Local Economic Gains from Primary Election Spending

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Abstract

This paper asks how government and private consumption spending affect earnings in service sectors. To do this, we exploit the variation across states and time in the money spent while campaigning for a party's Presidential primary nomination. We create a novel dataset combining the date each state held its primary from 1976-2008, the date in each election cycle in which only one candidate remained, and quarterly state earnings by sector. Using an instrumental variable strategy, we find that hosting a primary election increases earnings, particularly in the retail and accommodations sectors. These results remain consistent when using data on primary campaign expenditures across states in the 2004 and 2008 elections.

JEL codes: D7, P0, H0

In 2008 alone, Presidential campaigns spent $348 million across states on hotels, meals, rental cars, and other campaign expenditures (CRP 2011). This figure does not include the amount spent by media covering the race, personal in-state expenses of staffers, or additional funds individuals outlay when coming out to witness the spectacle of a primary race. We use this exogenous spending to estimate the short-run income gains when money enters a state economy. This paper is the first to determine the degree to which exogenous consumption spending affects local earnings.[1] Exploiting the variation in the duration and ordering of Presidential primary campaigns, we estimate the relationship between consumption spending and short-run earnings gains.[2]

Primary elections are held sequentially by state and each election cycle varies in duration due to changes in the competitiveness of elections. In some years, there is no primary in many states, as the nomination is determined long before each state has its turn to vote for a nominee.[3] For example, in 2004 Senator Kerry clinched the Democratic nomination in March, whereas in 2008 President Obama did not win the nomination until June. In particularly long primary elections, local businesses in states that are not normally exposed to primary campaigns receive an exogenous increase in revenue. In addition, we exploit variation due to changes in the state's position on the primary calendar across election cycles.

In this paper, we test how increased campaign spending affects local economies. Specifically, we study how earnings are affected by the presence of a primary in a given state and quarter. The idea that election outcomes could affect the economy is not new. Snowberg *et al.* (2007) use prediction market analysis of elections from 1880-2004 to show that electing a Republican President raises equity valuations by 23%. Knight (2006) shows that policy platforms in the 2008 Presidential general election were capitalised into equity prices. No one, however, has previously asked how the act of campaigning can affect the economy.

To conduct this analysis, we create a novel dataset of primary and caucus dates from 1976-2008, where we determine if a state held a primary based on the scheduled primary date and the date in which only one candidate remained in each party's election. We pair this primary elections data with quarterly state-level and sector-specific information on personal earnings from the Bureau of Economic Analysis (BEA). Our empirical strategy includes state and year fixed effects and seasonal trends.

We first test the effect of primary spending on local income, assuming exogeneity. For this to be true,

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[1]To a certain degree, this question has been addressed in the literature on the economic impact of mega-events such as the Superbowl, Presidential Nomination conventions, and the Olympics, (See Matheson (2009) and citations therein). This paper differs in that we have a stronger identification strategy. In primary elections, there is ex-ante uncertainty as to whether or not a state will be reached, whereas mega-events are planned far in advance and allow an area to anticipate additional consumption expenditures and internalise the benefits by increasing up front costs. However, the value of consumption spending in a primary is unanticipated ex-ante and the variance in spending between hosting and not hosting a primary is high, deterring businesses from internalising the benefits prior to the event. Second, candidates campaign in areas to reach the maximum number of pivotal voters not in the most desirable tourist locations, making it unlikely that primaries crowd out the local tourist sector, as in the prior vein of literature. One exception to this is Rose and Spiegel (2011) who find that unsuccessful Olympic bids increase exports.

[2]We use the term "primary" loosely to include caucuses and primaries throughout the paper.

[3]We consider the nomination determined once there is only one candidate remaining in the contest who can feasibly win the nomination.

candidates would need to campaign sequentially, following the primary calendar, and not in response to economic conditions. Candidates campaign to maximise their chances of winning the election, and individual victories create momentum to propel a candidate to his next contest (Abramowitz 1989; Abramson *et al.* 1992; Mutz 1998; Adkins and Dowdle 2001; Callander 2007; Strumpf 2002; Klumpp and Polborn 2006). In addition, candidates have a disincentive to over-spend in the primary, as they want to save any potential funds for the general election battle, conditional on winning the nomination. For these reasons, the optimal strategy for candidates is to follow the primary calendar. Our estimates when assuming exogeneity would be biased if states adjust their positions in the calendar in response to economic conditions. For example, if states move up in the calendar during periods of economic downturn, this could bias us against finding an effect. At the same time, a period of economic growth could raise prices as well as campaign spending in a state, overestimating the effect of campaigning on income. To address these concerns, we instrument for the existence of a primary with a "simulated instrument" that uses the previous election cycle's primary dates and the current election cycle's clinch date to determine whether or not a state would have been reached in the current election given the previous cycle's date.

Using the simulated instrumental variables strategy, we find that hosting one primary increases overall earnings, as well as earnings in service-related sectors. From 1974-2009, per capita earnings increased by 25% in states with primaries. Hosting a second primary in the same quarter has a slightly smaller, though still positive effect on income. These results are robust to dropping ceremonially early states such as Iowa and New Hampshire to ensure that these states with the highest spending volumes are not driving the effect. We verify these results using data on campaign expenditures for 2004 and 2008 from the Center for Responsive Politics. In this setting, we find that doubling campaign expenditures increases overall per capita earnings 9.4%, and this effect is particularly pronounced in the accommodations and retail sectors. Finally, we provide a placebo test that shows the effect is not present in unrelated sectors.

The remainder of the paper is organised as follows. Section 1 discusses previous literature and Section 2 describes the construction of the dataset. Section 3 provides descriptive statistics and motivates our identification strategy. Section 4 explains our empirical strategies and presents our findings. Section 5 discusses the source of campaign funds, and Section 6 provides concluding remarks.

1 Literature Review

We appeal to three distinct literatures in this paper. First, a long literature examining political business cycles (Nordhaus 1975; Lindbeck 1976; Hibbs 1977; Tufte 1978) shows that incumbents have incentives to alter monetary and fiscal policy in order to increase their probability of re-election. This

literature has been extended to study both industrialised and developing countries, where Alesina *et al.* (1997) and Drazen (2000) provide extensive reviews of this literature. Given the nature of primary elections, we are able to isolate the specific effect of campaign activity on local economies. This could shed new light on empirical work finding that output, employment, and income increase before elections (Alesina and Roubini 1992). By studying primaries, we are able to separately isolate campaign activity from changes in fiscal and monetary policy leading up to the election, as primary campaigns conclude at least four months prior to the Presidential general election. This is consistent with Nordhaus (1975), who finds that incumbents will set policies such that short-run unemployment rates will be at their lowest on the eve of the election night and increase thereafter.[4]

Second, our paper adds to the literature investigating the incentives for states to hold early primaries. States early in the primary process are presumed to have a disproportionate effect on candidate selection by building candidate viability, attracting donors and volunteers, and creating momentum (Abramowitz 1989; Abramson *et al.* 1992; Mutz 1998). This interest was demonstrated in 2008, when Michigan and Florida moved their primaries to January. Because the Democratic National Committee (DNC) rejected this motion, Democratic candidates agreed to refrain from campaigning in these states, and the delegates were not counted in the candidates' totals. However, this did not deter Florida from moving its primary up in the order again in 2012. This time the Republican National Committee (RNC) rejected the motion, costing the state half of its delegates (Grice 2012). Thus, moving a primary contest too early can be costly, yet states are still attempting to change their primary dates. Some work examines the policy benefits of early contests. Taylor (2010) uses state procurement data from 1984 to 2004 to show that primary order matters only in competitive nominations when the victorious candidate won that state's contest. Knight and Schiff (2010) use changes in prediction markets over the election to identify influence and find that early contests had a 20% greater influence over candidate selection than later contests in 2004. Similarly, Malhotra and Snowberg (2011) find that the order mattered less than pivotal, or competitive, primary contests in 2008. Theoretical work demonstrates that voters can use early contests as cues in determining their vote choices (Morton and Williams 2001; Callander 2007; Serra 2011; Ali and Kartik 2006). This paper is the first to investigate the potential economic benefits of having an early nomination contest.

A parallel literature looks at the effects of the primary structure on general election outcomes. The primary process may constrain candidates from converging to the position of the median voter, as they will take on more extreme positions to satisfy primary voters who are less moderate than the general population (Geer 1988; Norrander 1989). Malhotra and Snowberg (2011) study the effects of early contests more broadly, including candidates' difficulties of returning to the centre in the general after trying to

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[4]In addition, an increase in output and employment prior to the general election will bias us against finding an effect, since primaries are not hosted in the months prior to the general election.

attract primary voters.

Third, the existence of primary elections provides a new environment in which to study local economic development, through shocks to consumption expenditures that are likely to have the largest effects in service sectors. Recently, scholars and policymakers have expressed interest in the American Recovery and Reinvestment Act (ARRA) spending. Wilson (2012) and Chodorow-Reich *et al.* (2012) use instrumental variable strategies and find that one new job created costs $125,000 and $26,300 per year, respectively. Chodorow-Reich *et al.* (2012) find that the jobs resulting from Medicaid spending are concentrated in the state and local government, health, and education sectors. Asking a similar question, Serrato and Wingender (2010) find that an additional job costs $30,000 per year, using an instrumental variables strategy and data on federal investment spending. Similarly, Shoag (2010) uses the idiosyncratic component of state-managed defined benefit pensions to predict government spending. He finds that $35,000 of spending generates one additional job.

Our paper studies the effect of spending on a different set of sectors than is normally assessed. Most of the ARRA funds were centred around Medicaid and education, and other federal spending initiatives focused on infrastructure investment, energy efficiency, unemployment assistance, and state and local government stabilisation (111th Congress 2009). On the other hand, primary spending likely benefits the local economy in the service-related sectors.[5]

2   Data

We combine institutional details of primary races dating back to 1976 with state-level personal earnings data from the Bureau of Economic Analysis (BEA), creating a comprehensive Presidential primary and local economic database. In the next 3 sub-sections, we explain how we collected these data. For more information on the specifics of the variables created, including summary statistics, the source of each variable and the calculation of each variable, see Tables A.1 - A.3 in Appendix A.

2.1   *Primary Information*

We hand-collected a thorough database of the dates of each primary or caucus in each state starting from 1976, which is the first year the DNC and RNC held conventions in their current forms, and ending in 2008.[6] We obtain this information from the Green Papers (for primaries), as well as Frontloading HQ (for caucuses), and confirm these with state election boards when the two are not consistent. When a state's delegates are determined by only state party officials (and not in caucuses or primaries with

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[5]See Section 6 for more on the sources of campaign funding.

[6]This means that individual voters, not party elites, began selecting candidates in each state. The candidate with the most delegates earned the nomination at a national convention.

individual voters), we count this as a case where the state did not have a "primary." In cases where states hold a "beauty contest" nomination, where individual voters choose their favourite candidate but there are no delegates at stake, we count this as having a "primary," as some candidates find it important to win a symbolic victory in these states to gain momentum.[7]

Next, we collect information on the date at which the nomination was clinched for each party in each year. We award a candidate the nomination when he is the only candidate left in the contest, meaning that the primary campaigning has ended. Specifically, this is the date in which only one candidate can feasibly win the contest, or that he has gained enough electoral votes to win the nomination. With this strategy, if there are still candidates continuing to campaign that refuse to accept defeat and formally pull out of the contest, this will bias us away from finding an effect. This sometimes occurs months before the convention date. Table A.4 in Appendix A contains the dates at which candidates clinched the nominations over time. In cases where the incumbent was not challenged in the primary, such as 1984 for Ronald Reagan, we code the primary for that party as "no primary."[8]

2.2   *Earnings*

The BEA reports seasonally adjusted total personal earnings in each quarter and state, for each sector of the economy. Total earnings include wages and salaries, which consists of monetary payments, in-kind payments, bonuses, and tips. This is recorded before social security deductions, and these also include stock options at the time they are taken by the individual (Moylan 2007). These measures are seasonally adjusted. We transform this into per-capita values using population data from the US census. In addition to total earnings per capita, we focus on the sectors where we would expect large effects from primary spending, which are mostly service related sectors. Accommodations and retail are the two sectors we focus on, in that the visiting campaign staff and media will need to stay in hotels and make purchases during the campaigns. The accommodations and retail sector accounted for about 4% and 7% of total earnings in 2008, respectively.

The BEA data are divided into 2 periods: 1974-2001 and 1990-2009, and the sector definitions changed across the two periods. In the data from 1974-2001, the BEA only reports total earnings in the services sector, which includes accommodations but it cannot be accounted for on its own. However, in the 1990-2009 data, they divide services into different groups, including accommodations, which we focus on. We

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[7]States holding these "beauty contests" usually choose their candidate based on conventions and state party officials' decisions. After 2000, there are some instances where there were no delegates at stake, after a state had moved up in the primary process and one of the national committees considered this unconstitutional , i.e. Michigan and Florida in 2008. These two states still had campaigning from the Republicans, so we include them in this context alone. The votes for the Democratic candidates were not included in the final electoral count.

[8]All incumbents do not have the luxury of having no opposition in the primary election. For example, President Carter's low approval ratings gave the DNC justification to push other candidates, including Edward Kennedy, to challenge him in the primary contest.

therefore do the analysis separately for each period due to these data limitations.[9,10]

2.3 *Campaign Expenditures*

We obtain campaign expenditures data for the 2004 and 2008 primary election cycles from the Center for Responsive Politics (CRP), which collects and compiles data from the Federal Election Commission (CRP 2011). These data contain information on each expenditure made in House and Presidential races by campaigns, Political Action Committees (PACs), and state parties, where each expense contains a date, location (down to zip code), and information on what the expense entailed (i.e. hotel). We narrow this dataset to include only expenses made in pursuit of the primary nomination by the Presidential candidate's official campaign, i.e. "Barack Obama for President, 2008." We do not include PAC spending as it is difficult to understand for which campaign the PAC is spending its funds (i.e. Presidential or House) in the data.

These data also include information on the division of the campaign in which the expense was made. Campaign expenditures consist of all money spent by the candidate and his direct staff on travel, hotel rooms, and meals, as well as local polling, Get-out-the-Vote campaigns (GOTV), and campaign events. In addition, campaign expenditures include what the campaign calls "administrative expenditures," which includes all money spent on the offices within a state and its staffers. This mostly consists of spending on catering for meetings, rent, utilities, cable, and internet in campaign offices, administrative supplies (associated largely with IT costs), and staffer travels (rental cars, housing, flights, etc.). The last component includes all money spent on broadcast, radio, and print advertising, along with other media-related costs (i.e., media consultants, production costs of advertisements, and miscellaneous costs related to getting out the message).

We expect that campaign expenditures are a good proxy for the candidate's travel and the campaign's direct expenses. However, the administrative portion of the campaign expenditures are likely a lower bound for the amount of money staffers spend in each state during the campaign. For example, if campaign staff go to a restaurant in the evening, this will likely not be covered as a campaign expense. This spending amount is a lower bound for total exogenous spending in the area, since national news and media crews also tend to follow and cover the primary schedule state by state. Even with this lower bound, states with primaries tend to see between one half a million and 19 million dollars in spending over an election cycle. Comparing this to the median total income in the retail and accommodations

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[9]We attempted to aggregate the 1990-2009 data to get a total measure of earnings in the services sector. Since the years 1990-2001 are included in both datasets, we can compare to see how similar the two measures are. They are very different, which is why we could not use this aggregated services earnings in the same analysis as the 1974-2001 services data.

[10]We obtain data from a new release of the BEA downloaded on December 1, 2014 for all sectors available from 1976-2001 that is slightly more detailed. The new release of the data for sectors categorised originally from 1990-2009 is only available from 1998-2009 in the new release, so we rely on the data that was obtained on April 4, 2012.

sectors, 5.3 and 2.5 billion dollars respectively, this is still enough money to modestly boost local per capita income.

The advertising component of total expenditures is likely to include some expenses that do not directly affect a state's local economy at the time of a primary, even though they are expenses made for the primary campaign. For example, the production of an advertisement run in Iowa could be done in California, and thus included in this measure. The production could also be done in Iowa, however, and it is not feasible, given the data, to distinguish the two. However, it is likely that primary contests drive up the price of ad buys, and even purchase slots from local media at an elevated price, thus benefiting local firms as well as local media stations. Thus, for the remainder of the paper, we include the advertising spending as a part of campaign expenditures.[11]

3   Descriptive Statistics

In this section, we first explore the relationship between primary campaigns and local economic conditions to explain the variation in our data. We next look at the campaign expenditures data from 2004 through 2008 to establish that there is more spending during primary campaigns.

3.1   *Variation in Primary Campaigns*

This paper looks at how the variation in primary elections affects local income. States experience variation in regards to (1) whether or not any money will be spent in primary campaigns and (2) how much money will be spent. This variation comes from two main channels.

First, the duration of any primary campaign is unknown ex ante. While some primary campaigns leave only one candidate in each party after only a few months (i.e. in 2004 when Senator Kerry clinched in March), other election cycles (i.e. 2008) carry on until June, reaching every state. Figure 1 shows the variation, by party, of the number of states reached by campaigns in each election cycle. This shows significant fluctuations in the number of states that have primary elections each year, particularly in Republican primaries. Alternatively, Figure 2 plots the duration of primary campaigns over time, where the duration is defined as the number of days from the first primary until only one candidate remained in the contest.[12] In general, the early contests from 1976-1992 took longer to determine each party's candidate. Figure 2 also plots the average real GDP per capita (in 2008 dollars) in the US over time, providing suggestive evidence that the duration of primaries is seemingly uncorrelated with the state of

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[11]If we replicate our results excluding advertising expenditures, the results are slightly larger in magnitude and remain the same in statistical significance.

[12]Since there are potentially 2 primaries in each state and year, there is a duration for each contest. We plot the length of the longer primary in each year.

the economy.[13]

Second, the ordering of primaries across states has changed drastically from 1976 through the present day. Although national parties have some influence on the timing of primaries, the decisions are ultimately made by each state. There has been significant movement in the primary calendar over time. The change in ordering also allows for some states to experience campaign spending in some election cycles and not others. In addition, if a state's primary moves to a day in which many other states hold their contests, this may lead to a reduction in campaign spending in that state. This gives us variation in both the existence of and amount of spending by primary campaigns. Figure 3 shows which states switched primary status between 2004 and 2008. Comparing just these 2 election cycles, we see that there are many states that had primaries in 2008 but not 2004, due to both the fact that there was no Republican primary in 2004 and the competitiveness of the lengthy 2008 Democratic primary.

The argument in our paper implies that states should have an incentive to move their primaries earlier in the calendar in order to gain economic benefits. However, there are lengthy processes associated with changing a state's primary dates, where the state legislature must propose a bill and fewer than 5-10% of bills are passed.[14] The lengthy process creates difficulty for states to change their date in a timely fashion, making it unlikely that the primary date will be switched (and reached) when the state's economy is at its worst. In addition, the state and national party officials must approve the change in date for the state's delegates to count in the nomination process.

Furthermore, even though this change of date is under the authorisation of state elected officials who have an interest in state policy, a state's change in ordering is seemingly uncorrelated with a change in GDP growth. To demonstrate this, in each year we split the states into two groups: those who changed their primary date from the previous election, and those that did not.[15] Figure 4 plots the average GDP growth in both groups over time. The average GDP growth takes percentage growth of GDP between two years of each state (in each group) and takes the average of those observations by year. The graph also shows the number of states that changed their primary date in each year. This figure shows no systematic difference between the GDP growth in both groups over time.[16] We also see that there are a large number of states that change their primary dates each year, showing that this provides an important source of variation. This only captures the states that did and did not change and does not capture the amount by which the state moved up.

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[13]When regressing real GDP per capita on the duration of primaries, we find no statistically significant relationship between the two variables.

[14]Most states have dates like the following from Montana's Constitution: 13-1-107. Times for holding primary elections. (1) On the first Tuesday after the first Monday in June preceding the general election provided for in 13-1-104(1), a primary election shall be held throughout the state (The Constitution of the State of Montana, 2011).

[15]We label a state as having changed their primary date if the date of the primary made a substantial change (i.e., more than 2 weeks) such that it took an initiative within the state's Board of Elections and changed the ordering of the primary schedule.

[16]A t-test shows that the difference in the means is not statistically different than 0 at the 5% significance level.

An additional literature on vote-buying suggests that politicians can adjust funds on a state-by-state basis (See e.g., Levitt and Snyder (1995); Fleck (2008)). If government funds are correlated with campaign spending, this could additionally confound our effect. However, the ability of politicians to adjust the allocation of government funds quickly on a state-by-state basis is limited. For example, Senator Kerry would have had trouble providing a voting record that appeased each state he visited in his Presidential primary campaign surrounding the time of that state's election. This makes the approach taken in this paper more compelling than studies that focus on differences in policy spending over time as exogenous variation.

Overall, there are still endogeneity concerns present. As stated above, it may be the case that states may try to elevate their position in the calendar to obtain more federal attention and aid when states experience their worst economic conditions (overstating the effect). On the contrary, states experiencing a boom in a specific sector may want more attention for that issue and move up in the calendar (understating the effect). These two opposing forces could bias estimates of primary campaigns on income towards zero. While we show reduced form estimates, we rely on an instrumental variables strategy to causally identify the effect of primary campaigns on income.

3.2 *Primary Spending*

In this paper, we study whether the existence of a primary increases local earnings. For there to be an effect, there has to be more campaign spending in states with primaries. To verify that this is true, we use data on campaign expenditures from the 2004 and 2008 primary elections. Table 1 shows the distribution of spending for primaries by quarter, where states with primaries in the current or next period have higher spending than areas without primaries. We see that spending increased during the quarter of the primary.

Next, we look at the changes in spending in states as they change primary status over the years, to ensure that having a primary leads to increased spending. Because of the extended nature of the 2008 primary, all states had primary elections in 2008. In general, we see that states that did not have a primary in 2004 tended to have an increase in spending between the 2004 and 2008 elections. Figure 3 shows the states that did not hold a primary in 2004, and Figure 5 shows the percentage change in expenditures between the two election cycles. States such as Pennsylvania and Utah, which were reached in the lengthy Democratic campaign in 2008, had over 20% more primary spending in this election cycle than they did in 2004, when the process culminated before the state was reached. There is also an increase in spending from 2004 to 2008 in early states like Iowa, South Carolina, and New Hampshire, where the increased number of candidates and the fact that both parties held primaries increased the spending in those states.

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Conversely, the state election boards in Michigan and Florida moved their Presidential primary contests up, and set the elections in January 2008. The DNC challenged these moves, and in turn, Democratic candidates opted to not campaign in these states. Thus, spending in these states actually decreased from their later primary day in 2004.[17] Overall, these figures show variation in spending in states, depending on whether or not there is a primary in that year. This supports our argument that there will be more spending in states with primaries.

Concern may arise that states experiencing a boom may simultaneously have more expensive services. Thus, we acknowledge the endogeneity between spending and local income and use an instrumental variable strategy to estimate the causal effect.

4 Empirical Analysis

In this section, we estimate the effect of primary spending on local economic development. We first test how the existence of a primary before the nomination has been determined affects per capita earnings from 1974-2010. We then verify these results using data on campaign expenditures across states in the 2004 and 2008 elections.

4.1 *Existence of a Primary*

We assume that earnings in a state in a given quarter depend on whether or not there is one primary, there are two primaries, and compare this to periods where there are no primaries, including a set of control variables, state fixed effects, quarter fixed effects, and year fixed effects. Let $1P_{it}$ be a dummy variable indicating whether or not there is one primary in state i at time t and $2P_{it}$ be a dummy variable indicating whether or not there are two primaries in state i at time t. Denote the log average per capita earnings in sector s in state i at time t (a year, quarter pair) as y_{ist}, state fixed effects as μ_i, year fixed effects as δ_y,[18] and quarter fixed effects as γ_q. Further, we include control variables X_{it}, and the error term ϵ_{ist}. Then we can write

$$y_{ist} = \beta_{0s} + \beta_{1s}1P_{it} + \beta_{2s}2P_{it} + \beta_{3s}X_{it} + \mu_i + \gamma_q + \delta_y + \epsilon_{ist}. \tag{1}$$

We estimate Equation (1) and look at how the existence of one or two primaries affects overall earnings, as well as earnings in different sectors. Identification in this specification comes from within

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[17]There are cases where state boundaries provide a neighbouring state with additional spending when there is not a primary in that state. For example, New Jersey benefited from New York's early primary on a day independent of all other primary contests in 2004. This is because candidates spent money renting cars, purchasing hotel rooms, and eating some meals in New Jersey, though they were officially campaigning in NY. In 2008, NJ held its own primary, buy on a day when many other states also held primaries, as did NY. This made spending higher in the previous election cycle.

[18]The year fixed effects control for potential political business cycles (Alesina *et al.* 1997; Drazen 2000).

state comparisons of times when a state did and did not host a primary election. Including the year dummies allows us to account for changes in income over time across all states. The year fixed effects capture the fact that earnings may rise during a Presidential election year anyway, due to beneficial fiscal policies (Nordhaus 1975; Lindbeck 1976; Hibbs 1977; Tufte 1978), allowing us to make a comparison between years a state was reached by the primary calendar and years that a state was not. A second comparison we exploit is the difference between off-Presidential years and Presidential election years for states that were reached in each election cycle. We rely upon the correlation between spending and primary existence in the 2004-2008 sample and define a state as having primary spending if there is one primary in the current quarter or if there are two primaries in the current quarter. We are careful to cluster standard errors at the state level since there is potential concern that some states might have both shorter campaign lengths throughout the entire sample as well as stronger economies.

We estimate Equation (1) using ordinary least squares (OLS) to determine the effects of hosting one primary and two primaries on earnings. If the existence of primary campaigns is exogenous to the state of the economy, the OLS estimates of β_{1s} and β_{2s} are unbiased. Focusing on heterogeneity within the primary dummy, we separate our initial primary variable into two separate dummy variables for one primary and two primaries. A state would host two primaries in one quarter if a Democratic and Republican primary were both held in that quarter. This would only happen in 1976, 1980, 1988, 2000, or 2008, since these elections did not host incumbents. Second, we control for the order in which the primary was reached. This way, we are able to determine if earlier states, which tend to receive more spending, have a larger income gain when hosting a primary. This variable equals 0 if the state was never reached. Second, we control for the number of primaries on the given day. This way, "Super Tuesday" states, where many races are held simultaneously, may have a smaller effect. When there is both a Democratic and a Republican primary in the same quarter, we use the maximum of the number of primaries on the same date when the two are not held on the same day. Third, we control for the persistence of the effect, by controlling for the presence of a primary election in the previous quarter. Acknowledging that candidates sometimes spend an extended amount of time campaigning in a state prior to the election, we control for whether or not there was a primary in the next quarter.

In Table 2, we show the results for total earned income, as well as in sectors where we would expect the largest effect from primaries: services, accommodations, and retail trade.[19] We expect accommodations to be particularly affected; however, this measure is not available for the early data, so we instead use the services sector for the first time period. We expect that primary campaign spending will directly affect the accommodations sector, as increased revenues from hotel room, catering, food services, and

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[19]The BEA data is missing for the accommodations sector in Alabama in 2001.

additional expenses the campaigns incur flow straight into this sector. The definition of retail trade changed between the two periods provided, and we retain the one with the widest coverage of the period (1974-2001).

Table 2 shows that hosting one primary only has a statistically significant effect on earnings in the service sector, where one primary increases earnings by 1.4% (Column (3)). However, Column (3) further shows that hosting a second primary in the same quarter surprisingly reduces service sector earnings by 1.8% in Column (3) and nearly 2.1% in Column (4). Hosting a second primary in one quarter increases earnings in the accommodations sector by 3.9% in Column (5) and 3.4% in Column (6). For both the services and accommodations sectors, hosting a primary in the previous quarter or hosting a primary in the subsequent quarter increase income by between 0.75 to 1.5%.

These OLS results highlight the potential endogeneity concerns described in the previous section. Specifically, we are concerned that federal attention may be attractive for states that are either experiencing a boom or a bust. Thus, being earlier in the calendar will increase the probability that a state is reached in the primary process, while also affecting income. In more recent cases, states with tight budgets move their primaries in order to schedule the presidential primary at the same time as the state primary for local officials. This could bias estimates towards zero.

We next relax the assumption that states are not cognisant of this effect and do not change their position in the primary calendar to increase their state's income. For example, if more needy states seek to go earlier for both gains in primary spending as well as from federal largesse resulting from candidates greater attention to their needs, the existence of primary campaigns will not be exogenous. To combat this, we next take an instrumental variables (IV) approach, where we instrument for the presence of one primary or two primaries using the previous election cycle's primary calendar and the current election cycle's clinch date. Specifically, *simulated instrument (one primary)* equals one if given the primary date four years ago, the state would have been reached one time with the current year's election duration and *simulated instrument (two primaries)* equals one if given the primary date four years ago, the state would have been reached two times with the current year's election duration.

Table 3 validates the first stages of these regressions using the simulated instruments, for each separate subsample of years. We estimate one first stage regression for each of the endogenous regressors (one primary and two primaries), where each specification contains state fixed effects, quarter fixed effects, and year fixed effects. In each case, the simulated instruments are high in predictive power, and for each first stage regression, the F-statistics surpass the Stock and Yogo F-statistic of 10 (Angrist and Pishke 2009). Table 4 goes on to present the second stage results. These are quite different from the ordinary least squares results from Table 2, highlighting the endogeneity. While we continue to include quarter

dummies, state fixed effects, and year fixed effects, we no longer include the additional control variables, as these are each additional heterogeneous treatment effects directly correlated with the primary dummy. Thus, we would need additional exclusion restrictions for each of those.

Table 4 shows that hosting one primary increases total earnings in that quarter by 25.2%, and hosting a second primary increases earnings by 18.5%. At first, this difference seems puzzling. However, when looking at the spending data, average spending is higher when only one primary is held in a quarter when compared to two primaries, but median spending is higher when two primaries are held in a quarter than one. The effect is more pronounced in the service sector, where hosting one primary increases earnings in the service sector by 26.5%, and hosting a second primary increases earnings by 20.7% (Column (2)). In Column (3), we see that accommodations earnings increase by 10.5% when hosting the first primary, and the second primary has no effect on earnings. Finally, Column (4) shows that retail sees the greatest effect from hosting a primary, increasing earnings by 27.2% for the first primary and 24.4% for the second primary.

This increased earnings could come through increased labour force participation, or an increase in hours worked (as well as overtime pay) for current workers. Using data from the Bureau of Labor Statistics on the number of workers in each sector on a monthly basis and the same specifications as above, we find that the effect of primary elections is not statistically different from zero. These results, shown in Table B.1 in Appendix B, imply that our results are due to increased hours worked for current workers in the sector.[20]

In Tables C.1-C.2 in Appendix C, we drop Iowa and New Hampshire, as they are the first 2 states on the primary calendar and have higher spending than other states. We want to be sure that the high levels of spending in these states are not driving our results. The fact that the results remain robust reassures us that the gains to hosting a primary are not driven by these traditionally early states that receive the most campaigning.

4.2   Expenditures

Next, we verify the results in the previous section with data on the amount spent by campaigns in each state during the 2004 and 2008 primary elections. This setup allows for an extra source of variation resulting from differences in expenditures across states and time.

Denote logged per capita spending in a state as e_{it}, and y_{ist} is defined as logged per capita earnings. Then we can write

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[20]Because the BLS data is monthly, these specifications include month fixed effects instead of the quarter fixed effects used in the rest of the analysis. The results do not change if we use quarter fixed effects.

$$y_{ist} = \beta_{0s} + \beta_{1s}e_{it} + \mu_i + \gamma_q + \delta_y + \epsilon_{ist}. \tag{2}$$

We use data from 2003, 2004, 2007, and 2008 in this specification. We include only these years to maintain a valid control group for each election cycle. Further, each non-election year has no spending, and more zero spending years will drive us towards finding an effect in the election years. Hence, we take a more conservative approach. We continue to include quarter dummies, year fixed effects, and state fixed effects. We use quarterly data on campaign expenditures to estimate Equation (2), and are interested in the coefficient on the logged per capita expenditures, β_{1s}.

The parameter β_{1s} tells us how changes in per capita spending affect per capita earnings in each sector, and the log-log specification gives us an elasticity measure. This provides a more precise estimate of the effect of spending on earnings since we also have variation in spending in each state and quarter. We prefer elasticity over a change in per capita earnings specification since campaign spending is not normally distributed in itself. Log-transforming the variable helps to preserve normality.

However, measuring the effect of spending on earnings in this sample can present a reverse causality problem. For example, if campaign-related services in a state with a booming economy in a given year cost more than the same services in a state without a booming economy, this would simultaneously result in more spending. In addition, as with the primary dummies, it could be the case that states with the worst economic conditions are the most likely to move up on the primary calendar for influence reasons, and also have the greatest impact from primary spending. For these two reasons, we favour an instrumental variables strategy, where we again use the simulated instrument to see if each state would have been reached in a given quarter based on the previous election cycle's primary date and the current election cycle's clinch date. In this section, we no longer control for different attributes of the primary. This is because the attributes are heterogeneous effects present when spending is non-zero, and thus also endogenous. Without an additional exclusion restriction for each of these variables, we cannot reliably estimate them.

We estimate Equation (2) using a two-staged least squares specification. In the first stage, *simulated instrument* equals one if given the primary date four years ago, the state would have been reached at least one time with the current year's election duration. Table 5 first reports the validity of the first stage in Column (1), where the simulated instrument increases per capita spending by 10%. While the F-statistic does not surpass the Stock and Yogo F-statistic of 10, the just identified approach is median unbiased and less subject to a weak instruments critique (Angrist and Pishke 2009).

Columns (2)-(4) report the coefficient and standard errors for β_{1s} in Equation (2), which is the elasticity of spending with respect to earnings for each sector. A 10% increase in per capita spending

increases per capita earnings by 0.93%. This effect is larger in the accommodations and retail sectors, at 1.1% and 1.6%, respectively.

Similar to the previous section, we also replicate these results dropping Iowa and New Hampshire, in the event that the entire effect is being driven by spending in these states. This is shown in Table C.3 of Appendix C, and does not substantially change the results.

In order to generate results that are comparable to those found in Table 4, we estimate the increased earnings from having a primary. To do this, we first note that having a primary approximately quadruples per capita campaign spending in a state at the median (as in Table 1). The results in this section show that quadrupling per capita campaign expenditures results in an 18% increase in a state's total per capita earnings, adjusting for seasonal and yearly increases in income. This is comparable to the effect found in Table 4, where hosting a primary increases per capita earnings by 21.7% (averaging the effect of one primary and two primary together).

We see the largest effects in the accommodations and retail trade sectors, where quadrupling expenditures results in a 22 and 30% increase in per capita earnings, respectively. We find larger effects in the accommodations and retail trade sectors than we do for total earnings. These effects are slightly smaller than the primary dummy variable results in Table 4. While a doubling of per capita spending increased per capita retail earnings by 30% in Table 5, hosting a primary results in a 25.5% increase in per capita retail earnings in Table 4, when averaging together the effect of one primary and two primaries. The accommodations sector result suggests that a primary increases income by approximately 10.5% in the dummy analysis, but a second primary has no effect, which is half of the size we find in the spending analysis.

To ensure that the difference in spending and dummy analysis is not simply driven by the separate sample of years, we replicate the primary dummy analysis using the 2004-2008 sample period in Table C.4 of Appendix C. The results are roughly similar, though slightly smaller in magnitude. This suggests that there is potentially more spending (either externally or by the campaigns) in the previous periods than in the 2004-2008 sample.

4.3   Multipliers

Next, we use these expenditure results to calculate a multiplier–the effect of additional spending on earned income levels. We expect that a multiplier effect will exist if service sector employees are receiving higher wages or working additional hours and consequently increasing their spending. For example, if a waitress receives a greater amount of tips than usual, she may be more inclined to make additional purchases, or even tip her hairdresser more. This money will continue to circulate in the state's

economy. Calculating this multiplier would provide a comparison to the traditional literature on fiscal stimulus multipliers, given that this multiplier would reflect previously unstudied sectors. In addition, we contribute to an ongoing debate between policymakers and economists, where the former claim that hosting mega events is beneficial to local economies and the latter assert that the investment is too costly for the benefit. Rose and Spiegel (2011) find that unsuccessful Olympic bids increase exports. This paper is the first to cleanly estimate a multiplier in the service sector based on the presence of a "mega event." Hosting a primary requires less investment in infrastructure than hosting the Superbowl or the Olympics, making the cost measures solely the expenditures (from campaign contributions) campaigns outlay. Mega events are planned well in advanced, allowing firms to increase up front costs in anticipation of the benefits. In addition, impact studies calculating the multipliers in mega events rely on survey estimates of travellers' expenditures during a visit. Relying on exogenous variation in primary hosting, as well as observational data on earnings helps us to calculate a more reliable estimate of a multiplier for the service sectors associated with mega events.

Multipliers are calculated by taking the derivative of earnings with respect to spending from Equation (2) and evaluating it at the average. We choose to maintain the log-log specification in Equation (2) since the distribution of expenditures is non-normal. Log transforming expenditure helps to preserve normality. The specific calculation is in Equation (3), where $\bar{x}$ denotes an average, and S is spending in per capita dollars and N is population.

$$m = exp(\beta_0 + \beta_1 ln(\bar{S}) + \bar{\mu} + \gamma_{q2} + \bar{\epsilon} - \beta_1 ln(\bar{N}))\frac{\beta_1}{\bar{S}}. \tag{3}$$

In Table 5, we report the multipliers for overall earnings, accommodations earnings, and retail earnings. We find the highest return to one dollar of spending in the retail sector, where one dollar results in a multiplier of 2.4. This is lower in the accommodations sector at 1.2, but still greater than one. The multiplier for overall earnings is approximately 1.4.

However, there is one large caveat to these multiplier estimates; we do not have a complete measure of the amount spent during primary campaigns. Our measure of spending is a lower bound on the actual amount of additional spending brought forth by a Presidential primary campaign, and does not include spending by the media, individual spending by staffers, or the additional expenditures put forth by a state's residents in order to engage in campaign events. For simplicity, we will refer to these additional expenses as "media spending" for the remainder of the discussion. This mis-measurement of total spending makes it hard to calculate accurate multipliers.

We assume that media spending and our expenditure values are highly correlated, which implies that our estimate of β_{1s} will not be biased. We think this is a valid assumption since a race with greater primary spending may have more electoral votes and garner more media attention. Also, like candidates, networks are constrained if many contests occur on the same day and have to spend less covering each given state. However, this makes it difficult to estimate the multiplier. The multiplier tells us how much total income would grow with an additional \$1 of spending. In our setup, an additional \$1 of primary spending does not just account for a \$1 increase in spending, as it would also be associated with an increase in media spending. Because we do not have an accurate measure of media spending, we are uncertain of the degree to which media spending would increase, and therefore cannot calculate an accurate multiplier. This argument implies that multipliers are overestimated.

To account for this additional spending, we next simulate the amount of media spending and replicate our results. Table 5 reports these results. Even when changing the spending measure, the elasticities, β_{1s}, remain unchanged.[21] This simulation also produces lower multiplier estimates, where media spending equal to 10% of total campaign spending generates multipliers of 1.3, 1.1, and 2.2 for total income, accommodations, and retail, respectively. Once we increase the potential media spending to 20% of total campaign spending, the multiplier on total income falls to 1.2. The multiplier on the accommodations sector drops to 1.0, and the multiplier on retail falls to 2.0.

4.4 *Unrelated Sectors*

In order to be sure that we are not picking up a spurious correlation between primary existence and earnings, we replicate each of our main findings in all sectors that ex-ante seem unrelated to primary campaigns. We select the Construction, Education, Entertainment, Forestry, Health, Information, Management, Manufacturing, Mining, Professional Services, Real Estate, Transportation Warehousing, Utilities, and Wholesale Trade, as these are all the sectors that span all years (both some part of the primary dummy sample as well as the spending sample) that should see no gains at the time a state hosts a primary.

Table 6 shows that the effect of hosting a primary in these sectors is not statistically different from zero when we instrument for the primary dummy in all sectors but management, where it is statistically significant at the 10% level. When the null hypothesis is true, a 10% significance level implies that we will reject the null one in ten times by definition, meaning that we are not overly concerned by the management results.[22] Our spending specification does not find a statistically significant effect in any

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[21]This is because $ln(c \times \text{spending}) = ln(c) + ln(\text{spending})$, where c is a constant.

[22]Moreover, this effect seems to be driven by just one data point (Delaware, 2003, fourth quarter), as it goes away when we drop that one point.

placebo sector. This placebo tests re-affirms that the effect we find in total earnings, as well as the accommodations, services, and retail sectors are not spurious correlations.

5 Where is the Money Coming from?

A discussion of the economic benefit of primaries would be incomplete without considering the sources of these funds. In particular, concern may arise that campaign contributions from individuals within a state are approximately equal to campaign spending in that same state. If, for example, Iowa residents are contributing at a higher rate than the rest of the country (especially at the time of the primary), funds may simply be moving amongst Iowa citizens.

Campaign spending differs from traditional government spending because campaigns are financed through three sources: individual level contributions, federal matching funds, and Political Action Committee (PAC) contributions. Individual level contributions in presidential races are generally considered consumption goods, where an individual donates to a campaign if it increases his/her utility (Ansolabehere *et al.* 2003). Thus, individuals who enjoy following politics, as well as those with more resources, tend to contribute more money to candidates and do this more frequently (Brady *et al.* 1995). While we do not precisely know the counterfactual, we postulate that this money would not be spent in the absence of primaries, as those who contribute in primaries tend to be more high-income individuals whose budgets allow for some flexibility in spending. However, we cannot fully assess the value of individuals' participation in the process, where they give their time, or small dollar donations to the campaign. These resources would likely be reallocated in the absence of the race. An additional source of "individual" funds, which are less frequently utilised in primary races, is a candidate's personal expenditures, which likely would not be spent to the same extent in the absence of a race and are a direct transfer to individuals in the service sector of states with a high degree of campaigning.

Second, partial public funding is available to Presidential primary candidates in the form of matching payments of up to $250 per individual contribution. Variation in total federal funding will come via the number of contributions as well as the number of candidates raising the threshold amount to begin collecting federal dollars within each primary cycle. To obtain these funds, candidates must become eligible and limit themselves to spending caps.[23] Again, these funds differ from the traditional federal spending in that they are not targeted at aiming an impoverished area, but instead are entrusted to viable Presidential candidates with intentions of getting out their messages to help voters make an informed decision. There has been little variation in the total federal funds allocated for Presidential primary contests over our full sample period (1976-2008), and this money can be seen as a transfer from all

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[23]See www.fec.gov for more on these rules.

taxpayers to those receiving campaigning.

Third, candidates receive money from PACs. While PAC contributions have increased significantly since 1976 (FEC 2010), candidates still receive most of their money during the primary from individuals and matching funds. This is because partisan PACs generally wait until a candidate has clinched the nomination to stand behind him. In 2008, candidates raised a total of $534 million from individuals, $63 million from PACs, and $21 million from federal matching funds. Similarly, in 2004, candidates raised $130 million from individual contributors, $10 million from PACs, and $27 from federal funds.[24]

Recognising that the majority of campaign spending comes from individuals, we analyse the geographic sources of the donations in Figure 6 for 2004 as an example of the source of campaign donations and spending. We construct a measure, entitled Campaign Ratio, by dividing total campaign-related expenses (i.e., money spent specifically on the travel-related activities for campaigning, not on ads, media, consultants, etc.) in a given state by that state's total individual-level campaign contributions. Thus, the greater the measure, the more relative money that is coming from out of state than being spent in state.

In Figure 6, we see that in early states like Iowa, New Hampshire, South Carolina, Missouri, Arkansas, and Virginia, there is the greatest ratio of spending to contributions. States like Texas, Washington, and California had some of the lowest ratios in 2004, meaning that residents were contributing more money than was being spent in the state on campaigns. In general, what we see is a transfer of funds from individuals in some states with many contributors to states early in the primary process, or on days with their own contest. These figures imply that the money being spent during primaries is mostly coming from outside the state.[25] Similar trends exist in 2008.

6   Conclusion

This paper takes a traditional public finance and macroeconomics question, asking how government spending affects local economies, and looks at primary campaign spending as a shock to previously unstudied sectors of a state's economy. We find that this money modestly increases per capita income in a state. Specifically, the service sectors see the largest effects, where the accommodations and retail sectors seem to be the main source of this finding.

While other papers have investigated the ability of early primaries to influence policy, as candidate's attempt to appease early state's preferences in order to clench the nomination early (Malhotra and Snowberg 2011), this paper is the first to show the economic value of hosting a primary race. This paper

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[24]Calculations based on Federal Election Commission data on Presidential candidates' primary fundraising.

[25]Again, we cannot account for small donations or within-state volunteering as inputs.

provides additional incentives for states to move their primaries up in the ordering, as states earlier in the process tend to see greater gains. However, it is important to tread cautiously, as the overall effect from hosting the primary is contingent upon campaign activity existing there, so states must change dates strategically.

Additionally, this paper provides a new insight on fiscal stimulus. While previous work has established a link between government spending and increases in employment, earnings, and income, this paper asserts that additional spending in states' service sectors provide short-run increases to personal earnings on the intensive margin. Thus, when individuals are greeted with a political campaign, they should relish in the stimulus this provides (and the transfers from individuals in other states that allow this to occur).

As policymakers continue to reform campaign finance legislation, they should consider the potential positive effects, though short-run and sector-specific, that can ensue from campaign spending in states.

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Figures

Fig. 1: *Number of Primaries over Time*
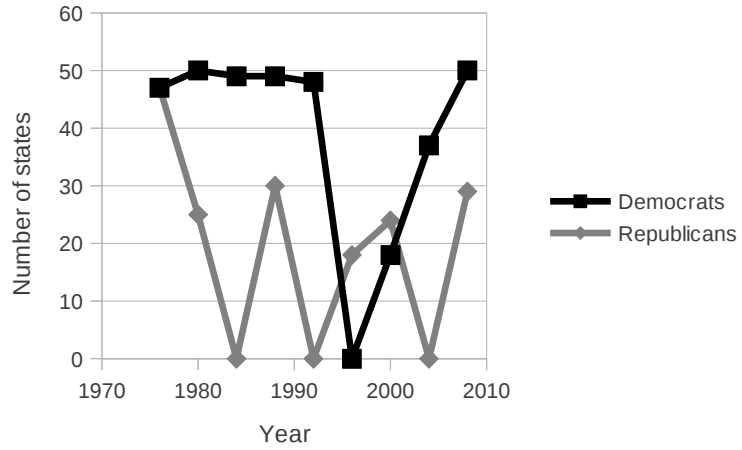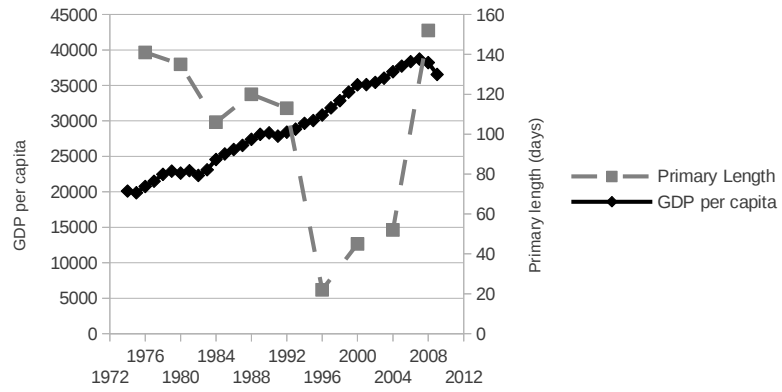

Fig. 2: *Primary Length and GDP*

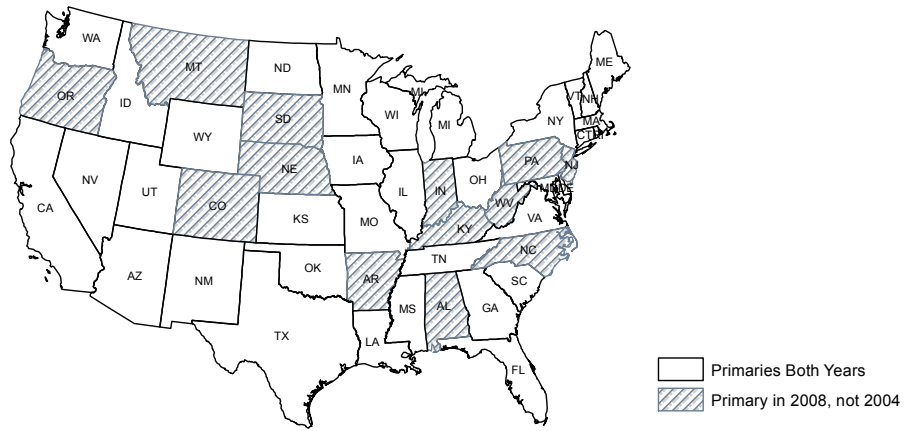*Fig. 3: Primary Status between 2004 and 2008*

Fig. 4: *States that Switch Primary Dates and GDP*

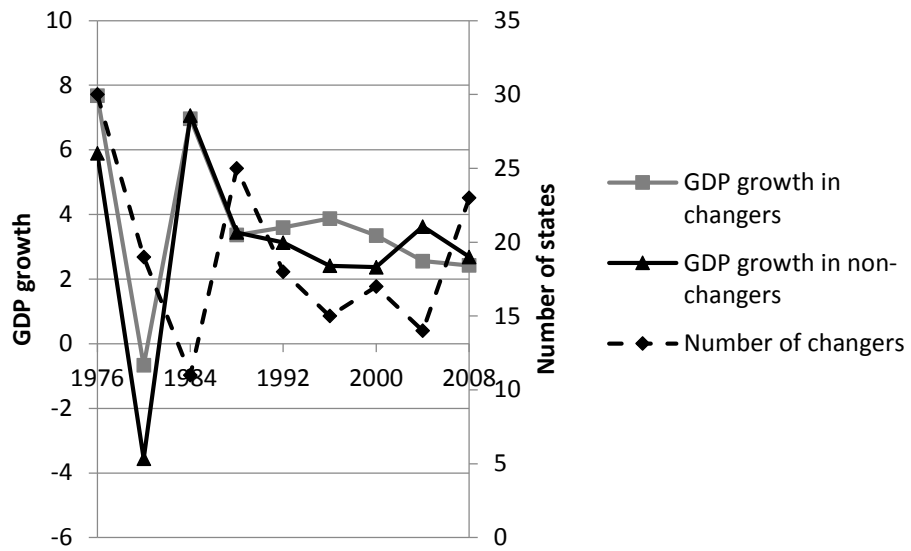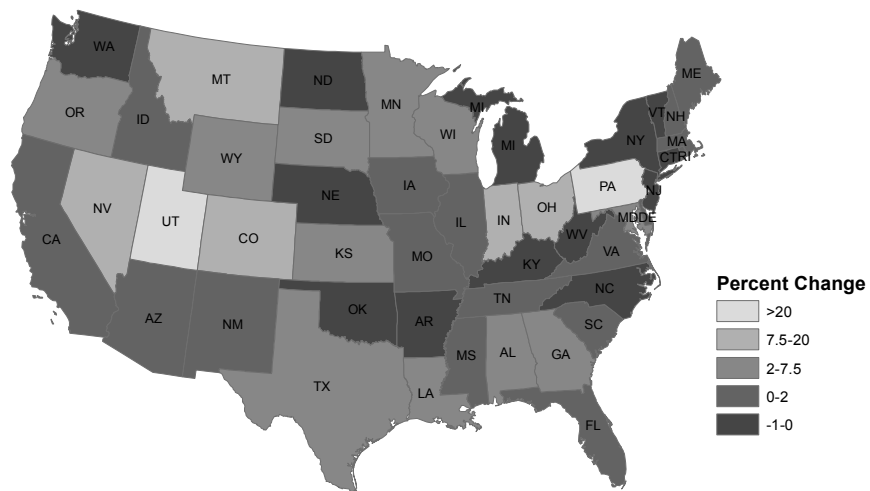Fig. 5: *Changes in Expenditures from 2004-2008*

Fig. 6: *Campaign Expenditures and Contributions in 2004*

Expenditures/Contributions

Campaign Finance Ratio 04

	<.25
	.25-.50
	.50-1.0
	1-2
	>2
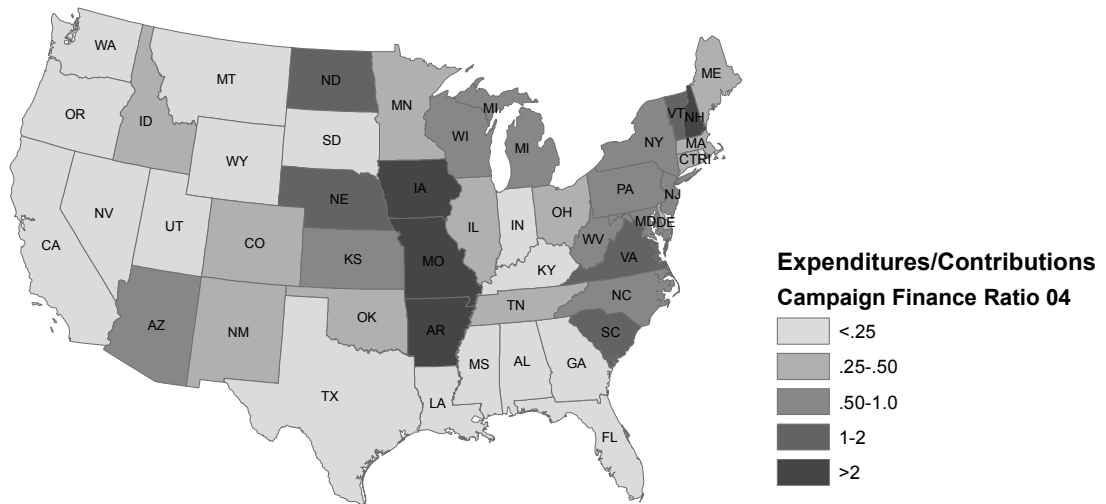
Tables

Table 1: *Spending by Primary Existence*

Total Spending Measures

	Primary in Current Quarter		No Primary	
	Total	Minus Advertising	Total	Minus Advertising
Average	1,507,529	703,237	973,236	407,181
Median	423,584	222,641	121,831	42,912
25th Percentile	86,755	55,653	18,845	5,515
75th Percentile	1,487,526	721,901	689,755	301,154
Observations	89	89	711	711

Per Capita Measures

	Primary in Current Quarter		No Primary	
	Total	Minus Advertising	Total	Minus Advertising
Average	0.27	0.12	0.15	0.074
Median	0.093	0.046	0.03	0.012
25th Percentile	0.037	0.007	0.023	0.0018
75th Percentile	0.273	0.113	0.117	0.047
Observations	89	89	711	711

Notes: Total Spending includes all money spent by campaigns (in 2008 dollars). Minus Advertising removes ad and media expenditures from Total Spending. We compare quarter/states with and without primary elections in the 2003-2004 and 2007-2008 election cycles.

Table 2: *Primary Existence Increases Income in Specific Sectors*

	Dependent Variable = ln(Per Capita Earnings by Sector)							
	Income (1974-2009)		Services (1974-2001)		Accommodations (1990-2009)		Retail (1974-2001)	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
One Primary	0.00769	0.00991	0.0141*	0.0144	0.00569	-0.00425	0.00416	-0.00202
	(0.00751)	(0.0186)	(0.00811)	(0.0200)	(0.00513)	(0.00850)	(0.00418)	(0.00801)
Two Primaries	-0.00469	-0.00428	-0.0177**	-0.0207*	0.0394***	0.0342***	-0.00188	-0.0109
	(0.00451)	(0.00919)	(0.00842)	(0.0108)	(0.00727)	(0.00963)	(0.00431)	(0.00692)
Order		0.0000216		0.000276		0.00152		0.000687
		(0.00103)		(0.00117)		(0.000970)		(0.000570)
Number Primaries		0.000852*		0.00219***		-0.000144		0.00192***
		(0.000472)		(0.000669)		(0.000429)		(0.000611)
$Primary_{q+1}$		0.00535		0.00754*		0.0147***		0.00312
		(0.00391)		(0.00380)		(0.00341)		(0.00308)
$Primary_{q-1}$		0.00631		0.00962**		0.0110**		0.00350
		(0.00499)		(0.00432)		(0.00425)		(0.00371)
Observations	7200	7200	5600	5600	3996	3996	5600	5600
Number of States	50	50	50	50	50	50	50	50

$* \ p < 0.10, \ ** \ p < 0.05, \ *** \ p < 0.01$

Notes: Robust standard errors clustered by state in parentheses. Specifications includes state fixed effects, quarter dummies, and year dummies. One Primary=1 if there was one primary in the given quarter; Two Primary=1 if there were two primary in the given quarter. $Primary_{q-1} = 1$ if there was a primary in the previous quarter. Order is the number in the sequence the primary occurred, and equals zero if the state was not reached in the cycle. Number Primaries is the number of primaries held the same day as a given state's contest.

Table 3: *IV Stage 1: Last Cycle's Primary Calendar Predicts Current Primary Status*

	Total earnings (1974-2009) (1)	Services (1974-2001) (2)	Accommodations (1990-2009) (3)	Retail (1974-2001) (4)
Dependent Variable=1 if State Hosted one Primary				
Simulated Instrument	0.0849***	0.0666***	0.0938***	0.0666***
(one primary)	(0.0140)	(0.0150)	(0.0144)	(0.0150)
F-Statistic	45.66	41.64	12.68	41.64
Dependent Variable=1 if State Hosted 2 Primaries				
Simulated Instrument	0.119***	0.125***	0.116***	0.125***
(two primaries)	(0.0183)	(0.0194)	(0.0243)	(0.0194)
F-Statistic	51.41	39.31	15.63	39.31
Observations	7200	5600	3996	5600
Number of States	50	50	50	50

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Robust standard errors clustered at the state level in parentheses. Specifications include state fixed effects, quarter dummies, and year fixed effects. Simulated Instrument (one primary) =1 if the state would have been reached once given the state's last election cycle's primary date and the current cycle's clinch dates. Simulated Instrument (two primaries) =1 if the state would have been reached twice given the state's last election cycle's primary date and the current cycle's clinch dates.

Table 4: *IV Stage 2: Primaries Increase Total and Sector Earnings*

Dependent Variable = ln(Per Capita Income by Sector)				
	Total earnings (1974-2009) (1)	Services (1974-2001) (2)	Accommodations (1990-2009) (3)	Retail (1974-2001) (4)
One Primary	0.252***	0.265**	0.105*	0.272***
	(0.0554)	(0.107)	(0.0565)	(0.0849)
Two Primaries	0.185***	0.207***	-0.0213	0.244***
	(0.0521)	(0.0721)	(0.0653)	(0.0569)
Observations	7200	5600	3996	5600
Number of States	50	50	50	50

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Notes: Robust standard errors clustered at the state-year level in parentheses. Specifications include state fixed effects, quarter dummies, a linear time trend, and an election year dummy. Primary=1 if there was a primary in the given quarter.

Table 5: *IV Results: Primary Spending Increases Total and Sector Earnings*

Dependent Variable (All Per Capita)	ln(Spending)	ln(Earnings by Sector)		
	(1)	(2)	(3)	(4)
	Stage 1	Total earnings	Accommodations	Retail
Simulated Instrument	0.10002***			
	(0.0344)			
ln(Per Capita Spending)		0.0937**	0.110**	0.155**
		(0.0435)	(0.0520)	(0.0663)
Multipliers				
Campaign spending only		1.389***	1.176***	2.356**
		(0.537)	(0.448)	(0.729)
+ 10% media spending		1.274**	1.080***	2.173**
		(0.497)	(0.417)	(0.686)
+ 20% media spending		1.177**	1.000***	2.019**
		(0.464)	(0.390)	(0.649)
Stage 1 F-Statistic	8.448			
Observations	800	800	800	800
Number of States	50	50	50	50

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Notes: Robust standard errors clustered at the state-year level in parentheses. Specifications includes state fixed effects, quarter dummies, year dummies, and a constant term. Simulated Instrument=1 if the state would have been reached given the state's last election cycle's primary date and the current cycle's clinch date. Using data from 2003-2004 and 2007-2008.

Table 6: *No Effect in Unrelated Sectors: IV Results*

		Primary Dummy Regression		Spending regression
		Coefficient on		Coefficient on
Sector	Years covered	One Primary	Two primaries	ln(Per Capita Spending)
		(1)	(2)	(3)
Dependent Variable = ln (Per Capita Sector Earnings)				
Education	1990-2009	-0.113	0.00247	-0.0251
		(0.0995)	(0.131)	(0.0612)
Entertainment	1990-2009	0.216	-0.00508	0.0349
		(0.205)	(0.256)	(0.0748)
Health	1990-2009	-0.149	-0.101	-0.0249
		(0.112)	(0.0861)	(0.0260)
Information	1990-2009	-0.158	0.324	0.112
		(0.196)	(0.328)	(0.0867)
Management	1990-2009	0.554*	0.0671	0.296
		(0.271)	(0.342)	(0.245)
Professional Services	1990-2009	-0.109	-0.0634	0.0553
		(0.147)	(0.176)	(0.0673)
Real Estate	1990-2009	0.139	0.121	0.150
		(0.292)	(0.348)	(0.0987)
Construction	1974-2001	0.314	0.0614	0.387
		(0.297)	(0.0798)	(0.290)
Forestry	1998-2009	0.0000695	-0.488	0.137
		(0.785)	(0.708)	(0.154)
Manufacturing	1974-2001	-0.00370	-0.0445	0.126
		(0.294)	(0.274)	(0.0851)
Mining	1974-2001	-0.594	0.893	0.400
		(0.725)	(0.577)	(0.350)
Transportation Warehousing	1990-2009	-0.0574	-0.0643	0.0887
		(0.129)	(0.141)	(0.122)
Utilities	1990-2009	0.130	0.212	0.167
		(0.177)	(0.265)	(0.133)
Wholesale trade	1974-2001	-0.146	-0.144	0.107
		(0.241)	(0.230)	(0.0895)

Notes: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$ Robust standard errors clustered at the state level in parentheses. Specifications include state fixed effects, quarter dummies, and year dummies. Columns (1) and (2) show the coefficients of interest from the primary dummy regression, and column (3) shows the results from the spending regression. Columns (1) and (2) use data from the years specified by the sector and Column (3) uses data from 2003-2004 and 2007-2008. Columns (1) and (2) instrument for one primary and two primaries using two simulated instruments, capturing whether the state would have been reached one or two times (or not at all) given the state's last election cycle's primary date and the current cycle's clinch date. Column (3) instruments for spending using a simulated instrument=1 if the state would have been reached given the state's last election cycle's primary date and the current cycle's clinch date.