(First Draft) A Look at the 2012 Presidential Election

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Nov. 15, 2012

1   Introduction

In 2010, the United States Supreme Court released its decision on Citizens United v. Federal Election Commission. The decision found that it is a violation of the constitutional right to free speech for limits to be placed on money spent by corporations and labor unions to support or oppose political candidates. For the first time since the passage of the Tillman Act in 1907, corporations and unions could spend unlimited amounts of their own money on the presidential election. Such power led to the coining of the term Super PAC, as well as a cloud of uncertainty as to what effect such money could have on the election outcome.

In this report, we analyze the independent expenditures dataset from the Federal Election Commission in an attempt to determine the effect of this spending on the 2012 election. We also retrieve data from the NationalPolls.com database of polling results to quantify the effect of this spending. The results of our analysis suggest that the spending may have had a measurable impact on public opinion, but external factors, such as the presidential debates, had much stronger impacts.

2   Data

We are primarily working with two data sources to complete our analysis: independent expenditures (PAC) data and polling data. The PAC spending data comes from the Federal Election Commision and the polling data comes from `http://nationalpolls.com/`.

2.1   Variable Definitions

The variables present in the PAC spending data are defined as follows:

Tag	Field Name	Data Type	Description	Explanation
can_id	Candidate ID	Character	unique ID of candidate for or against whom the expenditure was made	First character indicates office sought - H=House, S=Senate, P=Presidential. Columns 3-4 are the state abbreviation for Congressional candidates. NOTE - this information is provided by filers and may be missing - in these cases office, state, district and candidate name should appear.
spe_id	Spender ID	Character	Unique ID of committee, individual or group making expenditure	Unique FEC ID assigned to the entity submitting reports of independent expenditures
spe_nam	Spender Name	Character	Name of committee, individual or group making expenditure	
ele_typ	Election Type	Character	code for specific election for which expenditure was made	First character indicates election - P=Primary, G=General, S=Special. Next four characters indicate election year.
can_off_sta	Candidate State	Character	Postal state abbreviation for the candidate	
can_off_dis	Candidate District	Number	District number for the candidate	District location if spending for/against House candidate.
can_off	Office	Character	Office Sought by Candidate	(H=House, S=Senate, P=President)
can_par_aff	Party	Character	Party abbreviation for candidate	Dem=Democrat Rep=Republican
exp_amo	Expenditure Amount	Currency	Dollar amount of specific expenditure	
exp_dat	Expenditure date	Date	Date of specific Expenditure MM/DD/YYYY	

agg_amo	Aggregate amount	Currency	Total amount expended during the calendar year, per election, per office sought	
sup_opp	Support or Oppose	Character	S=Support, O=Oppose	Describes whether the expenditure was made to support or oppose the candidate.
pur	Purpose of expenditure	Character	description of the expenditure, e.g. television or radio ad	
pay	name of payee	Character	Name of the person or vendor or other entity receiving this payment	
file_num	Filing number	Number	Unique identifier for a submission (which may report several disbursements)	
amn_ind	Amendment Indicator	Character	New report or amendment to a report	
tra_id	Transaction ID	Character	Unique identifier for the transaction (unique within the specific filing	
ima_num	Image number	Number	Image location for page on which transaction appears	
rec_dt	Filing receipt date	Date	Date on which transaction was submitted to FEC MM/DD/YYYY	
prev_file$_n$um	Previous filing number	Number	Reference to a filing being amended	For electronic filings the previous filing number references the filing being amended. For new filings and paper filings this field will be null

The variables present in the polling data are defined as follows:

Tag	Field Name	Data Type	Description
Pollster	Polling Company	Character	Company that conducted the poll.
State/US	State	Character	State poll was conducted of. If national poll, then value is "National".
Date	Poll Date	Date	Range of dates that the poll was being conducted.
Obama	Support for Mr. Obama	Number	Integer rounded percent of support in the poll.
Romney	Support for Mr. Romney	Number	Integer rounded percent of support in the poll.

2.2 Cleaning

Most of the data cleaning had to be performed on the PAC spending data. We made sure all the columns were formatted correctly in regards to data type (dates are date, numbers are numeric, etc.) before cleaning and reformatting the data more extensively.

One challenge we faced was that the purpose of independent expenditures column is a free text field on the FEC reporting form. The result was that when trying to explore what PACs spent the majority of their money on, we were unable to group expenditures together. To solve this issue we searched for matches to patterns in the purpose field. We chose these patters by looking at the expenditure purposes and manually finding common threads among the purposes. From these patterns we were able to create buckets that each expense fell in to, as well as high level buckets that more generally classified the expenditures.

An additional complication we faced was with the support/oppose column. This column in conjunction with the candidate column are used to indicate which candidate benefits from the expenditure. An example would be if the support/oppose column is oppose and the candidate name is Romney, then Mr. Obama benefits because the money is being spent to "oppose Romney". Likewise, if the support/oppose column equals support and the candidate name is Romney, then Mr. Romney benefits.

The polling data did not require very much data cleanup. We needed to split the date range and format the second date as a date for our use. We also removed some differences in state naming by the different pollsters.
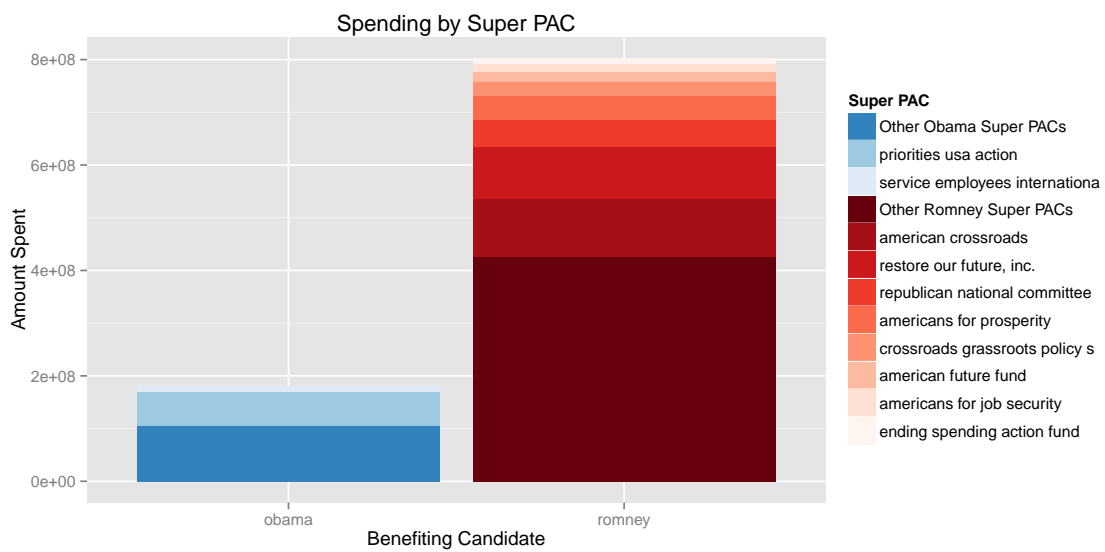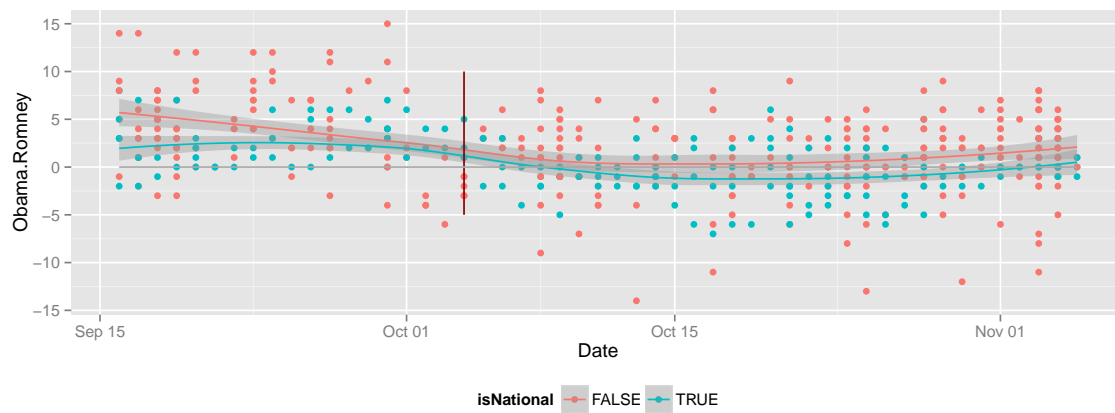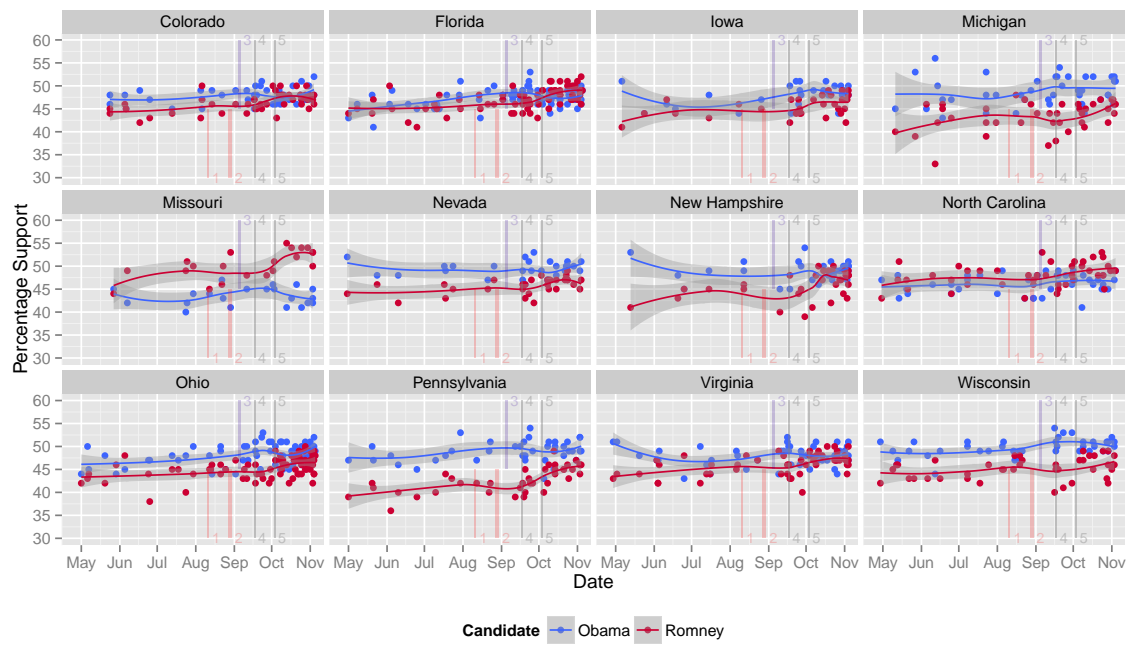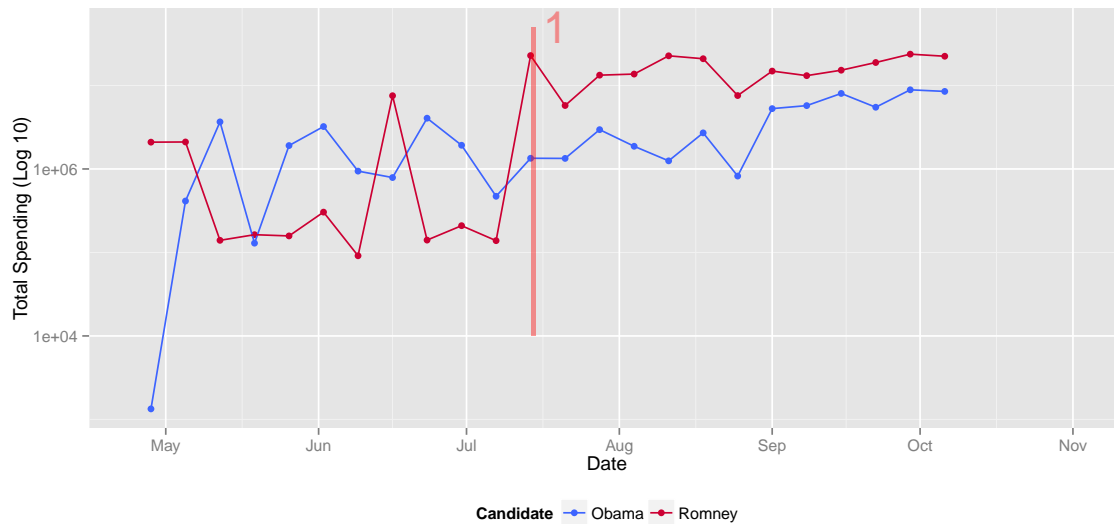
3 Findings
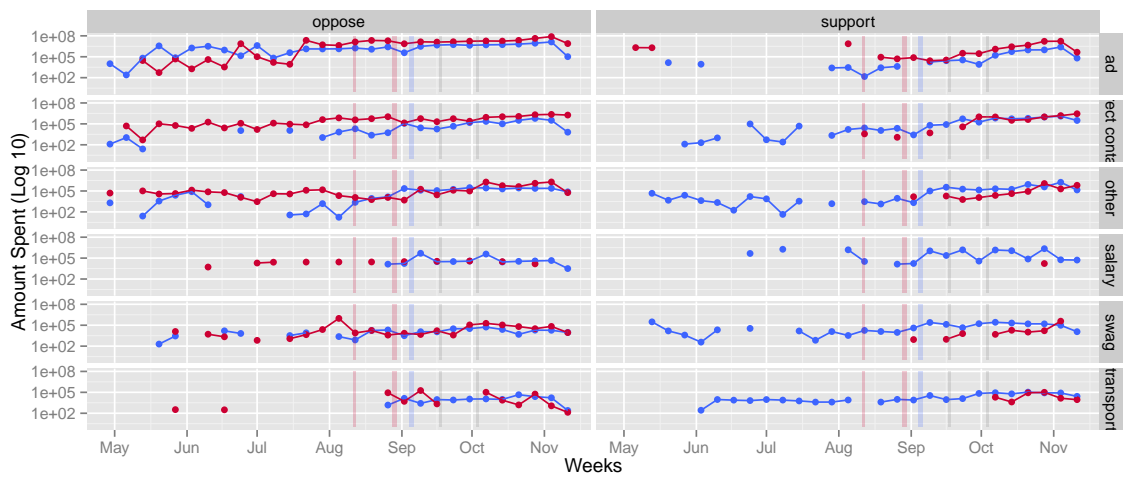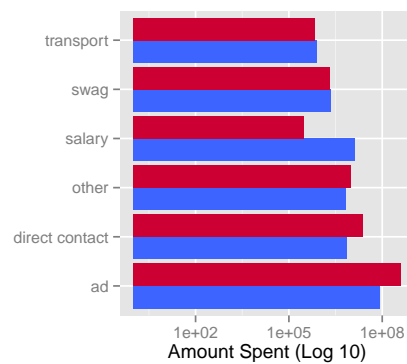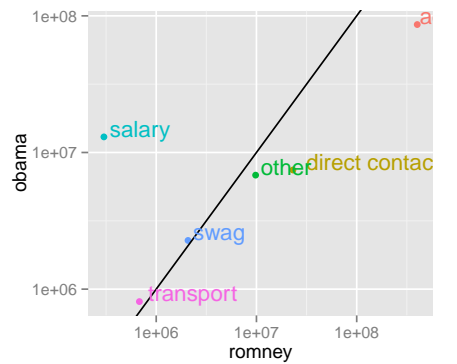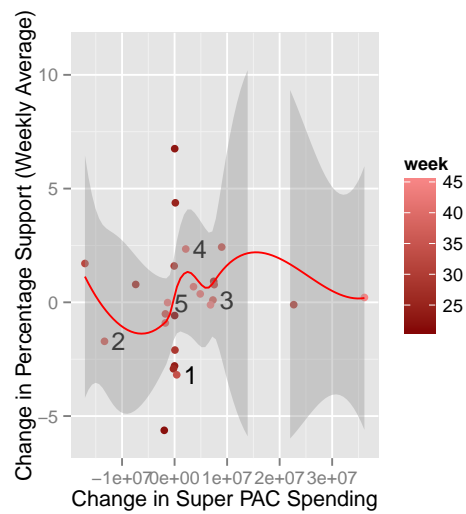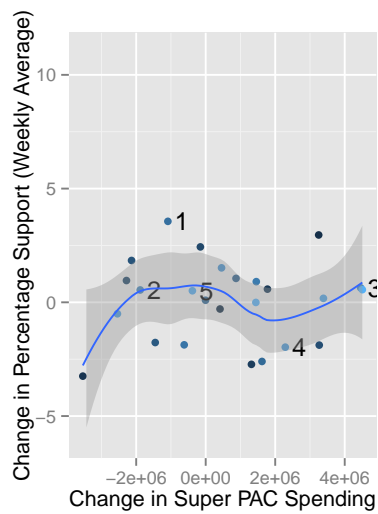
4   Conclusions/Future Work

(1/2 page) summarize your findings - don't just list them, but try to come up with a cohesive statement. If you started your Intro by posing a question, try to answer it at this point. For future work come up with at least two good points of how to extend the project or your analysis in a meaningful way.