

Fundamentals Matter: Forecasting the 2020 Democratic Presidential Nomination

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ABSTRACT

Previous studies used pre-primary variables (e.g., endorsements, national polls, and fundraising) and momentum variables from the Iowa and New Hampshire contests to predict presidential nomination outcomes. Yet, races with no elite favorite and no clear frontrunner in polls, such as in the 2020 Democratic race, are more difficult to forecast. We replicate and extend two forecasting models from 1980 to 2016 used by Dowdle et al. (2016) to predict the 2020 results. Our models suggest that Joe Biden may have been a stronger frontrunner than expected but that subsequent models may need to incorporate other early contests, such as the South Carolina primary. Overall, our results also argue that the fundamental factors in winning presidential nominations have remained relatively stable.

Forecasting presidential nominations is challenging. Unlike general elections, presidential nominations involve sequential elections spread across several months, and multi-candidate races produce more error around the estimates compared to forecasts of two-candidate races (Steger 2008a). Candidates enter and leave the process at different points in the nomination calendar (Norrande 2006). Voters in primaries and caucuses lack helpful heuristics (e.g., partisanship) to distinguish among candidates (Steger, Dowdle, and Adkins 2012). Candidates may represent different ideological wings within a party (Olsen and Scala 2016), but voters often have difficulty in identifying differences, and candidate ideology is not a significant predictor of voting in primaries (Keeter and Zukin 1983; Steger 2008b). Nevertheless, “open” nominations tend to play out in one of two scenarios (Steger 2013). The first involves party elites, groups, and party identifiers/leaners converging on a candidate during the “invisible


primary”—that is, before the caucuses and primaries begin (Cohen et al. 2008). The second scenario is characterized by minimal convergence during the invisible primary, in which case the winner is difficult to predict *a priori* and the nominee is the candidate that gains momentum from the traditional bellwethers: the Iowa caucuses and the New Hampshire primary (Steger 2016). In these races, momentum plays a role in clinching nominations (Bartels 1988), which makes them difficult to predict (Clinton, Engelhardt, and Trussler 2019; Collingwood, Barreto, and Donovan 2012).

Nevertheless, several studies developed successful nomination forecasts (Adkins and Dowdle 2000; Dowdle et al. 2016; Mayer 1996; 2003; Steger 2000; 2008a). Replication studies are important because they enable us to assess the strengths and shortcomings of previous models under differing conditions. For instance, the 2020 Democratic presidential nomination campaign featured the largest candidate field in history, with 12 serious contenders as of January.¹ The incorporation of elite endorsements into presidential nomination forecasts improved the prediction of the primary vote; however, this improvement is conditional on the degree of participation by party elites in the endorsement game (Steger 2016). Although elite participation in the 2020 Democratic endorsement game was low, it was higher than during the 2016 Republican nomination counterpart. Also, national polls during the invisible primary indicated that Biden was a weak frontrunner, but polls indicated more consistency than the 2012 and 2016

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contests. In the model for 2020, the results of those contests increased predictive error, suggesting that Iowa and New Hampshire may have lost some of their potency as the Democrats moved from a first-two (i.e., Iowa and New Hampshire) to a first-four framework (i.e., adding Nevada and South Carolina).

RESEARCH DESIGN

We estimated models of the aggregate primary vote in open presidential nomination contests from 1980 to 2016 and used the coefficients to generate out-of-sample estimates of the results in the 2020 Democratic race.² We gauged the effects of pre-primary indicators of support and early signs of campaign momentum by using two ordinary least squares (OLS) models to predict each candidate's percentage share of the aggregate primary vote in open presidential nomination races.³ The pre-Iowa model included indicators measuring pre-primary campaign strength (e.g., a candidate's standing in national polls, party-elite endorsements, and fundraising). The second "early-momentum" model used these same measures, updated by incorporating the results of the Iowa and New Hampshire contests.

National Polling Average

Previous studies used poll standing in the pre-primary season as a variable in their presidential nomination forecast models (Adkins and Dowdle 2000; Mayer 1996; Steger 2000). The variable reflects the degree to which party identifiers and leaners, as opposed to party insiders, converged on a candidate in advance of the primary season.

H1: The greater a candidate's standing in pre-primary national polls, the more votes in presidential primaries that the candidate will receive.

The *National Polling Average* variable derives from each candidate's support among party identifiers and party-leaners in the average of national polls during the fourth quarter of the 1980–2020 pre-primary seasons.⁴

Elite Endorsements

Despite changes following the McGovern–Fraser reforms, party elites still manage to play a crucial role in shaping nomination outcomes (Cohen et al. 2008; Steger 2000). Endorsements reflect the insider game in which party elites send direct and indirect signals to the media, donors, groups, and mass membership by extolling a preferred candidate while downplaying the chances of some other candidate(s). Elite endorsements in the pre-primary period help to predict nomination outcomes (Dowdle et al. 2016; Steger 2008b).

H2: The greater the share of possible elite endorsements of a candidate by the end of the pre-primary season, the more votes in presidential primaries that the candidate will receive.

The *Elite Endorsements* variable represents the percentage of governors, senators, and representatives endorsing a candidate as

Measuring endorsements as a percentage of the endorsements that could have been made accounts for the variable participation of elites across nomination cycles. Steger (2016) found that elite influence is conditional on elite participation in the nomination game in addition to the convergence and timing of endorsements.

Campaign Expenditures

During the post-reform era, the eventual nominee also tends to be the winner of the "money primary"—that is, the aspirant who has raised the most money in the pre-primary period (Adkins and Dowdle 2002). To avoid issues of multicollinearity and more precisely measure the impact of when the money was spent, we separated fundraising into two variables: (1) campaign expenditures by December 31 of the pre-primary period, and (2) remaining cash reserves as of that date. The December 31 date is common to all nomination cycles, but there is variation in the time between that date and the date of the Iowa caucuses.

H3: The more money spent during the pre-primary period relative to their opponents, the more votes in presidential primaries that a candidate will receive.

The *Campaign Expenditures* variable measures the percentage of the money that each candidate spent during the pre-primary period relative to the total spent by the entire candidate pool in that contest as of that date.⁶

Cash Reserves

The second measure of fundraising (i.e., cash reserves) assesses a campaign's potential to compete beyond the initial contests. Candidates with low cash reserves generally cannot continue without a win in those early states. Previous research has shown that this variable is a better predictor of candidate success than money raised or money spent during the pre-primary season (Adkins and Dowdle 2001). Candidates who raise money without spending it have two advantages: (1) it shows that they are competitive without spending resources, and (2) they retain the resources to compete during the primaries when there is limited time to raise money.

H4: The larger a candidate's cash reserves at the end of the pre-primary period relative to their opponents, the more votes in presidential primaries that the candidate will receive.

We calculate *Cash Reserves* as a percentage of the unspent money that each candidate has available at the end of December relative to the cash reserves of the entire candidate field to control for both inflation and the context of individual election cycles.⁷

Iowa

The Iowa caucuses and the New Hampshire primary are important early tests of candidate strength. Since Jimmy Carter's victory in 1976, campaigns typically allocate a disproportionate share of resources—when measured in delegates elected—in these early races to generate

momentum by winning or at least trying to beat popular expectations (Bartels 1988). The first variable to measure candidate strength in Iowa represents whether candidates won the caucuses, which previous studies found is an important predictor of nomination success or failure (Redlawsk, Tolbert, and Donovan 2011).

H5: The winner of the Iowa caucuses will receive a larger number of votes in the presidential primaries than other candidates will receive.

We code this measure as a dichotomous variable (i.e., *Iowa Win*), with the winner receiving a value of “1.”⁸ The second measure (i.e., *Iowa Percent*) is the candidate’s share of the vote in the Iowa caucuses.

H6: The higher percentage of the vote that a candidate receives in the Iowa caucuses, the more votes the candidate will receive in the remaining presidential primaries.

New Hampshire

Adkins and Dowdle (2001) found that the results of the Iowa caucuses were not significant. The results of the New Hampshire primary, by contrast, produce a statistically significant impact on the nomination outcome.⁹

H7: The winner of the New Hampshire primary will receive a larger number of votes in the presidential primaries than other candidates will receive.

We code this measure as a dichotomous variable (i.e., *NH Win*), with the winner receiving a value of “1.” The second measure (i.e., *NH Percent*) is the candidate’s share of the New Hampshire primary vote.

H8: The higher percentage of the vote that a candidate receives in the New Hampshire primary, the more votes in presidential primaries that the candidate will receive.

DATA ANALYSIS

To forecast presidential nomination outcomes, this research compares the output of two OLS regression models. We modeled the aggregate primary vote in open Democratic and Republican nomination contests from 1980 to 2016 to generate out-of-sample parameters, which we then applied to data for the 2020 nomination cycle.¹⁰ The first OLS model (see the second column in table 1) includes a series of measures from the pre-primary that ends on December 31 of the year prior to the convention to predict the eventual total aggregate primary vote: *Poll Results*, *Campaign Expenditures*, *Cash Reserves*, and *Elite Endorsements*.

Overall, the pre-primary forecast model does an adequate job of accounting for variations in the dependent variable with an adjusted r^2 of 0.60. *Poll Results* and *Elite Endorsements* are both statistically significant and positively correlated with candidates’ aggregate primary-vote shares, which is consistent with both our hypotheses and previous research. Essentially, indicators of elite- and mass-level partisan support remain the strongest predictors of the primary vote. Notably, these results hold using December 31 as the cutoff date, even though this measure omitted a slight surge for Biden in both factors in January 2020. The coefficients for *Campaign Expenditures* are not significant, which is consistent

Table 1
OLS Forecasting Models of Aggregate Primary Vote, 1980–2016

	Pre-Primary	Post-New Hampshire
	0.73**	0.32**
<i>Poll</i>	(4.43)	(2.93)
<i>Results</i>	0[.50]	[0.18]
<i>Campaign</i>	0.02	–0.35
<i>Expenditures</i>	(0.14)	(–2.70)
	0[.01]	[–0.22]
<i>Cash</i>	0.12	0.14*
<i>Reserves</i>	(1.15)	(2.09)
	[0.13]	[0.15]
<i>Elite</i>		
<i>Endorsements</i>	0.19**	0.18**
	(1.85)	(2.61)
	[0.20]	[0.18]
<i>Iowa</i>		9.67**
<i>Win</i>		(2.71)
		[0.22]
<i>Iowa</i>		–0.02
<i>Percent</i>		(–0.20)
		[–0.02]
<i>NH</i>		12.07**
<i>Win</i>		(3.85)
		[0.22]
<i>NH</i>		0.64**
<i>Percent</i>		(6.13)
		[0.49]
Constant	0.87	–1.12
	(0.45)	(–0.94)
R ²	0.61	0.86
Adjusted R ²	0.60	0.85
F	36.33	68.92
SEE	12.58	7.67
N	97	97

Notes: The dependent variable is the percentage of the total aggregate primary vote. Coefficients are unstandardized OLS coefficients; *t* scores are in parentheses (); standardized beta coefficients are in brackets []; SEE=standard error estimate. Significant at * $p < 0.05$, ** $p < 0.01$.

with every study since Mayer’s (1996) original forecast of the primary vote. *Cash Reserves* also are not significant in the pre-Iowa model, which affirms the result of the Dowdle et al. (2016) forecast. *Cash Reserves* may be losing predictive potency in the era of Internet-based crowd-sourcing of presidential nomination campaigns.

The second equation, estimating the effects of early momentum (see the third column in table 2), includes the four independent variables from the first model plus the Iowa and New Hampshire variables indicating “win” and “candidate vote share” in each election. The second model improves the predictive power of the forecasts, with an adjusted r^2 of 0.85. Both *Poll Results* and *Elite Endorsements* correlate positively with aggregate vote share and are statistically significant. As Dowdle et al. (2016) found,

Table 2
 Combined Model Predicted and Actual Finish, 1980–2020

Year	Party	Stage	First	Second	Third
1980	R	Pre-Primary	<u>Reagan</u>	Connally	Baker
1980	R	Post-NH	<u>Reagan</u>	<u>Bush</u>	Baker
1984	D	Pre-Primary	<u>Mondale</u>	Glenn	Cranston
1984	D	Post-NH	<u>Mondale</u>	<u>Hart</u>	Glenn
1988	R	Pre-Primary	<u>Bush</u>	<u>Dole</u>	Kemp
1988	R	Post-NH	<u>Bush</u>	<u>Dole</u>	Kemp
1988	D	Pre-Primary	Jackson	Dukakis	Gephardt
1988	D	Post-NH	<u>Dukakis</u>	Gephardt	Jackson
1992	D	Pre-Primary	<u>Clinton</u>	Kerrey	Brown
1992	D	Post-NH	Tsongas	Clinton	Kerrey
1996	R	Pre-Primary	Dole	Gramm	Alexander
1996	R	Post-NH	Dole	<u>Buchanan</u>	Alexander
2000	R	Pre-Primary	<u>Bush</u>	<u>McCain</u>	Forbes
2000	R	Post-NH	<u>Bush</u>	<u>McCain</u>	<u>Keyes</u>
2000	D	Pre-Primary	<u>Gore</u>	<u>Bradley</u>	
2000	D	Post-NH	<u>Gore</u>	<u>Bradley</u>	
2004	D	Pre-Primary	Dean	Gephardt	Clark
2004	D	Post-NH	<u>Kerry</u>	Dean	Clark
2008	R	Pre-Primary	Giuliani	F. Thompson	McCain
2008	R	Post-NH	<u>McCain</u>	Huckabee	Giuliani
2008	D	Pre-Primary	<u>Clinton</u>	<u>Obama</u>	<u>Edwards</u>
2008	D	Post-NH	<u>Clinton</u>	<u>Obama</u>	<u>Edwards</u>
2012	R	Pre-Primary	<u>Romney</u>	Paul	<u>Gingrich</u>
2012	R	Post-NH	<u>Romney</u>	<u>Santorum</u>	Paul
2016	R	Pre-Primary	Trump	Rubio	Cruz
2016	R	Post-NH	Trump	<u>Cruz</u>	Bush
2016	D	Preprimary	Clinton	<u>Sanders</u>	O'Malley
2016	D	Post-NH	Clinton	<u>Sanders</u>	O'Malley
2020	D	Pre-Primary	<u>Biden</u>	<u>Sanders</u>	<u>Warren</u>
2020	D	Post-NH	Sanders	Buttigieg	Biden

Notes: Underlined names indicate a correct ordinal forecast in terms of percentage of primary vote. In the 2008 Democratic nomination process, Hillary Clinton finished with the highest number of total aggregate primary votes, if the results of the Florida Democratic primary are included.

Cash Reserves correlates positively with the primary vote and is statistically significant. Winning either Iowa or New Hampshire provides a boost, as does a strong showing in New Hampshire

all nominations in which the winner gained significant momentum during the primaries. The post-New Hampshire model correctly predicts 93% of the winners. Following his strong finish in

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(i.e., NH Percent). However, the actual percentage of the vote received in Iowa (i.e., Iowa Percent) is not statistically significant.

We then examined the ability of both models to predict the ordinal-level finishes (i.e., first, second, and third) in each contest. The pre-primary model correctly predicts 79% of the winners of the aggregate primary vote in every year except 1988, 2004, and 2008—

New Hampshire, the second model incorrectly identifies Paul Tsongas as the victor in 1992. Both models do worse when predicting second- and third-place finishes in these contests. The pre-primary model correctly identifies only five of 14 runners-up and three of 13 third-place finishers.¹¹ The post-New Hampshire model produces somewhat better results by predicting 10 of

14 runners-up but only three of 13 third-place finishers. As Norrander (1993) first argued, momentum may matter most for determining which candidate comes in second.

Nevertheless, the models show that pre-primary national polls and elite endorsements continue to have predictive power, even when the signal is less clear cut.

CONCLUSION

Forecasting the 2020 Democratic nomination presents a challenge given the large candidate field, lack of a clear frontrunner in early national polls (from the fourth quarter of the year before the primaries), and low participation by party elites of pre-primary party-elite signaling. Winning Iowa and New Hampshire, which has been an important determinant of the aggregate primary vote in previous models, should be stronger in a wide-open race. The second model, however, overestimates the Sanders' share of the aggregate vote in 2020.

Why did this antithetical outcome occur? The South Carolina primary and the Super Tuesday states may have had more effect because there was no clear frontrunner at either the end of the invisible primary or immediately following the Iowa caucuses or the New Hampshire primary. That finding is consistent with Steger's (2015) argument that nominations with no pre-primary consensus among elites and party identifiers results in a race that is competitive deeper into the primary season. Democratic elites including Senator James Clyburn began to rally around Biden before the South Carolina primary to avoid repeating what they perceived to be a mistake in 2016 by Republican insiders. However, far more Democratic elites waited until after Biden won in South Carolina, thereby demonstrating electoral appeal. Furthermore, we witnessed a substantial surge in turnout of moderate Democratic voters in South Carolina and subsequent primaries, according to CNN Exit Polls. This indicates a grassroots surge for Biden among moderate Democrats prior to or at least concomitant with the coalescence of Democratic elites behind Biden's candidacy. With the plurality of Democrats rallying around Biden and the 2020 Covid-19 pandemic effectively stopping ground-game campaigning, Biden's surge in these states effectively solidified his pre-primary status as the frontrunner. Biden's share of the vote expanded in subsequent primaries as remaining rivals dropped out of the race.

The presidential nomination process has experienced a number of changes in recent years. The rise of social media and Internet-based fundraising have lowered some of the barriers to participation by party activists. The move to a first-four structure to the nomination calendar, starting in 2008, raised the profile of the Nevada and South Carolina contests (Knotts and Ragusa 2019; Wendland 2019). In particular, African American voters in South Carolina and other Super Tuesday states played a crucial role in deciding both the 2016 and 2020 Democratic processes and in rescuing faltering frontrunners, as opposed to 2004 and prior years when Iowa and New Hampshire played a stronger role in shaping the field. Ironically, the "woke" white activists who boosted Sanders in Iowa and New Hampshire saw their preferred candidate fade in the more diverse electorate of South Carolina.

Nevertheless, the models show that pre-primary national polls and elite endorsements continue to have predictive power, even when the signal is less clear cut. The results also suggest that

the earliest two nominating contests may be losing their potency following the Democratic Party's shift from a first-two to a first-four state structure. The greater representativeness of the diversity of the Democratic and Republican parties is more evident in South Carolina, which must be considered for future forecasting models.

DATA AVAILABILITY STATEMENT

Replication materials can be found on Dataverse at doi:10.7910/DVN.DVBL0A.

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NOTES

1. We included candidates if they were former vice presidents, senators, governors, members of the House of Representatives, or if they polled higher than 5% in multiple public-opinion polls. A list of candidates is available on request.
2. We excluded nominations without an incumbent president because these races are fundamentally different and presidents have won renomination when they have sought it since 1904 (Adkins and Dowdle 2000; Steger 2003). We note that measures such as social media and independent spending may affect recent nominations, but inclusion would limit our analysis to 2008–2020.
3. We excluded the New Hampshire tally from this dependent variable because we used the results to form a separate independent variable.
4. The data are from monthly editions of *The Gallup Report*, annual editions of *The Gallup Poll*, and Gallup.com from 1979 to 2003. Results after 2003 for both CNN and Gallup are drawn from pollingreport.com. Gallup discontinued pre-primary "horse-race" preferences in 2015; therefore, CNN polls were used for 2016 and 2020.
5. Data for 1980–2012 are from Steger 2015. Endorsements for 2012 and 2016 are from FiveThirtyEight.com.
6. The data are from Line 9 of an individual presidential candidate Federal Election Commission (FEC) report (Form 3P) for the Year-End Report of the pre-primary-year.
7. The results for each candidate are from the FEC Year-End Report, Line 10 (Form 3P).
8. We classified Mitt Romney and Pete Buttigieg as the winners of the 2012 Republican and 2020 Democratic Iowa contests, respectively, because the state parties declared them victors at the time.
9. We awarded each candidate the estimated number of precinct-level delegates they received because the state Democratic Party did not release raw vote totals until 2020.
10. See Dowdle 2020 for the dataset.
11. Bill Bradley and Al Gore were the only serious contenders for the 2000 Democratic presidential nomination.

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