The 2008 Presidential Primaries through the Lens of Prediction Markets

Neil Malhotra
Stanford Graduate School of Business
neilm@stanford.edu

Erik Snowberg
California Institute of Technology
snowberg@caltech.edu

Abstract

To explore the influence of primary results during the 2008 nomination process we leverage a previously unused methodology—the analysis of prediction market contracts. The unique structure of prediction markets allows us to address two unexplored questions. First, we analyze whether primary results affect candidates' chances in the general election, as candidates who take strong positions during the nomination contest may be unable to easily appeal to centrist voters in the general election. We also assess whether states with early primaries, such as Iowa and New Hampshire, have a disproportionate effect on the nominating process. We show that the length of the primary season has a minimal impact of the electability of candidates in the general election, and that some states have a disproportionate impact on the nominating process. However, the states that have the largest impact are not necessarily New Hampshire and Iowa, the states that have often been assumed to be the most influential because of their early position on the primary calendar.

1

Political parties in the United States use a series of sequential elections, or primaries, within a state or across groups of states in order to select nominees for the presidential election—often referred to as the general election. A substantial body of empirical and theoretical research has explored the impact of primaries on political outcomes. Normatively, scholars express concerns that states early in the sequence of primaries, such as Iowa and New Hampshire, have a disproportionate influence on which candidate is ultimately nominated. The presumed prominence of these two states is problematic as they are unrepresentative of the U.S. as a whole. Indeed, the structure of presidential primaries in the United States has raised questions as to whether the principle of "one man, one vote" is followed in both letter and spirit (Beckel and Thomas 2008; Hallett, Torry, and Rowland 2007; Hickey, Myers, and Theriault 2008).

Research in political science has pointed to the significant influence of early primary states in building candidate viability, attracting donors and volunteers, and creating "bandwagons" (e.g. Abramowitz 1989; Abramson et al. 1992; Mutz 1998). Theoretical work has also demonstrated that voters use early contests as cues in determining their vote choices (e.g. Morton and Williams 2001; Callender 2007; Serra 2007, Kartik and McAphee 20XX. The bulk of the previous empirical literature has relied on analysis of public opinion polls, survey data (Bartels 1988; Johnson et al. 1992), campaign contributions (Mutz 1995), or laboratory experiments (Morton and Williams 2001; Rickershauser and Aldrich 2007).

To explore the influence of primary results during the 2008 nomination process we leverage a previously unused methodology—the analysis of prediction market contracts. The structure of prediction markets allows us to address two unexplored questions. First, we analyze whether primary results affect candidates' chances in the general election. Previous research has generally explored the primary in isolation. Spatial competition models generally show that

2

candidates will converge to the same position in a single election.[1] Primaries may constrain candidates from full convergence as they will take on more extreme positions to satisfy (non-strategic) primary voters who are more extreme than the general population (Geer 1988; Grofman 1993, 2004; Norrander 1989). However, the question of whether the primary process actually damages a candidate's electoral viability in the general election has not been studied. By using prediction markets to calculate a candidate's chance of winning the general election conditional on winning his or her party's nomination, we show that the results of primary contests have at best a small impact on candidate's general election chances.[2]

We also assess whether states with early primaries, such as Iowa and New Hampshire, have an effect on the nominating process that is disproportionate to their relatively small population sizes. Although polling data could potentially address this question, public opinion surveys are not conducted frequently enough to assess the impact of each primary date. In contrast, prediction market contracts are constantly traded. We use prediction markets to compare the impact of a state's primary contest on the chances of a given candidate winning his or her party's nomination to that state's size.[3] In 2008, South Carolina and Nevada had a disproportionately large impact on the Republican nomination, whereas Louisiana, Nebraska, and Washington had a disproportionately large influence on the Democratic nomination. The delegate-rich Super Tuesday states had little impact on either of the parties' nomination.

How Do Primary Outcomes Affect Expectations About the General Election?

---

[1] Downs (1957) shows that politicians will converge to the most preferred policy of the median voter, while in probabilistic voting models (Lindbeck and Weibull, 1987; Dixit and Londregen, 1996) politicians converge to a policy that is a weighted average of voter ideal points.
[2] Of course, it may be the case that individual primaries do not have an effect on candidate chances in the general election, but the system itself does.
[3] By size we mean here the proportion of delegates from that state, not the state's population or physical size.

We first leverage prediction market prices to determine the probability of a candidate winning the general election conditional on that candidate obtaining his or her party's nomination. We use this data to determine whether the outcomes of primary contests affect the electoral prospects of candidates in the general election. As mentioned above, the electorates of primary and general elections are quite different, and success in attracting the support of strong partisans in the primary election may come at the cost of diminished support among centrist voters in November. This will be particularly true if candidates are constrained by positions they take early in the campaign (perhaps due to the risk of being labeled a flip-flopper). Success in early primary states is presumed to enhance a candidate's momentum and strengthen his or her chance of winning the nomination (Bartels 1988; Mutz 1998). However, it is less clear how primaries affect his or her chances of being elected president (although, a significant amount of literature has focused on the general election impacts of divisive primaries; e.g. Buell 1986; Stone, Atkenson, and Rapoport 1992; Kenney and Rice 1987).[4]

Data from public opinion polls are insufficient to address such questions. Not only are general election polls rare during the primaries, but an analyst would need to have a complete set of head-to-head polls between all of the Democratic candidates and all of the Republican candidates. Even with access to all these data, it is not possible to assess the change of a candidate's chances of winning the general election *conditional* on winning the nomination. However, prediction markets can be used to calculate these conditional probabilities.

The probability of a candidate winning the general election conditional on winning the nomination, $P(G|N)$ is:

---

[4] Whereas the previous literature has mainly focused on whether supporters of defeated candidates in the nomination contest "come home" to vote for their party's nominee in the general election, we study the effects of early contests more broadly, including candidates' difficulties of returning to the center in the general after trying to attract primary voters.

$$P(G|N) = \frac{P(G \cap N)}{P(N)} \quad (1)$$

where $P(G \cap N)$ is the probability of the candidate winning the general election and the nomination and $P(N)$ is the probability of the candidate winning just the nomination. If a candidate has won the general election, then it necessarily means that he or she has won the nomination. Hence, $P(G \cap N) = P(G)$. Therefore, the conditional probability of winning the general given that the candidate has won the nomination is the ratio of the probability of winning the general to the probability of winning the nomination:

$$P(G|N) = \frac{P(G)}{P(N)}. \quad (2)$$

Note that equation (2) can also be derived from the following expression:

$$P(G|N) = \frac{P(N|G)P(G)}{P(N)} \quad (3)$$

where $P(N|G)$ equals one because winning the general necessitates winning the nomination; hence, equation (3) reduces to equation (2).

In the analysis that follows, we examine the change in the probability of winning the general election conditional on winning the nomination before and after each primary contest for each party.[5] To do so, for the day before and the day after each day on which a primary or caucus takes place, we recorded contract prices for the candidates' winning the general and primary (i.e., $P(G)$ and $P(N)$) every ten minutes. We took the arithmetic means of the bid and ask prices, and computed an arithmetic mean for each day. We then calculated $P(G|N)$ as in equation (2).[6]

---

[5] When there are two contests in a state (a primary and a caucus), we focus on the one yielding the highest number of delegates.

[6] We also calculated standard errors for prices for each of the contracts. Because so many observations were taken, the daily means are extremely precisely estimated, and the changes in the conditional probabilities discussed below are all highly statistically significantly different from zero. For simplicity, we present point estimates and not standard errors.

Table 1 presents the results for each Democratic primary. The first two columns list the contest dates and all of the states that had primaries and/or caucuses on those dates. The next three columns present the change in the conditional probabilities of Barack Obama, Hillary Clinton, and John Edwards winning the general election given that they win the nomination. For reference, the final column lists the change in the prediction market contract of a Democrat—any Democrat—winning the general election.

The key finding is that primary contests have little impact on candidates' chances of winning the general election. For both Obama and Clinton, no day of primaries and/or caucuses changed their conditional probabilities by more than 10 percentage points, and the average change is 1.06 percentage points. These results are somewhat surprising given the importance afforded to early contests in both scholarly and popular work (Bartels 1988; Nagourney 2007). For example, the Iowa caucuses only change Obama and Clinton's conditional probabilities by .3 and 0.5 percentage points, respectively. Super Tuesday—on which nearly half of the states and territories held their contests—also negligibly altered the conditional probabilities.

What are the implications of these results for the study of presidential primaries? It appears as if primaries do not significantly constrain a candidate from moving towards the median voter (a la Downs, 1957) once the candidate has secured the nomination. The need to win over voters in the primary—which became especially acute in 2008 as the Democratic primaries wore on for months without a clear winner—seemed to do little damage to the candidates' prospects in the general election.

Although the probability changes presented in Table 1 are generally small, it is worth mentioning the strongest shifts, as they help us understand the dynamics of the nominating contests. Obama's conditional probability showed its largest increase (4.5 percentage points)

following the South Carolina primary. Many pundits consider this the turning point of the race in that it vaulted Obama into frontrunner status in the wake of Clinton's largely unexpected comeback victory in the New Hampshire primary. Further, Obama's resounding victory may have signaled the solidification of his support among African-Americans. Conversely, South Carolina also resulted in Clinton's largest drop in conditional probability (5.7 percentage points).

On the other hand, Obama's largest decrease (3.0 percentage points) was after March 4, when four states held their primaries: Ohio, Rhode Island, Texas, and Vermont. Clinton's narrow wins in Ohio and Texas ensured that the primaries would be extended another two months, as she was expected to win Pennsylvania a month later. Had Obama won Ohio and/or Texas, there would have been enormous pressure on Clinton to exit the race. Perhaps this possibility of an extended, or bloody, Democratic primary, requiring a massive expenditure of resources damaged Obama's chances in the general election.

Finally, Clinton's greatest conditional probability gains were after the Indiana and North Carolina contests on May 6, and the Kentucky and Oregon contests on May 20. After both of these contests, the chances of Clinton winning the nomination still appeared bleak but these primaries demonstrated her strength among white, working-class Democrats, a crucial demographic in the general election. Hence, her perceived ability to win among these voters may have increased her conditional probability of winning the general election.

Table 2 presents analogous results for the Republican primaries. For McCain, the eventual nominee, there is great stability in conditional probabilities over time. This underscores that primaries have a relatively small influence on general election prospects. Additionally, because McCain had largely secured the nomination following Super Tuesday, the subsequent primaries were, for all practical purposes, not covered by the media nor strongly contested,

thereby minimizing their impact on McCain's general election prospects (Cooper 2008). One interesting departure is February 9 (four days after Super Tuesday), where Huckabee performed extremely well in Louisiana and Kansas. This was perceived to be a sign of protest against the impending McCain nomination by conservative Republicans, potentially explaining McCain's drop in the conditional probability of winning the general.

The volatile probability changes of McCain's two less viable rivals are interesting. Huckabee's general election prospects increased substantially after Florida (perhaps due to the simultaneous harm that contest did to the Giuliani, Thompson, and Romney candidacies—all of whom had bet heavily on performing well in Florida). Romney, on the other hand, consistently saw improvements in his conditional probability, driven by dim nomination prospects but a consistently strong sense of electability in the general election.

The Disproportionate Influence of Early Nominating Contests

It has long been surmised that states early in the nominating calendar (e.g. Iowa and New Hampshire) have disproportionate influence in determining the parties' nominees. Their early positions allow victorious candidates (or at least candidates who perform "better than expected") to build momentum, attract undecided voters, gain viability, and attract donors, volunteers, and media coverage. Normatively, this is a potential problem for representative democracy as Iowa and New Hampshire are demographically unrepresentative of the rest of the nation (Hickey, Myers, and Theriault 2008). Previous attempts to study the influence of early contests have primarily relied on an examination of changes in fundraising or future electoral results (Hinckley and Green 1996; Mutz 1997; Adkins and Dowdle 2001). Prediction markets offer an alternative means of assessing the impact of early primaries and caucuses.

For each primary we can compare the change in the probability of a candidate winning the nomination for each state and compare it to that state's actual voting weight at the convention in terms of delegates. Note that public opinion polls cannot be interpreted as probability changes in the same fashion. Moreover, an analyst would need polling data on the subset of the American population that has *not* yet participated in the primaries. Moreover, analyzing a poll does not tell us who is most likely to win the nominations, given the complicated procedures involved in assigning delegates. Conversely, prediction market contracts are traded consistently each day, and price in the nuances of the nominating process.

In Table 3, we present the changes in the primary contracts for the two Democratic candidates who competed in all races (Obama and Clinton) in both absolute terms (i.e., signed change in the primary contract between the day before the contest date and the day after) and percentage terms (i.e., percent increase or decrease in the value of the contract one day before an and after the contract).[7] In the final column of Table 3, we list the number of voting delegates from each state at the Democratic National Convention.

One issue is that the changes in the contract prices do not capture how much of a surprise the primary result was. Hence, if we find that Florida's primary results have a small effect on the nomination contract price of a candidate, it could be due to one of two factors: (1) Florida is not an influential state in the nominating process; or (2) the result of the Florida primary was expected. We must take into account the candidate's probability of winning the contest, which is measured by P, the price of the candidate's contract on the day before the contest. Hence, we divide the absolute change in the nomination contracts by a *surprise adjustment*, calculated as follows: $0.01(100 - P)$ if the candidate wins the primary, and $0.01(0 - P)$ if the candidate loses.

---

[7] We exclude Edwards because he dropped out of the race prior to Super Tuesday, and therefore do not have usable contract prices for the full set of states. Additionally, due to lack of data, we exclude U.S. territories.

Intuitively, we want to weight unsurprising results more in order to capture the effect of the nomination contracts that would have occurred had the results been a complete surprise. When there are multiple contests on a single day, we take a weighted average based on the contests' share of the total number of delegates awarded on the day. Due to the unreliability of extremely small or large contract prices, we do not offer a number adjusted for the level of surprise in the result when that surprise is less than 5%.[8]

Some examples may help explicate the concept of the surprise adjustment. For example, suppose that a prediction market shows that Clinton has a 10% chance of winning the New Hampshire primary. Since Clinton actually did win the contest, and that this victory was quite a surprise, then we divide the change in her nomination contact by 0.9, since the total surprise value is almost entirely accounted for in the change of the nomination contract. On the other hand, Clinton had nearly a 70% chance of winning the Ohio primary. In this case, we divide by 0.3 to fully reflect the value of surprise. For Obama, who had an approximately 30% chance of winning, we divide by -0.3.

Consistent with popular consensus and scholarly work (e.g. Bartels 1988), Iowa and New Hampshire are overrepresented in terms of their influence. For Democrats, we present the results of the analyses in Table 3 and Figure 1. We focus on results using the adjusted contract prices. Whereas these two states collectively comprise 2.0% of the total number of delegates, once we account for the level of surprise, they have over half the effect of Super Tuesday (where 49.4% of the delegates were up for grabs) in terms of how much they changed the candidates' primary election prices. Interestingly, Iowa and New Hampshire are not the most influential primaries. Rather, the first contests after Super Tuesday (Louisiana, Nebraska, and Washington) had a large

---

[8] See Snowberg and Wolfers (2007) on the favorite-longshot bias which makes prices of these contracts diverge from the true underlying probabilities.

impact. This marked the beginning of Obama's string of victories following the even results of Super Tuesday, affirming him as the frontrunner for the nomination. Of course, this may be unique to 2008 as the nomination was contested late into the primary season.

The results are somewhat similar for the Republican primaries, in which McCain was the only candidate to remain throughout all contests (see Table 4 and Figure 2). Again, Super Tuesday made a disproportionately small impact on McCain's primary contract, despite it holding 46.4% of the delegates. The effect is in line with single states that held their primaries on their own day, such as Florida. However, the crucial states on the Republican calendar were Nevada and South Carolina. In the latter state, McCain scored a solid victory over Huckabee, demonstrating his appeal to Southern conservative voters. These two states only possess 2.5% of the delegates, meaning that they still received influence greater than its population share. On the other hand, the New Hampshire primary did not have a huge effect; the effect is lower than states such as Michigan and Florida. This is in contrast to popular accounts that suggest that New Hampshire is a supremely important contest different from all others. Finally, after McCain became the presumptive nominee following Super Tuesday, the subsequent contests, unsurprisingly, had little effect on contract prices.

For both parties, an interesting result is that Super Tuesday had a large impact on the overall chances of the candidates gaining the nomination, but nowhere in line with the total delegate counts of the participating states. Perhaps the bundling of several large states on a single day minimizes the impact of each individual state. In 2008, it was clearly advantageous for states to seek out unique spots on the calendar, even if that meant going later than the other states.

Conclusion

Using prediction markets tied to the 2008 presidential primaries and general election we have shown that the length of the primary season has a minimal impact on the general electability of candidates, and that certain states have a disproportionate impact on the nominating process. However, the states that have the largest impact are not necessarily New Hampshire and Iowa, the states which have often been assumed to be the most influential because of their early position on the primary calendar. Indeed, in both the Republican and Democratic contests, the states with the largest impacts were idiosyncratic and specific to each party.

This exposes the main weakness of this paper—namely that we use data only from a single election year. Our results can only apply to other elections to the extent that 2008 is typical of a presidential election year. Although many commentators (e.g. Pew 2008) have been quick to point out the differences between 2008 and a typical election year (whatever that is), by using prediction markets to study the questions addressed here (and others) in the future, it may be possible to asses in a more rigorous way just how typical or atypical the 2008 election truly was.

References

Abramowitz, Alan I. "Viability, Electability, and Candidate Choice in a Presidential Primary
     Election: A Test of Competing Models." <u>The Journal of Politics</u> 51 (1989): 977-92.

Abramson, Paul R., John H. Aldrich, Phil Paolino, and David Rohde. "Sophisticated voting in
     the 1988 Presidential Primaries." <u>American Political Science Review</u> 86 (1992): 55-69.

Adkins, Randall E., and Andrew J. Dowdle. "How Important Are Iowa and New Hampshire to
     Winning Post-Reform Presidential Nominations." <u>Political Research Quarterly</u> 54 (2001):
     431-44.

Bartels, Larry M. <u>Presidential Primaries and the Dynamics of Public Choice</u>. New York:
     Princeton University Press, 1988.

Beckel, Bob, and Cal Thomas. "Does Your Vote Matter?" <u>USA Today</u> 10 Jan. 2008: 9A.

Buell, Emmett H., Jr. "Divisive Primaries and Participation in Fall Presidential Campaigns: A
     Study of 1984 New Hampshire Primary Activists." <u>American Politics Quarterly</u> 14
     (1986): 376-90.

Callander, Steven. "Bandwagons and Momentum in Sequential Voting." <u>The Review of
     Economic Studies</u> 74 (2007): 653-84.

Cooper, Michael. "McCain wins big on Super Tuesday." <u>International Herald Tribune</u> 6 Feb.
     2008.

Dixit, and Londregen. "Fiscal Federalism and Redistributive Politics." <u>Journal of Public
     Economics</u> 67 (1998): 153-80.

Downs, Anthony. <u>An Economic Theory of Democracy</u>. New York: Addison-Wesley Longman,
     Incorporated, 1957.

Geer, John. "Assesing the Representativeness of Electorates in Presidential Primaries." <u>American Journal of Political Science</u> 32 (1988): 927-43.

Grofman, Bernard. "Downs and Two-Party Convergence." <u>Annual Review of Political Science</u> 7 (2004): 25-46.

Grofman, Bernard N. <u>Information, Participation, and Choice : An Economic Theory of Democracy in Perspective</u>. New York: University of Michigan P, 1993.

Hinckley, Katherine, and John C. Green. "Fund-raising in Presendtial Nomination Campaigns: The Primary Lessons of 1988." <u>Political Research Quarterly</u> 49 (1996): 693-718.

Johnston, Richard, Andre Blais, and Henry E. Brady. <u>Letting the People Decide : The Dynamics of a Canadian Election</u>. New York: Stanford UP, 1992.

Kenney, Patrick J., and Tom W. Rice. "The Relationship between Divisive Primaries and General Election Outcomes." <u>American Journal of Political Science</u> 31 (1987): 31-44.

Lindbeck, A., and J. Weibull. "Balanced-Budget Redistribution as the Outcome of Political Competition." <u>Public Choice</u> 52 (1987): 273-97.

Morton, Rebecca B., and Kenneth Williams. <u>Learning by Voting : Sequential Choices in Presidential Primaries and Other Elections</u>. New York: University of Michigan P, 2001.

Mutz, Diana C. <u>Impersonal Influence : How Perceptions of Mass Collectives Affect Political Attitudes</u>. New York: Cambridge UP, 1998.

Mutz, Diana. "Effects of Horse-Race Coverage on Campaign Coffers: Strategic Contributing in Presidential Elections." <u>Journal of Politics</u> 57 (1995): 1015-044.

Nagourney, Adam. "There's Something About Iowa and New Hampshire." <u>New York Times</u> 10 Sept. 2007.

Norrander, Barbara. "Ideological Representativeness of Presidential Primary Voters." <u>American Journal of Political Science</u> 33 (1989): 570-87.

The Pew Center on the States<u>. 2008 Primary in Review</u>. Washington, DC: The Pew Charitable Trust, 2008.

Rickerhauser, Jill, and John Aldrich. ""It's the Electability, Stupid" - Or maybe not? Electability, Substance, and Strategic Voting in Presidential Primaries." <u>Electoral Studies</u> 26 (2007): 371-80.

Serra, Gilles. "Why Primaries? The Strategic Chocie of a Candidate Selection Method." American Political Science Association, APSA 2007 Annual Meeting, 31 Oct. 2007.

Stone, Walter J., Lonna Rae Atkeson, and Ronald B. Rapoport. "Turnout On or Turning Off? Mobilization and Demobilization Effects of Participation in Presidential Nomination Contests." <u>American Journal of Political Science</u> 36 (1992): 665-91.

Theriault, Sean, Hickey Patrick, and Adam Myers. ""First-in-the-Nation in Proficiency or by Providence? Iowa, New Hampshire and the Presidential Primary Process"" APSA, APSA 2008 Annual Meeting, 28 Aug. 2008, Hynes Convention Center, Boston, MA.

Torry, Jack, Joe Hallett, and Darrel Rowland. "Are Iowa, N.H. Really Worthy?" <u>Columbus Dispatch</u> 30 Dec. 2007.

Table 1: Probabilities of Winning General Election Conditional on Winning the Nomination (Democrats)

Date	States	Obama	Clinton	Edwards	Democrat
1/3	IA	.3%	.5%	-4.3%	1.4%
1/8	NH	3.3	-3.8	8.8	.1
1/15	MI	.4	-.7	11.5	.1
1/19	NV	-.6	.2	-8.8	-.5
1/26	SC	4.5	-5.7	24.4	-.4
1/29	FL	2.7	-1.2	-3.1	-.5
2/5	Super Tuesday	1.5	.2	——	1.1
2/9	LA, NE, WA, VI	2.1	.3	——	2.5
2/10	ME	2.0	5.5	——	2.4
2/12	DC, MD, VA	1.6	-2.9	——	1.3
2/19	HI, WI	.3	1.8	——	-.7
3/4	OH, RI, TX, VT	-3.0	-.5	——	-2.6
3/8	WY	-2.6	2.2	——	.0
3/11	MS	1.9	2.0	——	.4
4/22	PA	-.8	5.5	——	.3
5/3	Guam	.5	3.9	——	.0
5/6	IN, NC	2.7	9.3	——	.6
5/13	WV	.1	-1.4	——	.4
5/20	KY, OR	-.2	9.9	——	-.4
6/1	PR	2.0	-1.4	——	.1

Note: Super Tuesday states include UT, TN, OK, ND, NY, NM, NJ, MO, MN, MA, IL, ID, GA, DE, CT, CO, CA, KS, AR, AZ, AL, AK, AS. "Democrat" refers to change in price of contract of Democrat winning presidency.

Table 2: Probabilities of Winning General Election Conditional on Winning the Nomination (Republicans)

Date	States	McCain	Huckabee	Romney	Republican
1/3	IA	4.5%	-3.2%	5.1%	-.1%
1/5	WY	-2.2	-3.9	-.3	-1.1
1/8	NH	.8	-3.7	2.2	-.3
1/15	MI	.5	.3	-.3	-.4
1/19	NV, SC	-2.7	5.5	2.7	.5
1/29	FL	.0	14.8	6.0	1.5
2/1	ME	-.7	-2.8	4.6	.2
2/5	Super Tuesday	-.8	-13.8	22.3	-1.1
2/9	LA, KS	-2.3	4.1	——	-1.1
2/12	DC, MD, VA	-.9	-4.4	——	-.9
2/19	WA, WI	.0	1.4	——	.2
2/23	AS, NMI	.8	-1.2	——	.3
2/24	PR	.6	-1.9	——	.2
3/4	OH, RI, TX, VT	1.0	-7.8	——	2.1
3/8	Guam	.3	——	——	-.1
3/11	MS	-.4	——	——	-.2
4/5	VI	.1	——	——	.1
4/22	PA	-.4	——	——	-.4
5/6	IN, NC	-1.0	——	——	-.4
5/13	WV, NE	.6	——	——	-.2
5/20	KY, OR	.8	——	——	.8
5/27	ID	.1	——	——	-.4

Note: Super Tuesday states include WV, UT, TN, OK, ND, NY, NJ, MT, MO, MN, MA, IL, HI, GA, DE, CT, CO, CA, KS, AR, AZ, AL, AK. "Republican" refers to change in price of contract of Republican winning presidency.

Table 3: Changes in Nomination Contracts (Democrats)

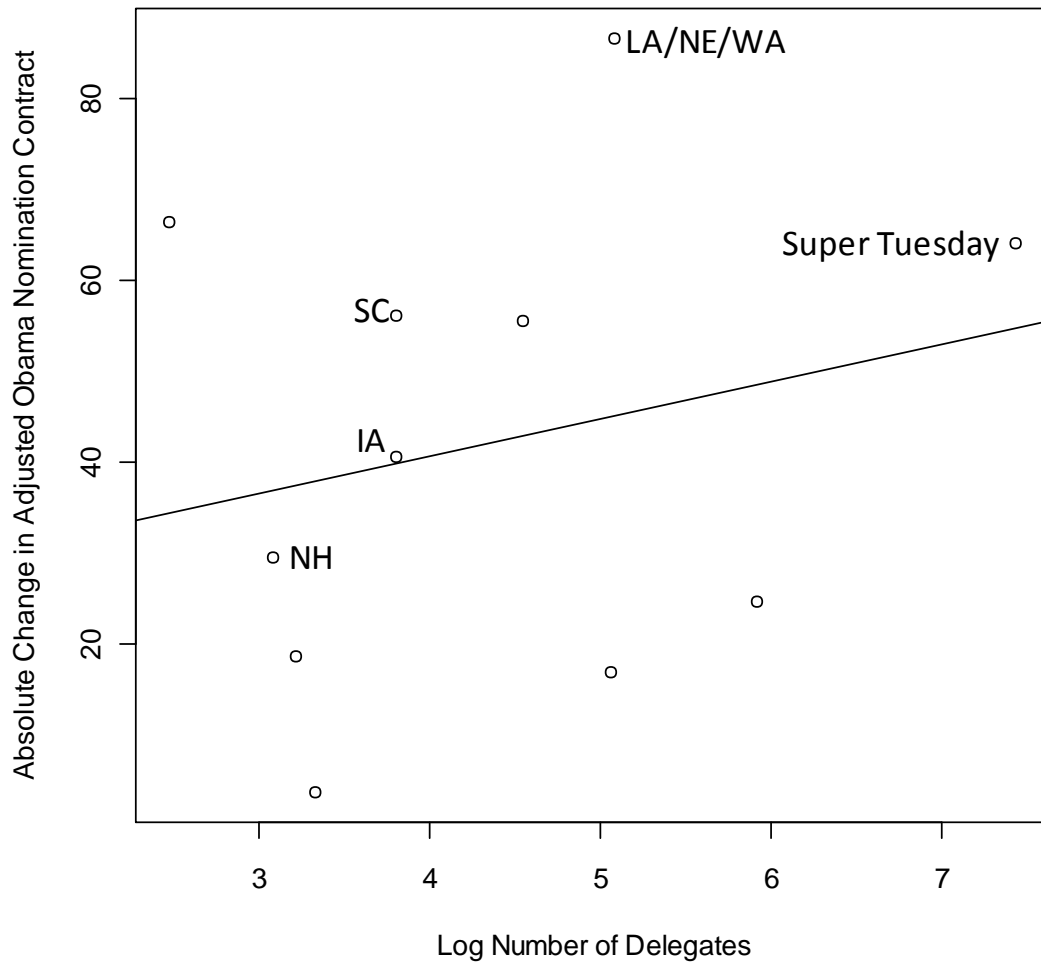| Date	States	Obama Absolute	Obama %	Clinton Absolute	Clinton %	Obama Abs. (Adj.)	Clinton Abs. (Adj.)	Delegates
1/3	IA	18.63	69.89	-13.18	-20.27	40.52	39.16	45
1/8	NH	-26.99	-41.01	26.87	83.52	29.43	29.61	22
1/15	MI	-2.11	-5.13	1.55	2.70	——	——	64
1/19	NV	-8.63	-21.30	8.31	14.38	18.58	18.71	25
1/26	SC	4.51	14.06	-4.22	-6.29	56.22	51.49	45
1/29	FL	-.38	-1.02	.94	1.53	——	——	92.5
2/5	Super Tuesday	4.75	10.49	-4.94	-8.96	-64.07	-70.95	1681
2/9	LA, NE, WA	8.88	15.60	-8.43	-19.76	86.65	74.79	161
2/10	ME	11.11	18.77	-10.86	-26.80	——	——	24
2/12	DC, MD, VA	3.56	5.07	-3.51	-11.83	——	——	168
2/19	HI, WI	7.18	10.02	-7.89	-28.03	55.58	56.03	94
3/4	OH, RI, TX, VT	-11.72	-13.82	11.75	79.54	24.61	24.84	370
3/8	WY	2.86	3.92	-3.57	-13.12	66.41	53.56	12
3/11	MS	.50	.66	.67	2.90	——	——	33
4/22	PA	-2.44	-2.92	2.67	18.24	16.82	18.00	158
5/6	IN, NC	13.33	17.56	-11.85	-53.95	——	——	187
5/13	WV	.80	.88	-.66	-7.58	-3.75	-3.30	28
5/20	KY, OR	.19	.20	.23	3.81	——	——	103
6/3	MT, SD	2.78	3.01	-2.64	-37.02	——	——	31

Note: Super Tuesday states include UT, TN, OK, ND, NY, NM, NJ, MO, MN, MA, IL, ID, GA, DE, CT, CO, CA, KS, AR, AZ, AL, AK.

Table 4: Changes in Nomination Contracts (Republicans)

Date	States	McCain Absolute	McCain %	McCain Abs. (Adj.)	Delegates
1/3	IA	9.12	38.79	——	37
1/5	WY	1.17	3.58	——	14
1/8	NH	1.46	4.22	8.67	12
1/15	MI	-7.12	-16.35	13.01	30
1/19	NV, SC	14.28	36.49	134.01	55
1/29	FL	25.47	44.14	50.64	57
2/1	ME	3.13	3.71	——	18
2/5	Super Tuesday	4.83	5.48	-45.49	1059
2/9	LA, KS	-1.45	-1.52	1.90	80
2/12	DC, MD, VA	1.23	1.31	21.83	113
2/19	WA, WI	.09	.10	1.12	77
3/4	OH, RI, TX, VT	2.14	2.26	——	256
3/11	MS	.06	.07	——	36
4/22	PA	-.05	-.06	——	71
5/6	IN, NC	-1.02	-1.07	——	123
5/13	NE	-.15	-.16	——	33
5/20	KY, OR	.12	.13	——	75
5/27	ID	-.09	-.09	——	32
6/3	NM, SD	.12	.12	——	53

Note: Super Tuesday states include WV, UT, TN, OK, ND, NY, NJ, MT, MO, MN, MA, IL, HI, GA, DE, CT, CO, CA, KS, AR, AZ, AL, AK.
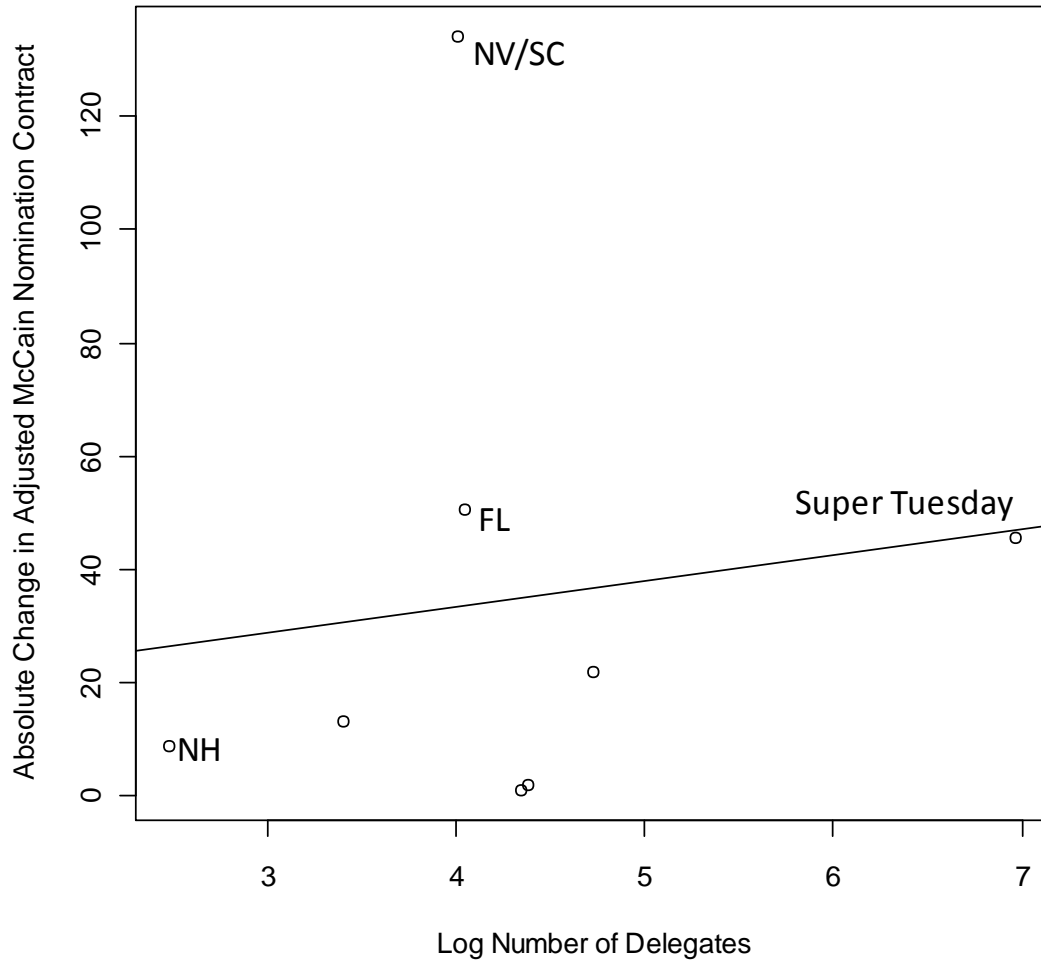
Figure 1: Influence of State Nominating Contests (Democrats)

$$\Delta \text{Contract} = 24.06 + 4.14 * \ln(\text{Delegates})$$
$$(26.15) \quad (5.74)$$

Figure 2: Influence of State Nominating Contests (Republicans)

$$\Delta \mathrm{Contract} = 15.00 + 4.56 * \ln(\mathrm{Delegates})$$
$$(62.27) \quad (13.96)$$