full range of major corporate giving and underlines our earlier conclusions about the importance of sectoral and firm conflicts in analyzing politics.

Data: Beyond the FEC and the IRS

All discussions of campaign money need to begin with the caveat that political money strongly resembles the electromagnetic spectrum: Only slivers of it are visible to the naked eye and even that portion is shrinking as so-called “dark money” proliferates in the electoral system.¹⁷ On the other hand, in the United States, though not necessarily everywhere else, the visible part of the spectrum is large and important: analyzing it yields insight into flows of funds

that play truly significant roles in the system. The now celebrated category of “Dark Money” – money that anonymous donors launder through public “charities” and similar groups that are not required to report where the money came from – is less of a threat to our inquiries than one might suppose. Most such funds do briefly surge above ground as they transit to campaigns from the “charities” that ladle them out. The latter report their spending, if often carelessly, just not who gave it to them. Inquiries into total spending are thus not affected very much, though estimates of donor concentration perforce become floors, not ceilings.

For this paper, the thornier data problems arise from the fragmentation of reporting sources and formats – whose chaotic realities are, we are sure, a major reason why progress has been so slow in understanding campaign finance. Because we have extensively discussed elsewhere the measures we have taken to overcome these problems, our discussion here will be summary.¹⁸

The guiding idea of our Political Money Project is to return to the raw data made available by the FEC and the IRS and create a single unified database containing all contributions in whatever form. This is a tall order, as anyone with any familiarity with our vastly different data sources will realize. In particular, FEC sources are sometimes jarringly inconsistent; many previous analysts do always appear to recognize the extent of the “flow of funds” anomalies in this data. And not all the IRS contributions are easily available in electronic form for all years.¹⁹

But our real work commences only once this stage is completed. At both the FEC and the IRS, standards for reporting names of both individual and corporate contributors are laughably weak. Both companies and individuals routinely take advantage of regulatory nonchalance about even arrant non-compliance. Along with an enormous number of obviously bad faith reports (such as presidential contributions listed as coming from individuals working at banks that were swallowed long ago by other giants) all sorts of naïve, good faith errors abound in spelling, consistent use of Jr., Sr., or Mr., Ms., and Mrs., along with many incomplete entries and hyphenated names. Many people, especially very wealthy contributors, legitimately have more

than one address and fail to consistently list their corporate affiliations (“retired” as a category of contributor is extensively abused; some people who chair giant corporations claim the status).

From the outset we recognized that solving this problem was indispensable to making reliable estimates of the concentration of political contributions. We adapted for our purposes programs of the type used by major hospitals and other institutions dealing with similar problems, adding many safeguards against tricks that no medical institution ever has to worry about; all the while checking and cross-checking our results, especially for large contributors. In big data efforts, there is never a point where such tasks can be regarded as unimpeachably finished.²⁰ But we are certain that our data substantially improve over other sources on offer, including rosters of campaign contributions compiled by for-profit companies and all public sources.

Because we can compare many reports filed by people who we recognize as really the same person, we are able to see through schemes, such as those encouraged by the Obama campaigns (especially in 2008), that encourage individual contributors to break up contributions into what looks like many “small” donations.²¹ We are also able to fill in many entries for workplace affiliation left blank. By itself, these steps lead to a quantum leap in the number of contributions coming from the same enterprises. But we have also used business directories and data from the Securities and Exchange Commission to pin down the corporate affiliations of many other contributors, whose identifications, once established, are similarly extendible.

These efforts allow us to take another step beyond existing discussions of political money. We aggregate all the data by “investing units.” For the first time, this brings together contributions from executives, corporate treasuries (especially the often gigantic “527” donations), political action committee contributions, and recognizes that they are really all coming from the same companies. Not surprisingly, this move dramatically changes the scale of the political landscape and estimates of concentration. This process is extremely time consuming, however, and can only in part be automated. We completed and used one full database of this type for our study of the 2012 election; the process is not complete for many of the elections discussed in this paper, as we will discuss.

Models of Congressional Elections

Data compiled like this allows us to brush past artificial efforts to distinguish kinds of spending in Congressional races, such as “inside” vs. “outside” funds (that is, spent by candidate’s own committee or by allegedly “independent” outside groups) or the spending of challengers or incumbents. Instead we simply pool all spending by and on behalf of candidates and then examine whether *relative*, not absolute, differences in total outlays are related to vote differentials.

If conventional claims about the limited importance of political money are correct, then the individual data points – particular House or Senate election outcomes –should be scattered indifferently across the graph. Money just wouldn’t predict voting outcomes very well. If on the other hand, money is strongly associated with votes received, then the fit would approximate a straight line. All kinds of intermediate cases, of course, can be imagined.²²

Figure 1 shows the actual result for House elections in 2012. It shows a strongly linear relationship between Democratic candidates’ shares of total two party spending in House elections and the percentage of major party votes they won. (At the bottom left Democrats spend no money and get no votes; at the top right, they spend all the money and garner all the ballots, calculated as proportions of totals for the major parties.)

Figure 1 About Here

Suspicious that this result was too good to be true, we ran more tests. Congressional districts exist in definite physical spaces at varying distances from each other. Though much of the literature on Congress brushes past this fact, such “spatial autocorrelation” can affect the accuracy of statistical estimates rather like temporal autocorrelation does. We accordingly ran Moran tests to test for this. In most cases we found spatial autocorrelation was indeed present, so we dropped ordinary least squares approaches to estimation in favor of spatial regressions. These only improved the fit (Figure 1 shows a spatial regression).

House elections provide hundreds of data points for every election; our results for these, accordingly, were relatively robust. By constitutional design, however, Senate elections are far fewer and deliberately staggered; typically only a third of that body's 100 seats are in play in a single election. This inevitably makes our results less tight and reduces statistical reliability, but the basic approach is once again vindicated, with the qualification that in Senate races the relation between money and votes appears to be somewhat looser than in the lower house.²³ Our conjecture was, and remains, that this is related to the differential press attention lavished on Senate elections.

Our customary reaction to all analyses of political behavior is to wonder how far back in time their results can be extended, since we agree with Burnham that a broad historical approach is the royal road to real comprehension. Alas, right now data of the type required for studies like ours go back only to 1980. Still, we thought, data on elections from those earlier years might be particularly interesting, because both elections and Congress itself functioned rather differently than in the nineties and, especially, now.

Our first studies, however, revealed that not only in 1980, but also in 1996, essentially the same linear results for spending and vote shares held.

We now have compiled data for both the House and Senate in every election between 1980 and 2012 (2014 for the Senate) and have estimated equations for all of them. Figure 2 displays graphs of the House elections; Figure 3 shows results for the Senate. They confirm that the patterns we found for 1980, 1996, and 2012 are not flukes. In all of them, our model works well. With the exception of the 1982 Senate elections, the results are extremely strong. (That election has one outlier, Wisconsin. If that is removed, the results fall into line with the rest, though the R-Squared is a bit less than usual. See Figure 3, for Senate panels for that year.) The conclusion has to be that spending by major political parties is indeed strongly related to the proportion of votes they win and has been for as long as we have data.

Figures 2 and 3 About Here

Saving the Appearances?

We think that the weight of all this new evidence is substantial and merits some elaboration. As discussed below, one can envisage various ways to attempt to explain our results away. But the evidence of a whole generation of elections should be a warning that such efforts are likely quixotic. Over the last decades, American political finance has evolved extensively into a more top-down process, in which giant blocs of investors organize nationwide and work steadily with (or against) a relative handful of national political leaders, who themselves plainly strive to emulate the consumption habits of their millionaire backers.²⁴ But even now this system's degree of centralization can be overestimated, as our evidence about the divergent paths charted by different sectors in 2012 and similar studies of earlier elections should forcibly remind everyone.²⁵

In the 1980s and until at least 1994, by contrast, nothing approaching centralized fundraising machines with the capacity easily to move money around on the margins of national races existed. The closest things to these at the time were the phalanxes of millionaires that swept first Reagan and then George H.W. Bush to power, but these were centered on the White House. They did not extend to the party as a whole, especially the one that did not hold down the White House. Machines capable of bankrolling a broad array of Congressional campaigns were little more than glimmers in the eye of New Democratic leaders like Charles Manatt or Republican insurgents such as Newt Gingrich, though Gingrich's efforts represented a quantum leap in this respect.²⁶ Neither party's Congressional flows of money probably ever approached the scale that would have been required to generate rapid response patterns of the size required to generate the eerie regularities in our data. Especially given the inexactitude of real life, small sample polling done on the fly, and the infighting and disorganization that demonstrably attended so many campaign efforts then, it is hard to accept that money could possibly follow polls so slavishly. Broadly and with sizeable lags, perhaps, but not to the degree suggested by the evidence. The requisite servo-mechanisms simply did not exist. Neither the information nor the organizational capacity for such activities existed; at best one could read tea leaves early in the race, put out begging bowls, and then hope for the best. In the final days, certainly, various efforts to top up deserving candidates happened, but again mostly on a decentralized basis.

In at least one case all vestiges of an Argument from Design can be decisively rejected. In 1994, Newt Gingrich and a bloc of Republican insurgents launched a sweeping effort to take control of the House of Representatives. They had been building for this for at least a decade and there is no doubt at all that Gingrich and his fellow fundraisers extraordinaire, Haley Barbour and Phil Gramm (who was concentrating on the Senate) had deep ties to big business sectors that were by then on fire for sweeping deregulation and a roll back of the whole New Deal regulatory state.²⁷ But here is the point: Though later many chroniclers of retrospective history write the story by assuming its endpoint, in fact at the outset Gingrich's was a faith based operation. Hardly anyone believed they could actually do it, perhaps outside of the leaders themselves. On the morning after the election, the sense of shock was profound and worldwide, extending for sure even to Gingrich's major financiers, who doubtless had hopes, but no realistic expectations, of victory on the scale they had just won.

One of us witnessed how some of Gingrich's greatest donors reacted to the triumph and has never forgotten the sense of joyous seismic shock that radiated through some corners of Wall Street in the days after. Newspaper coverage of the episode confirms the general sense of stupefaction. But there is no need to take anyone's word for this. In recent years, social scientists have come to appreciate how published gambling odds can be used to index expectations about probabilities.²⁸ Though we flatly reject all forms of "rational expectations" arguments and the entire decision making theory that justifies it, we have no quarrel with the use of odds as clinical evidence about consensus expectations.

A widely followed source for political campaign odds, the Iowa Electronics Markets, has a complete series of contract quotations (which reflect changing expectations for control of the House) down to election day, 1994. At the start of the campaign, it indicates the probability of the Democrats retaining control of the House was about 80%. After many months of campaigning and excited talk – that mostly achieved notice only afterward -- about Contracts with America, the probability had not budged much. Yes, there was a last minute blip in hopes for a Republican takeover – but the surge was tiny. There was no shift big enough to justify a huge wave of money based on the idea that an epoch making change in patterns of Congressional domination impended that alert corporate chieftains would have to accommodate, whether they liked it or

not. But, as one of us noted at the time, a tidal wave of money nevertheless was rolling into the coffers of Gingrich, Gramm, Barbour, the three who made the 1994 revolution.²⁹

Figures 4 and 5 About Here

We suspect that similar cases exist, but attempting detailed analyses of each could not be easily or concisely done. Few other elections are so clear cut that published odds permit of easy interpretation and the chances of getting lost in a thicket of particulars are high. It does not help that we disagree with many presuppositions that mainstream election analysts tend to take for granted. That literature largely fails to develop a realistic assessment of the actual incentive structures in Congress and takes occasional pronouncements from individual representatives about how they dislike fundraising altogether too seriously. We also suspect that political science rankings of “quality challengers” really index the attractiveness of candidates to donors in slightly disguised form. Nor do we find it at all odd that candidates running unopposed should nevertheless often collect millions of dollars in donations for reasons that go well beyond deterring challenges, though that is certainly one way money talks in the political system. We also believe that the process by which issues develop and affect campaigns is misunderstood and complicated by the fact that differences in the amounts of time and money devoted to them are hard to study.

Because arguments along these lines would take us too far afield, we think it is better to try to tackle the problem of reciprocal causality more broadly.

At first sight, the problem is daunting. Jacobson’s review lucidly summarizes the results of a generation of such efforts.

The problem was recognized early on (Jacobson, 1978; Welch, 1981) but after nearly three decades of work there is no agreed-upon solution. The standard technical fix-up is to use a two-stage procedure, in which instrumental variables “purged” of the effects of the reciprocally-related variables or of the component correlated with the omitted variables. The efficacy of this approach depends on finding exogenous variables that affect spending but not, directly, the vote (Johnston, 1972). This has proven difficult and the results remain inconclusive. Different choices of exogenous

variables to identify the equations and compute the instruments produce a disconcerting variety of estimates of the relative effects of campaign spending by challengers and incumbents.

Reported results from various two-stage (sometimes three-stage) models of campaign spending effects range from repetition of the OLS findings in which challenger spending has a large effect while incumbent spending has no effect at all on the vote (Jacobson, 1978, 1980, 1985), to estimates suggesting that spending by incumbents is as least as productive as spending by challengers (Green and Krasno, 1988, 1990; Grier, 1991; Ansolabehere and Snyder, 1996; Gerber, 1998), with others falling in between (Bartels, 1991; Goidel and Gross, 1994). Alternative approaches produce an even broader range of results from evidence that neither candidate's spending matters much (Levitt, 1994) to evidence that the incumbent's spending may be equally or more productive than the challenger's spending (Goldstein and Freedman, 2000; Erikson and Palfrey, 1998), with others again taking the middle ground that incumbents do help themselves by spending money on campaigns, but with a lower marginal rate of return on their investment than challengers (Box-Steffensmeier, 1992; Kenny and McBurnett, 1997; Coates, 1994).³⁰

As Jacobson indicates most efforts to resolve this problem rely on some instrumental variable, though a few researchers have tried other approaches, including Jacobson himself, who introduced a very interesting panel approach in the article containing this passage. The difficulty is that the technical requirements for instrumental variables are exigent; they need to be correlated with the original variable of interest, but not with the error in the new equation constructed using them.³¹ We are skeptical that much in this world is correlated with money that isn't money, to put matters somewhat baldly, and are not optimistic about finding that Snark. The abundance of sharply contrasting results only reinforces our skepticism.

We therefore searched for an approach that would make a virtue of ignorance and looked for methods relying on latent instrumental variables, that is, variables that are unknown to the researchers. These exist; they have been developed by Ebbes and colleagues and used with apparent success in specialized applications in business and economics.³² Where their results have been compared with previous findings using more conventional approaches, such as the relations of earnings to schooling (where the latent variable is ability) they produce answers similar to previous studies.³³

Much of our data, however, is spatially autocorrelated. Existing latent instrumental variable models usually rely on ordinary least squares for their estimation and thus require

modification. We have developed a spatial latent variable instrumental model that we can estimate using Bayesian methods.

Tables 1 and 2 present our results. Table 1 summarizes findings for the House; Table 2 displays them for the Senate. For all but three House elections, spatial models are required because the data show significant spatial autocorrelation. The tables therefore report no entry for ordinary least squares estimates (OLS in the column headings); instead results for a spatial model with no instrumental variable are reported in the column to the right.³⁴ To the right of the column presenting results for the spatial models is another, headed “Bayesian Sp LIV Model,” which details our Bayesian spatial latent instrumental variable estimates. (In cases where no spatial model was necessary, the results presented in that column are for latent instrumental variable models relying on ordinary least squares.) The coefficients for the political money term in that column represent our best estimates of how money drives elections. In the case of the 1980 House elections, for example, the coefficient in the Bayesian spatial latent instrumental variable model is estimated as 1.277. That is, for every 1 % increase in the money split compared to the other party’s, the vote is expected to increase by 1.277%. That is slightly higher than the coefficient for the spatial model without the latent instrumental variable.

The results as a whole, we think, are sobering: With the latent instrumental variable estimation, never do the coefficients on money fall very much; indeed, as in example just given, they often rise. Our tentative conclusion, which we are the first to acknowledge needs more scrutiny, is that seeing should, after all, be believing: the case in favor of the proposition that money drives US elections is significantly strengthened. The endless arguments about cause and effect in money and politics, perhaps, are entering a new stage.

Conclusion: Corporate America Holding the Center?

Our earlier work showed the strong dependence of both major parties on contributions from the very wealthiest Americans – the famous 1%. As a result, we dismissed claims by both scholars and journalists that are regularly repeated in the heat of election contests that small donations are the bedrock of any but losing candidates’ campaigns.³⁵ But the ubiquity of big money in American politics also suggests that analyses of the evolution of the American political system should begin by looking closely at money politics when they attempt to understand

political change, especially political system's steady shift to the right since the late nineteen sixties.

In our own work, we try to do exactly this.³⁶ But our research has made us quite suspicious of assertions that American corporations tend to the "political center"; if they really were anchored there, we doubt that the system dynamics would be what they are. A full discussion of just how mistaken claims about corporate "centrism" are would require more space than we have here. But we would like to close our discussion of the central role money plays in American politics with a simple demonstration of the fallacy of the centrist claims.

As indicated earlier, we doubt the validity of existing scales that purport to measure how far left or right major investors and corporations are in their political giving. But there are some distinctions that we accept as unproblematic. We certainly consider Tea Party Republicans to be a distinctive group within the GOP and located well to the right of the rest of the party. A fortiori, as a group, they sit well to the right of the Democrats.

This ordering provides a simple test that is potentially very illuminating. If it is true, as often suggested, that Tea Party backers disproportionately represent eccentric billionaires rather than major American corporations, then rates of support for the Tea Party should be higher among the Forbes 400 than the rest of big business. Our data set allows us to test this directly for the 2012 election; it is an easy segmentation.

Once again, the results surprise even us: In 2012, major American firms were far more likely to support Tea Party Congressional candidates and organizations that support these movements, such as Freedom Works.³⁷

Table 3 About Here

These results could perhaps be qualified in various ways, if there were space, but the general point would not change: Stories that the rightward drift of the American political universe is somehow the work of exceptionally ideological billionaires are huge over-

simplifications. On another occasion we will look in more detail at these questions, at the limits of the Tea Party, and also consider the interesting question of what explains the differences in the slopes and intercepts of our Congressional models in various years. But no one should credit claims that major American businesses somehow sat out the last generation of wrenching political change in America. That claim amounts almost to satire.

Figure I
Spatial Regression

2012 House Data

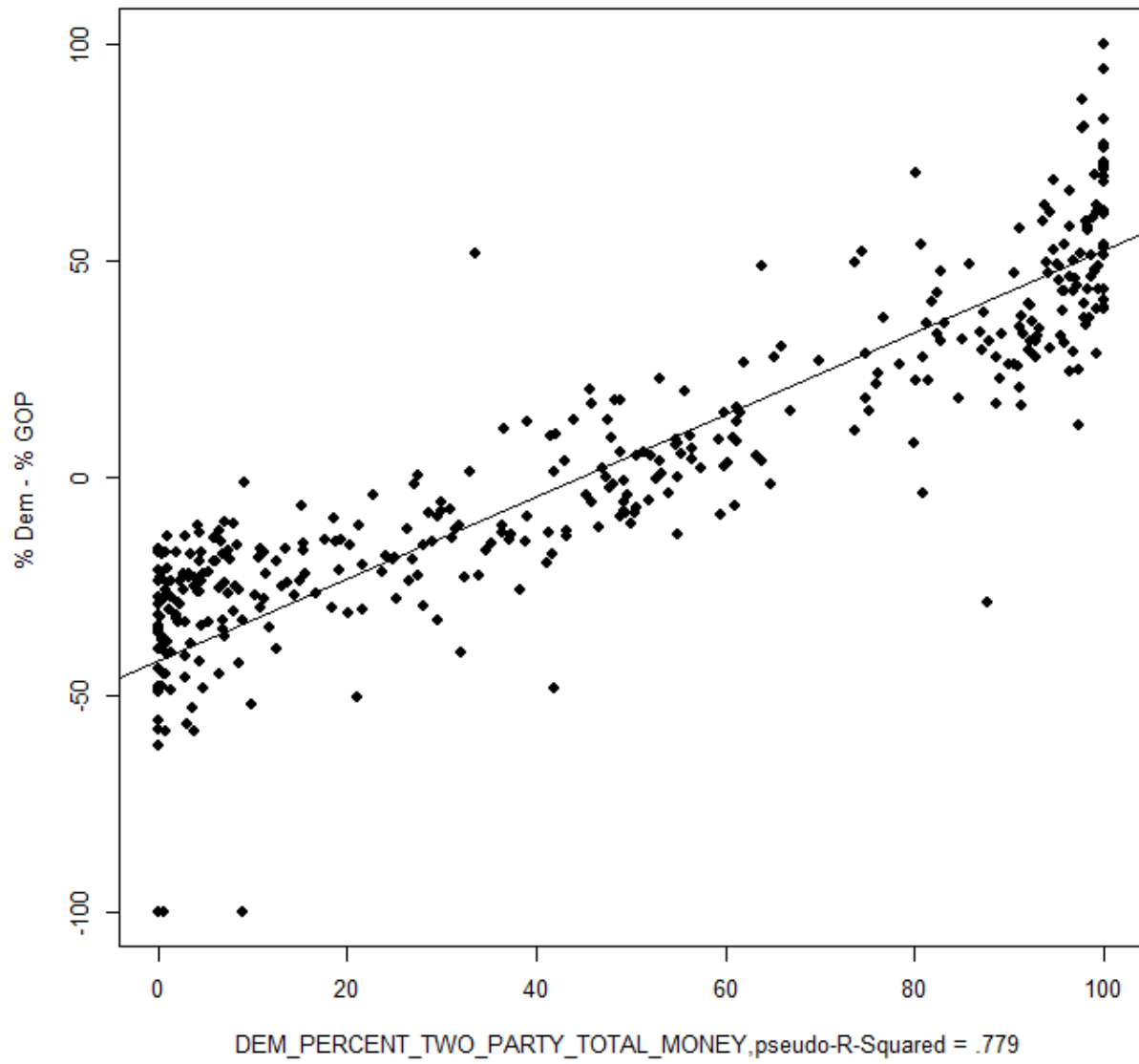


Figure 2:

House Elections 1980 to 2012

Figure 2.1: House 1980 – 1994.

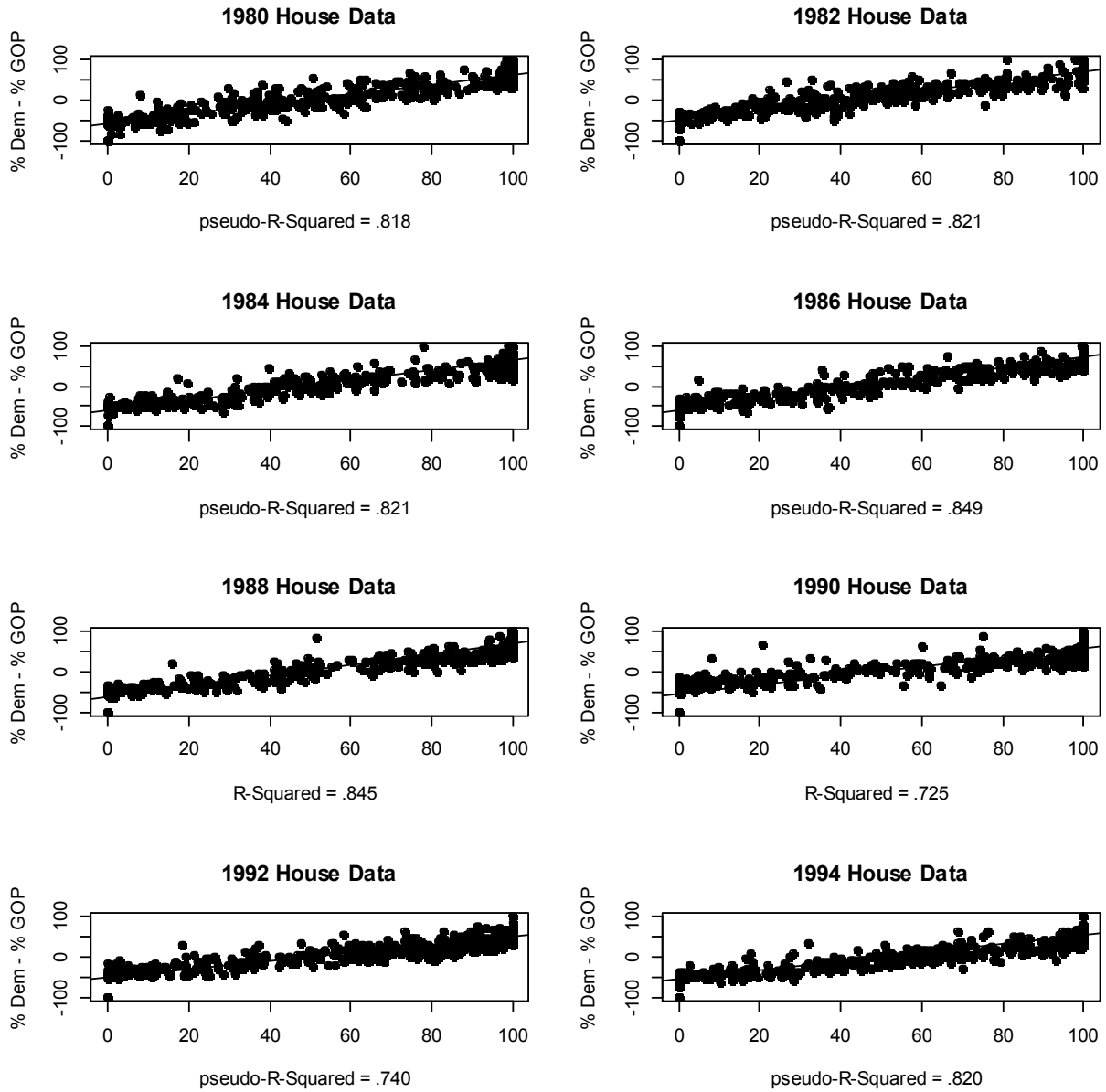


Figure 2.2: House 1996 – 2010:

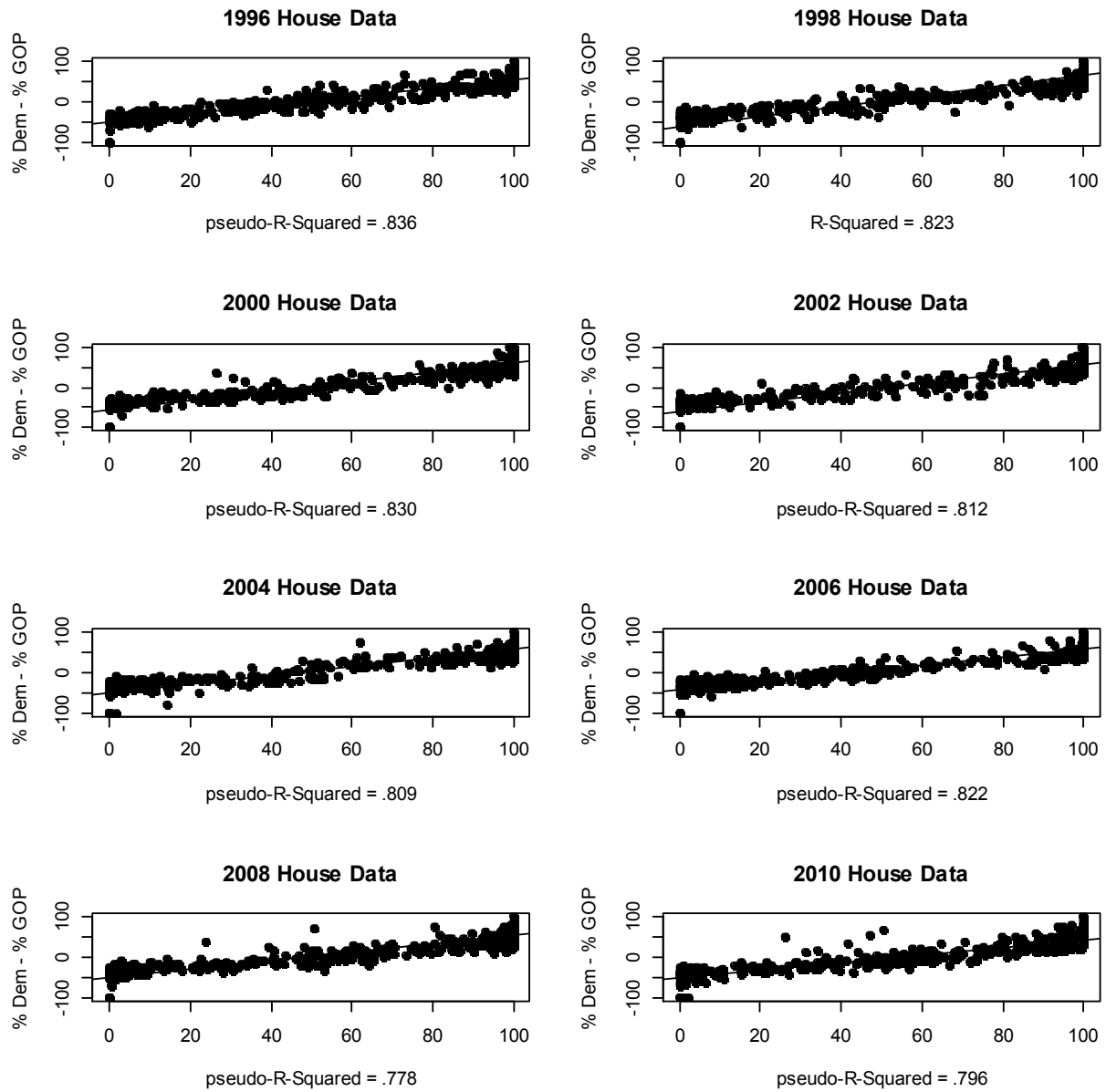


Figure 3: Senate Elections 1980 - 2014

Figure 3.1: Senate 1980 – 1992

(1982 Shown Twice – With and Without Wisconsin – See Text)

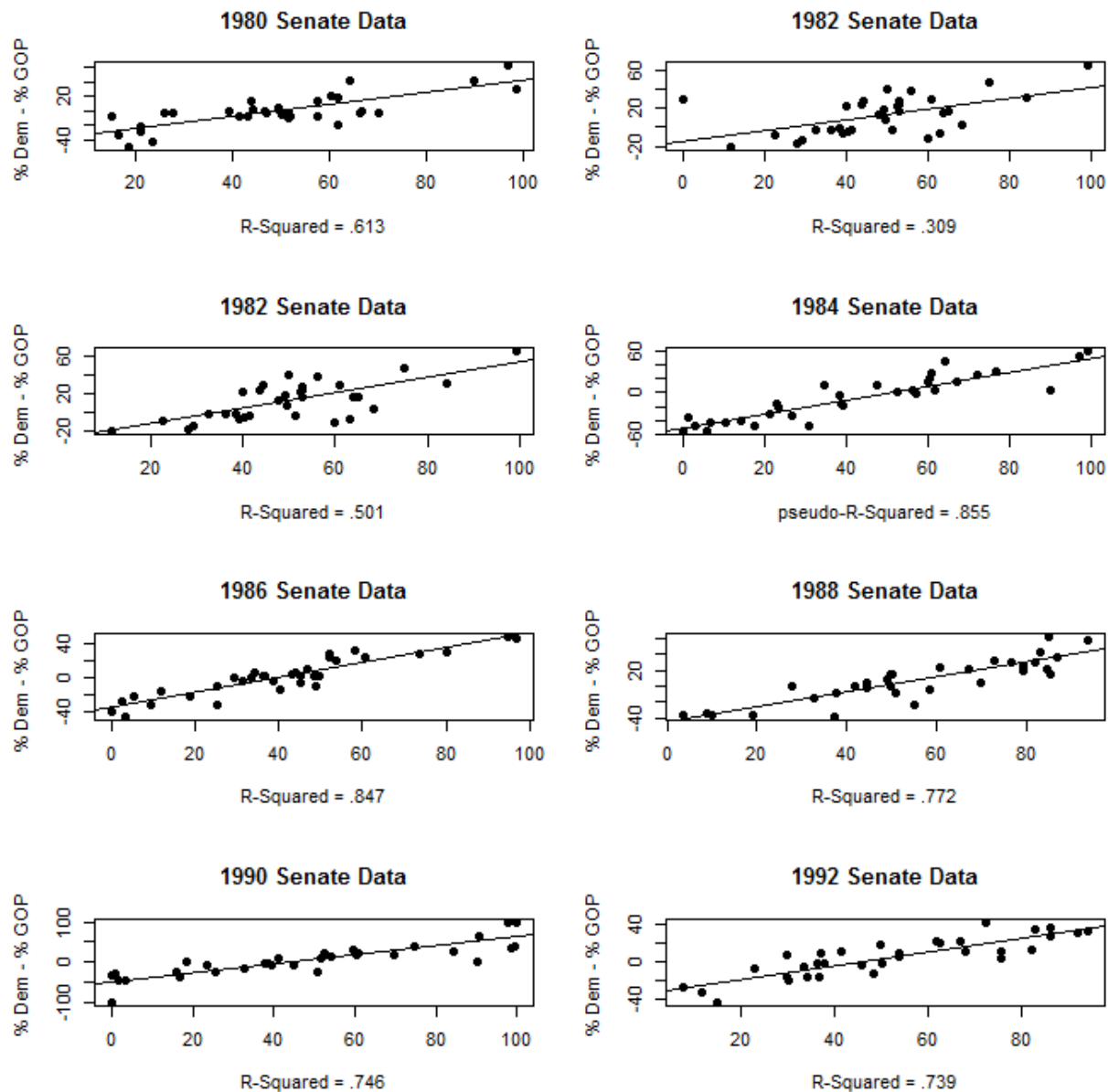


Figure 3.2, Senate 1994 – 2008

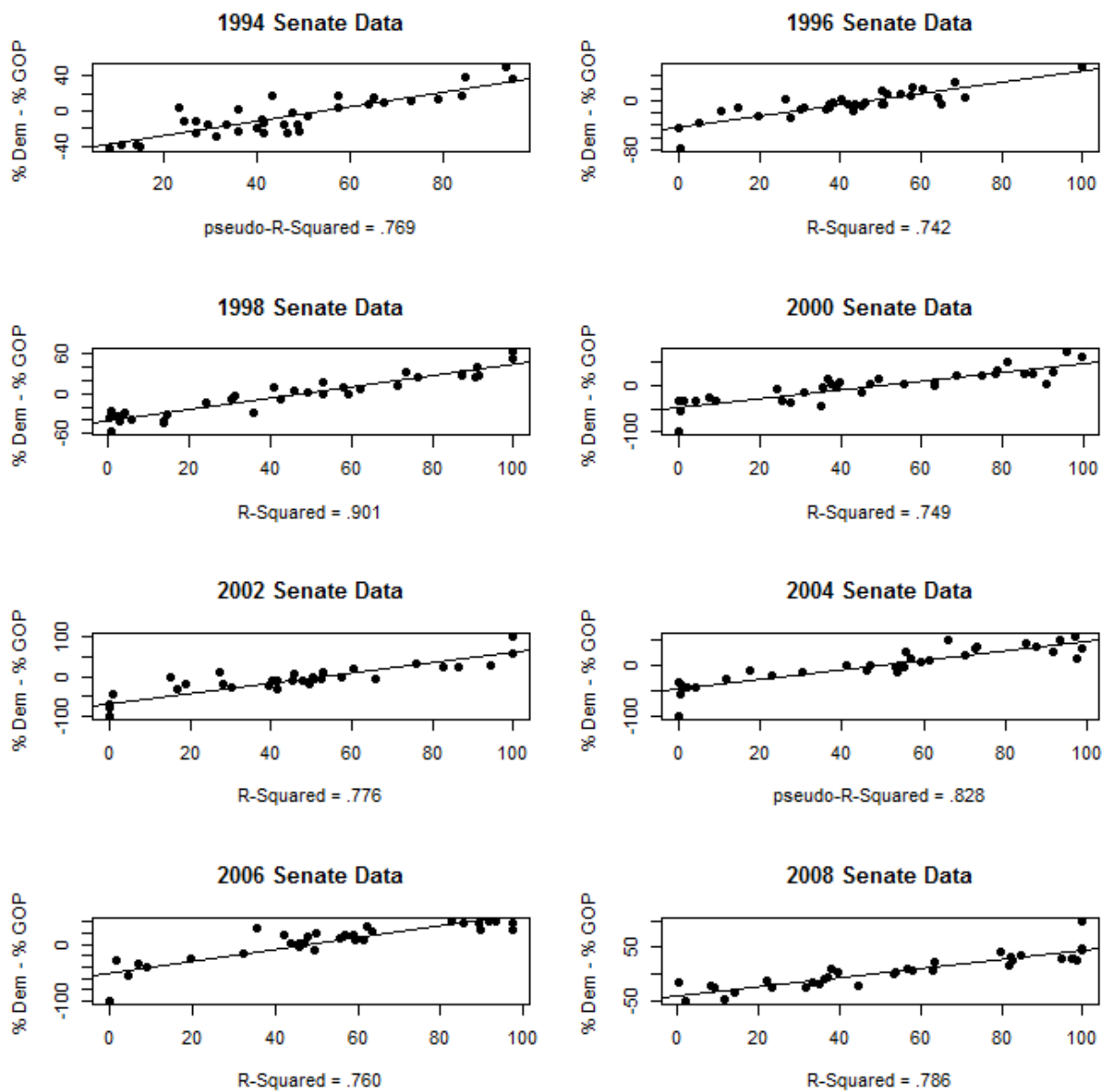


Figure 3.3 Senate 2010 – 2014

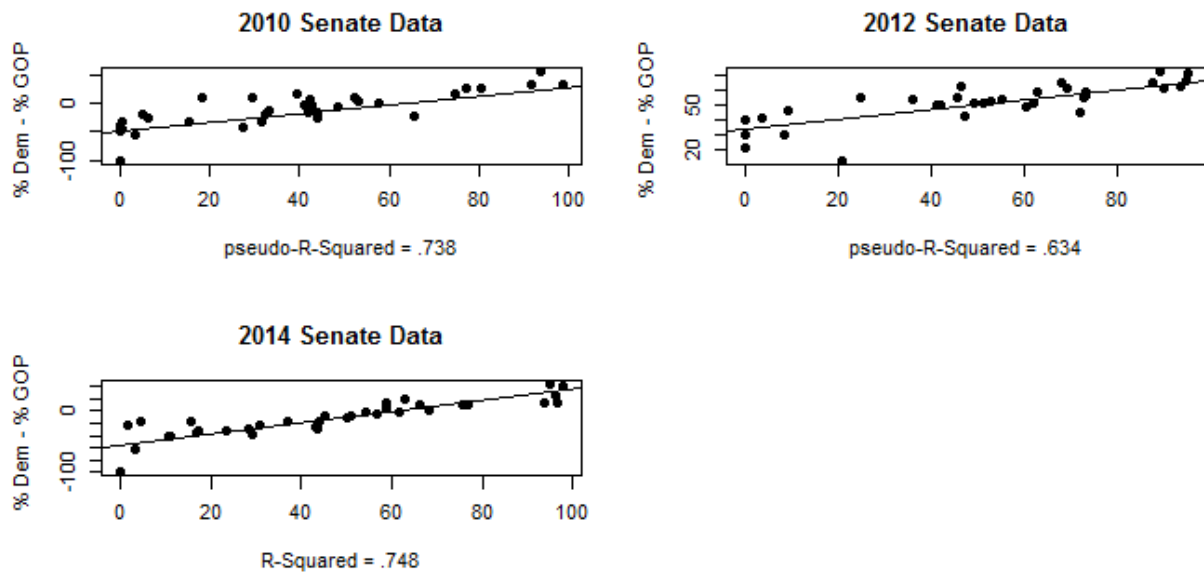


Figure 4

Iowa Market Predictions of House Control – 1994: Nothing Dramatic

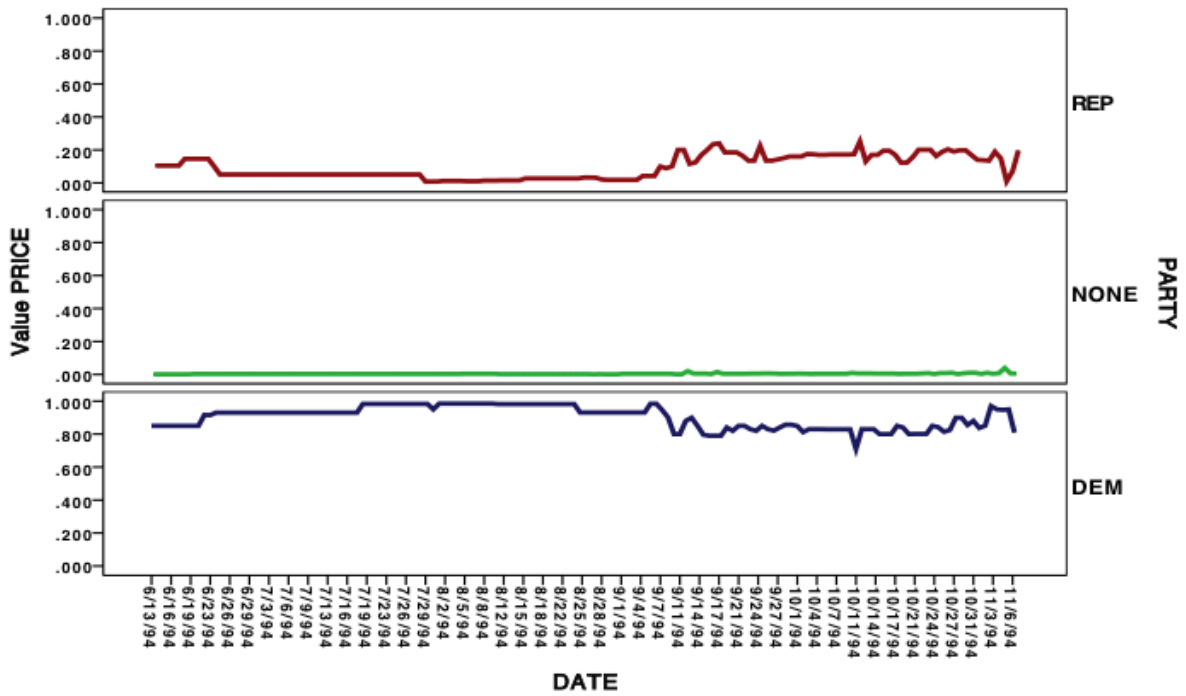
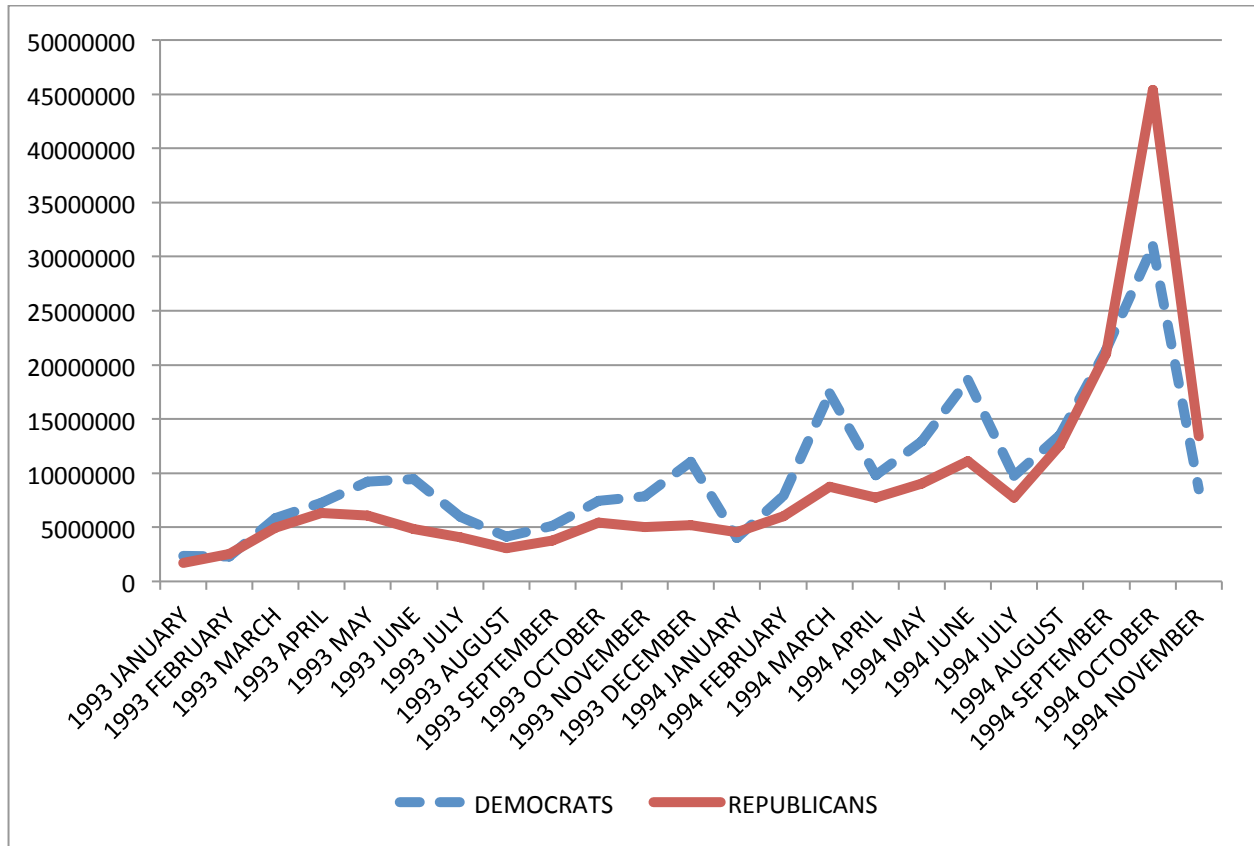


Figure 5

1994 Money Surge into Republican Campaign Coffers



Total Reflects Congressional Campaign Committees, Party Committees, and All Other Identifiable Expenditures Including Soft Money and Independent Expenditures

**Table 1: US House Elections Spatial Latent Instrumental Variable Model:
Estimated Coefficients of Mean and Median for Predicting the Percent of the Vote: % Dem
- % GOP of Two Party Vote**

Year	OLS Coefficients (Std. Err.)	Spatial Model Coefficients (Std. Err.)	Bayesian SpLIV Model Median (95% CI) Except for OLS cases – See text	Rsq/ Pseudo-Rsq	N
1980		1.228(.031)	1.277(1.217, 1.370)	.818	429
1982		1.202 (.030)	1.210(1.144, 1.279)	.821	430
1984		1.253 (.030)	1.269(1.211, 1.327)	.821	431
1986		1.295(.027)	1.387(1.301, 1.443)	.849	432
1988	1.299 (.027)		1.435(1.273,1.477)	.845	430
1990	1.103(.033)		1.284(1.191,1.343)	.725	429
1992		.992(.029)	.948 (.892, 1.016)	.740	429
1994		1.129(.028)	1.027(.953,1.179)	.820	435
1996		1.059(.025)	1.021(.973, 1.078)	.836	425
1998	1.297 (.029)		1.297(1.239,1.353)	.823	434
2000		1.166(.028)	1.176(1.121, 1.233)	.830	433
2002		1.168(.028)	1.362(1.285 , 1.397)	.812	432
2004		1.098(.028)	1.317(1.269, 1.358)	.809	430
2006		1.041(.025)	1.050(.990,1.136)	.822	426
2008		1.039(.030)	.969 (.899,1.064)	.778	435
2010		.939(.028)	.884(.723, 1.008)	.796	435
2012		.946(.030)	.799 (.759, .844)	.779	424

Note that for 1988, 1990 and 1998, the residuals of OLS were not spatially significant, so an ordinary least squares specification reported for those years in the OLS column is used. For those years, a spatial latent instrumental

variable estimation is not used; only latent instrumental variable models were fitted. The column for the spatial model reports the best model among SAR, SER and SDM alternatives based on Lagrange Multiplier diagnostics for spatial dependence.

**Table 2: US Senate Elections Spatial Latent Instrumental Variable Model:
Estimated Coefficients of Mean and Median for Predicting the Percent of the Vote: % Dem
- % GOP of Two Party Vote**

Year	OLS Coefficients (Std. Err.)	Spatial Model Coefficients (Std. Err.)	Bayesian SpLIV Model Median (95% CI)	Rsq/ Pseudo- Rsq	N
1980	.827		.835(.592,1.073)	.613	33
1982	.582 (.156)		.591 (.239, 1.022)	.309	33
1984		1.012(.065)	1.024 (.888, 1.160)	.855	32
1986	.898 (.068)		.899 (.762, 1.035)	.847	34
1988	.942 (.092)		.968(.775,1.152)	.772	33
1990	1.131(.117)		1.153 (.905, 1.378)	.746	34
1992	.737 (.079)		.739 (.578, .895)	.739	33
1994		.819 (.073)	.841 (.656, 1.016)	.769	35
1996	.897 (.095)		.882(.681, 1.080)	.742	33
1998	.874(.052)		.892 (.778, .994)	.901	33
2000	.937 (.096)		.939(.746, 1.131)	.749	34
2002	1.262 (.122)		1.275 (1.008, 1.517)	.776	33
2004		.956(.073)	.906(.768,1.030)	.828	33
2006	1.058(.109)		.847(.684,1.024)	.760	32
2008	.846(.078)		.847(.689,1.005)	.786	34
2010		.750(.095)	.667(.469,.885)	.738	36
2012		.324(.046)	.348(.253, .448)	.634	33
2014	.896 (.089)		.894(.713,1.073)	.748	36

Spatial Autocorrelation is not so prevalent in Senate elections; Spatial Latent Instrumental Variable Model estimated only where tests indicated one was needed. Otherwise results for Latent Instrumental Variable Model are shown. Note that occasionally one or another state elected two Senators.

Table 3

**Big Business Firms Support Tea Party Candidates at Far Higher Rates than Members of
the Forbes 400**

(N= 774)

Big Business and Forbes 400 Members Combined – 51%

Big Business Without Forbes 400 – 78%

Forbes 400 Members – 24%

- Bartels, Lawrence. "Instrumental and Quasi-Instrumental Variables." *American Journal of Political Science* 35, no. 3 (1991): 777-800.
- Bonica, Adam. "Ideology and Interests in the Political Marketplace." *American Journal of Political Science* 57, no. 2 (2013): 294-311.
- Burnham, Walter Dean, and Thomas Ferguson. "Americans Are Sick to Death of Both Parties: Why Our Political System Is in Worse Shape Than We Thought." *AlterNet* (2014).
Published electronically December 18, 2014. <http://www.alternet.org/americans-are-sick-death-both-parties-why-our-politics-worse-shape-we-thought>.
- Drutman, Lee. "Despite Citizens United, Elections Aren't a Good Investment for Corporations." *Washington Post*, March 27 2015.
- Ebbes, Peter. "Latent Instrumental Variables: A New Approach to Solve for Endogeneity." Ph.D., Groningen, 2004.
- Ebbes, Peter, Michel Wedel, Ulf Boecheholt, and Ton Steerneman. "Solving and Testing for Regressor (in) Dependence When No Instrumental Variables Are Available: With New Evidence for the Effect of Education on Income." *Quantitative Marketing and Economics* 3 (2005): 365-92.
- Eichengreen, Barry. *Hall of Mirrors*. New York: Oxford University Press, 2015.
- Epstein, Gerald, and Thomas Ferguson. "Answers to Stock Questions: Fed Targets, Stock Prices, and the Gold Standard in the Great Depression." *Journal of Economic History* 51, no. 1 (March 1991): 190-200.
- . "Monetary Policy, Loan Liquidation, and Industrial Conflict: The Federal Reserve and the Open Market Operations of 1932." *Journal of Economic History* 44, no. 4 (December 1984): 957-83.
- Ferguson, Thomas. "Big Money, Mass Media, and the Polarization of Congress." Chap. 95-128 In *Polarized Politics: The Impact of Divisiveness in the Us Political System*, edited by William Crotty. Boulder: Lynne Rienner Books, 2014.
- . "Big Money, Mass Media, and the Polarization of Congress." Chap. 5 In *Polarized Politics: The Impact of Divisiveness in the Us Political System*, 95-127. Boulder: Lynne Rienner Books, 2015.
- . "From 'Normalcy' to New Deal: Industrial Structure, Party Competition and American Public Policy in the Great Depression." In *Golden Rule: The Investment Theory of Party Competition and the Logic of Money-Driven Political Systems*, edited by Thomas Ferguson, 113-72. Chicago: University of Chicago Press, 1995.
- . *Golden Rule: The Investment Theory of Party Competition and the Logic of Money-Driven Political Systems*. Chicago: University of Chicago Press, 1995.
- Ferguson, Thomas, and Robert Johnson. "Too Big to Bail: The "Paulson Put," Presidential Politics, and the Global Financial Meltdown Part II: Fatal Reversal—Single Payer and Back." *International Journal of Political Economy* 38, no. 2 (2009): 5-45.
- Ferguson, Thomas, Paul Jorgensen, and Jie Chen. "Party Competition and Industrial Structure in the 2012 Elections: ." *International Journal of Political Economy* 42, no. 2 (2013): 3-41.
- Ferguson, Thomas, and Joel Rogers. *Right Turn: The Decline of the Democrats and the Future of American Politics*. New York: Hill & Wang, 1986.
- Jacobson, Gary. "Campaign Spending Effects in U.S. Senate Elections: Evidence from the National Annenberg Election Survey," *Electoral Studies* 25 (2006): 195-226.
- . *The Politics of Congressional Elections*. Boston: Pearson, 2013.

- Jones, Michael, and Paul Jorgensen. "Mind the Gap: Political Advertisements and Congressional Election Results." *Journal of Political Marketing* 11 (2012): 165-88.
- Jorgensen, Paul. "Institutional Corruption and the Pharmaceutical Industry." *Journal of Law, Medicine, and Ethics* (Fall 2013): 561-70.
- Krasnow, Jonathan. "Introduction -- Political Scientists in McConnell Vs. Fec." *PS: Political Scientists and Politics*, no. October (October 2004): 769-70.
- La Raja, Raymond J. "Richer Parties, Better Parties? Party-Centered Campaign Finance Laws and American Democracy." *The Forum* 11, no. 3 (2013): 313-38.
- Mian, Atif, Amir Sufi, and Francesco Trebbi. "The Political Economy of the U.S. Mortgage Default Crisis." 34. Cambridge: National Bureau of Economic Research, 2008.
- Milyo, Jeff. "Campaign Spending and Electoral Competition: Towards More Policy Relevant Research." *Final Draft of Article to be published in The Forum: A Journal of Applied Research in Contemporary Politics* 11, no. 3 (2013): 437-54.
http://www.cfinst.org/pdf/papers/04_Milyo_Competition.pdf.
- Parti, Tarini, and Anna Pallmer. "Tea Party Fumes over Campaign Finance Plan." *Politico* (2014). Published electronically December 11, 2014.
<http://www.politico.com/story/2014/12/tea-party-revolts-over-campaign-finance-plan-113520.html>.
- Piketty, Thomas. *Capital in the Twenty-First Century*. Translated by Arthur Goldhammer. Cambridge: Harvard University Press, 2014.
- Rutz, Olivier J., Randolph E. Bucklin, and Garrett P. Sonnier. "A Latent Instrumental Variables Approach to Modeling Keyword Conversion in Paid Search Advertising." *Journal of Marketing Research* XLIX (June 2012): 306-19.
- Snowberg, Erik, Justin Wolfers, and Eric Zitzewitz. "Prediction Markets for Economic Forecasting." *Discussion Paper Series* no. 6720 (2012).
- Stiglitz, Joseph. *The Price of Inequality*. New York: W.W. Norton, 2013.
- Stock, James H., and Mark W. Watson. *Introduction to Econometrics*. 3rd ed. Boston: Pearson Addison Wesley, 2010.
- Tooze, Adam. *The Deluge*. New York: Viking, 2014.
- Zhang, Jie, Michel Wedel, and Rik Pieters. "Sales Effects of Attention to Feature Advertisements: A Bayesian Mediation Analysis." *Journal of Marketing Research* XLVI (2009): 669-81.

¹ Pope Francis, quoted in *Ansa en Vatican*, March 10, 2015; available on the web at http://www.ansa.it/english/news/vatican/2015/03/10/pope-calls-for-free-election-campaigns_35296d5c-c578-4ea4-babe-e9cb9f520bb1.html The original has an extra quotation mark in the middle, which appears to be a misprint. Note that this is a report of the Pope's interview with a Brazilian slum newspaper and not the original.

² Thomas Piketty, *Capital in the Twenty-First Century*, trans. Arthur Goldhammer (Cambridge: Harvard University Press, 2014); Joseph Stiglitz, *The Price of Inequality* (New York: W.W. Norton, 2013).

³ See, for example, the discussion in Thomas Ferguson and Robert Johnson, "Too Big to Bail: The "Paulson Put," Presidential Politics, and the Global Financial Meltdown Part II: Fatal Reversal— Single Payer and Back," *International Journal of Political Economy* 38, no. 2 (2009). p. 31, note 2, on the otherwise very stimulating work of

Atif Mian, Amir Sufi, and Francesco Trebbi, "The Political Economy of the U.S. Mortgage Default Crisis," (Cambridge: National Bureau of Economic Research, 2008). More striking are many recent works that attempt to discuss the 1931 crisis in the United States without mentioning that the basic framework of famous Hoover Moratorium was handed to the President on a platter by Thomas Lamont of J.P. Morgan & Co. – a fact that the banker and the President then tried to conceal. See the discussion of the telephone transcripts found in the Lamont Papers at Harvard Business School in Thomas Ferguson, "From 'Normalcy' to New Deal: Industrial Structure, Party Competition and American Public Policy in the Great Depression," in *Golden Rule: The Investment Theory of Party Competition and the Logic of Money-Driven Political Systems*, ed. Thomas Ferguson (Chicago: University of Chicago Press, 1995). That essay was first published in 1984, but recent discussions by a number of quite excellent economic historians pass over the fact or even claim that Hoover acted independently of the bankers. Cf. Barry Eichengreen, *Hall of Mirrors* (New York: Oxford University Press, 2015) and Adam Tooze, *The Deluge* (New York: Viking, 2014). Eichengreen's treatment omits also crucial points about Federal Reserve and Treasury policy in 1932 laid out in Gerald Epstein and Thomas Ferguson, "Monetary Policy, Loan Liquidation, and Industrial Conflict: The Federal Reserve and the Open Market Operations of 1932," *Journal of Economic History* 44, no. 4 (1984) and their "Answers to Stock Questions: Fed Targets, Stock Prices, and the Gold Standard in the Great Depression," *Journal of Economic History* 51, no. 1 (1991).

⁴ Jeff Milyo, "Campaign Spending and Electoral Competition: Towards More Policy Relevant Research," *Final Draft of Article to be published in The Forum: A Journal of Applied Research in Contemporary Politics* 11, no. 3 (2013), http://www.cfinst.org/pdf/papers/04_Milyo_Competition.pdf.

⁵ See the sample of views in the symposium prefaced by Jonathan Krasnow, "Introduction -- Political Scientists in McConnell Vs. Fec," *PS: Political Scientists and Politics*, no. October (2004). Also Raymond J. La Raja, "Richer Parties, Better Parties? Party-Centered Campaign Finance Laws and American Democracy," *The Forum* 11, no. 3 (2013). This campaign for still more money for the parties was recently crowned with success. A provision in a bill recently passed with support from both the White House and Congressional leaders vastly expanded the amount of money parties can collect. This was part of the same measure that gutted the most important provision of what was left of the Dodd-Frank financial reform legislation. See the discussion of the banking part in, e.g., Walter Dean Burnham and Thomas Ferguson, "Americans Are Sick to Death of Both Parties: Why Our Political System Is in Worse Shape Than We Thought," *AlterNet*(2014), <http://www.alternet.org/americans-are-sick-death-both-parties-why-our-politics-worse-shape-we-thought>. For the party financing changes, see, e.g. Tarini Parti and Anna Pallmer, "Tea Party Fumes over Campaign Finance Plan," *Politico*(2015), <http://www.politico.com/story/2014/12/tea-party-revolts-over-campaign-finance-plan-113520.html>. Note that Tea Party representatives strongly opposed the provision as an effort by the GOP establishment to weaken them, which is exactly what it was. Democrats supported the measure for the usual reasons; in neither case were desires to turn back power to the people at all relevant. From an investment theory perspective, of course, the idea that expecting more money from millionaires will make parties more responsive to average citizens is a contradiction in terms.

⁶ See for references and discussion, Thomas Ferguson, Paul Jorgensen, and Jie Chen, "Party Competition and Industrial Structure in the 2012 Elections," *International Journal of Political Economy* 42, no. 2 (2013).

⁷ See, e.g., Lee Drutman, "Despite Citizens United, Elections Aren't a Good Investment for Corporations," *Washington Post*, March 27, 2015. On the academic side, see, e.g., Adam Bonica, "Ideology and Interests in the Political Marketplace," *American Journal of Political Science* 57, no. 2 (2013). This latter raises a complex set of methodological and substantive issues we propose to examine in the near future.

⁸ Ferguson, Jorgensen, and Chen, "Party Competition 2012."

⁹ This statement needs a qualification. As discussed below, Congressional districts exist in distinct geographic spaces. Each is nearer some and further from others. This opens the door to the possibility of spatial autocorrelation, which can create difficulties for statistical estimation quite like the better known case of temporal autocorrelation. From the outset, we were clear about this possibility and tested for it, though such tests are not common in the vast literature on Congress by political scientists and economists. In most cases, we found spatial autocorrelation present and corrected for it in our estimates. This means that the models are not in fact purely "linear"; but because they still graph as straight lines, we employ the term for its ease in communication.

¹⁰ The fewer number of cases makes the precision of the Senate estimates looser and the fit is in any case not as tight. We conjecture that this has something to do with the great publicity Senate races normally attract. One way of regarding media influence is as a special case of another industrial sector.

¹¹ Ferguson, Jorgensen, and Chen, "Party Competition 2012."

¹² We repeat the qualification about the use of "linear" here.

¹³ Gary Jacobson, *The Politics of Congressional Elections* (Boston: Pearson, 2013), p. 51.

¹⁴ See, e.g., James H. Stock and Mark W. Watson, *Introduction to Econometrics*, 3rd ed. (Boston: Pearson Addison Wesley, 2010).

¹⁵ Gary Jacobson, "Campaign Spending Effects in U.S. Senate Elections: Evidence from the National Annenberg Election Survey," *Electoral Studies* 25 (2006), p. 197; Lawrence Bartels, "Instrumental and Quasi-Instrumental Variables," *American Journal of Political Science* 35, no. 3 (1991).

¹⁶ Peter Ebbes, "Latent Instrumental Variables: A New Approach to Solve for Endogeneity" (Ph.D., Groningen, 2004); Peter Ebbes et al., "Solving and Testing for Regressor (in) Dependence When No Instrumental Variables Are Available: With New Evidence for the Effect of Education on Income," *Quantitative Marketing and Economics* 3(2005); Ebbes, P., M. Wedel, and U. Böckenholt, "Frugal IV Alternatives to Identify the Parameters for an Endogenous Regressor," *Journal of Applied Econometrics*, 24, (2009), 446-468. See also Jie Zhang, Michel Wedel, and Rik Pieters, "Sales Effects of Attention to Feature Advertisements: A Bayesian Mediation Analysis," *Journal of Marketing Research* XLVI(2009); Olivier J. Rutz, Randolph E. Bucklin, and Garrett P. Sonnier, "A Latent Instrumental Variables Approach to Modeling Keyword Conversion in Paid Search Advertising," *ibid.*, XLIX (2012); Ebbes, P., U. Böckenholt, M. Wedel, and H. Nam, "A Bayesian Modeling Framework to Account for Regressor-Error Dependencies in Multilevel Models," (2009), unpublished paper.

¹⁷ For Dark Money see immediately below; for the spectrum of political money, with some estimates of its empirical extent within the US system, see Thomas Ferguson, "Big Money, Mass Media, and the Polarization of Congress," in *Polarized Politics: The Impact of Divisiveness in the Us Political System*, ed. William Crotty (Boulder: Lynne Rienner Books, 2014). An early version of this paper was presented at an INET conference and is available at: http://ineteconomics.org/sites/inet.civactions.net/files/BWpaper_Ferguson_040811.pdf “.

¹⁸ Ferguson, Jorgensen, and Chen, "Party Competition 2012."

¹⁹ *Ibid.*

²⁰ Note that by many standards of "big data" the data sets we use here are fairly small.

²¹ See the discussion in Ferguson, Jorgensen, and Chen, "Party Competition 2012."

²² The votes measure is: $[(\#Dem\ Votes)/(\#Dem\ Votes + \#Rep\ Votes)] - [(\#Rep\ Votes)/(\#Dem\ Votes + \#Rep\ Votes)]$. For money, we capture all candidate disbursements of the two major parties (House and Senate) and all outside-the-candidate spending in the district/state that is known/measured.

- a. Pro DEM Money = DEM Disbursements + All Independent Expenditures For DEM + Communication Costs for DEM + Identified Electioneering for DEM + Party Coordinated Expenditures
- b. Against REP Money = All Independent Expenditures against REP + Communication Costs against REP + Identified Electioneering against REP
- c. DEM % of Total Two Party Money =
 - i. $[(Pro\ DEM\ Money + Against\ REP\ Money) / (Pro\ DEM\ Money + Against\ DEM\ Money + Pro\ REP\ Money + Against\ REP\ Money)]$

²³ Spatial autocorrelation in Senate elections is also less common; see the discussion below.

²⁴ See Thomas Ferguson, *Golden Rule: The Investment Theory of Party Competition and the Logic of Money-Driven Political Systems* (Chicago: University of Chicago Press, 1995), but especially Ferguson, "Big."

²⁵ For earlier elections, see the discussion in *Golden Rule*.

²⁶ Thomas Ferguson and Joel Rogers, *Right Turn: The Decline of the Democrats and the Future of American Politics* (New York: Hill & Wang, 1986).

²⁷ Ferguson, "Big." See also Paul Jorgensen, "Institutional Corruption and the Pharmaceutical Industry," *Journal of Law, Medicine, and Ethics* (2013).

²⁸ Erik Snowberg, Justin Wolfers, and Eric Zitzewitz, "Prediction Markets for Economic Forecasting," Bonn: Forschungsinstitut zur Zukunft der Arbeit *Discussion Paper Series*, no. 6720 (2012).

²⁹ See "Postscript: The 1994 Explosion," in Ferguson, *Golden Rule*. The 1994 election is the analogue in politics of the 1987 stock market crash that so embarrassed partisans of the efficient markets hypothesis. Nothing happened that day that could possibly justify so colossal a drop in the market. Of course, there is a perfectly straightforward explanation for the 1994 surge of money to the Republicans: increasingly hostile sentiment to the New Deal and everything that smacked of it within American business. See the discussion in Ferguson, "Big." It is easy to mistake this for some abstract ideological development, as seems to be fashionable within political science and to ignore its connections with hopes for very concrete gains.

³⁰ Jacobson, "Campaign. "

³¹ Stock and Watson, *Introduction to Econometrics*.

³² See the references above.

³³ Ebbes et al., "Solving."

³⁴ We tested among several possible patterns of spatial autocorrelation and report the results for the best fitting among SAR, SER and SDM alternatives based on Lagrange Multiplier diagnostics for spatial dependence.

³⁵ Ferguson, Jorgensen, and Chen, "Party Competition 2012," shows that small donors did play important roles in the campaigns of some GOP Presidential Also Rans, such as Michele Bachmann. As we write, Ted Cruz's campaign is celebrating funds from small donors.

³⁶ Ferguson, *Golden Rule*; Michael Jones and Paul Jorgensen, "Mind the Gap: Political Advertisements and Congressional Election Results," *Journal of Political Marketing* 11(2012).

³⁷ This definition is different from the tests reported in Ferguson, Jorgensen, and Chen, "Party Competition 2012." That used a narrower definition that excluded organizations like Freedom Works in favor of direct support for candidates' campaign and leadership committees. Of course this test, too, showed important support for the Tea Party from major American companies, as we said plainly.