Switching to the Winning Horse? Electoral Dynamics and Campaign Donations in the 2020

Democratic Primaries

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Abstract: How do individual campaign contributors react when the candidate of their choice is poised to lose? The political fundraising ecosystem has evolved tremendously in recent years, with many more Americans giving to political candidates than before. Despite their importance in campaigns, studies of individual contributors' decisions remain lacking, especially on how electoral dynamics may affect donor behavior. Using the 2020 Democratic presidential primary as a case study, this paper analyzes how donors' financial support changes as the election progresses using publicly available FEC data. First, using Sankey diagrams, I visually represent changes in donation patterns for candidates over time. Although the eventual winner was Biden, more than 70% of donations went to others until the second quarter of 2020. Then I test for structural changes in when "switching" to Biden occurs, i.e., a donor who has given to another candidate changes the donation target to Biden. Although it was clear that Biden was to be the primary winner by early March, as well as that party leaders were coordinating to push for Biden's victory, a significant number of switches only occurred late into the campaign. While a lot of switching activity occurred on primary contest dates, a significant number of switches occurred late into the campaign, such as on August 10, 2020.

I. Introduction

How do individual campaign contributors react when the candidate of their choice is poised to lose? The political fundraising ecosystem has evolved tremendously in recent years, with many more Americans giving to political candidates than before. And yet, despite their importance in campaigns, studies of individual contributors' decisions remain lacking, especially on how electoral dynamics may affect donor behavior.

There is some work on these topics, such as the effects of coverage of presidential primaries on contributions (Mutz 1995), and momentum in presidential primaries (Knight 2010). That being said, observing how individual contributors would react in such situations in presidential primaries has been difficult. This is because, in most primary elections, there are few viable contenders, leading to few testable implications given the idiosyncrasy across election cycles. However, individual campaign contributions have dominated the world of campaign finance for United States presidential candidates for some time, and it is one of the most prevalent and direct forms of political involvement for the American public. Moreover, given recent changes in the campaign finance ecosystem, analyzing donor patterns in presidential primaries is crucial for understanding how electoral dynamics interact with individual political behavior.

This paper examines the 2020 Democratic primaries for the U.S. presidential election, in which a large number of candidates were in fierce competition for the party's nomination. Not only was the number of candidates quite large, but also important is the fact that they were not quickly winnowed through the primary process. This case allows us the ability to observe how the changing nature of the candidate field—such as drop-outs, media portrayals, and early primary state wins—affects individual donation behavior.

I analyze how the donation patterns of individuals changed in the 2020 Democratic primary using publicly available individual contribution data from the Federal Election Commission (FEC). I use Sankey diagrams to visually represent the flow of money from individual donors to candidates over the election cycle timeline and detect points of significant change in "switching" throughout the cycle via breakpoint detection.

I show that switching, i.e., a donor who has given to one candidate giving to another candidate, became more pronounced as the primary election cycle wore on. In addition, switching activity does not necessarily group by FEC quarters, and dollar amounts given when the contribution targets are switched are often less than the donors' initial contributions. Breakpoint detection displayed further interesting results offering a clearer picture of contribution switching dynamics. The structural breakpoints seemed to show that polling had more of an impact on overall switching activity among all candidates than between specific candidate-to-candidate switching. Breakpoint detection also showed that successive primary contests, momentum, "big events," and candidate dropouts were very informative for significant switching activity from candidate donors to Biden, the eventual nominee.

II. Literature Review

The literature available related to the donation dynamics of presidential primary contributors focuses on how and why donors make contributions to specific candidates. To examine the contribution decisions of individuals in presidential primary elections, one can look to literature on the general dynamics of electoral politics for individuals, as well as to the statistical work that has been done to understand how such electoral dynamics inform individual contribution decisions. What makes the study of campaign individual donation dynamics

important is that such activity is inextricably linked to those same individuals' electoral perspectives and beliefs. Scholars have attempted to understand this link through case study analysis of ideological, momentum, and media factors, as outlined below. Scholars have tended to explain contributions in one of three ways: based on ideology, momentum/viability, or media coverage/"big events."

Context

Individual campaign contributions have dominated the world of campaign finance for United States presidential candidates for some time, and it is one of the most prevalent and direct forms of political involvement for the American public. The gaps in the literature regarding the modern contribution dynamics that characterize the present political cycle provide an opportunity to contribute to the study of the rationale underpinning individual campaign contributions. Moreover, given recent changes in the campaign finance ecosystem, analyzing donor patterns in presidential primaries is crucial for understanding how electoral dynamics interact with individual political behavior. This paper examines the 2020 Democratic primary for the U.S. presidential election. Not only was the number of candidates large, but also important is the fact that the field was not quickly winnowed through the primary process. The circumstances in the most recent presidential election allow for the consideration of how the changing nature of the primary process—including drop-outs, media portrayals, early primary state wins, polling, and digital fundraising efforts—affects individual donation behavior.

Potential Explanations for Contribution Decisions

Ideology

Previous scholars have shown how ideology can be a major factor in individual contribution decisions. For example, Ensley (2009) explores whether candidate contribution

receipts are more dependent on the ideological extremity of candidates or the difference in extremity between candidate ideologies. Ensley attempts to answer this question through the lens of the contribution tendencies that define U.S. congressional elections, offering insight into similar dynamics at play in U.S. presidential elections.

What Ensley found when exploring U.S. House candidate ideologies in the context of individual contributions in the 1996 election is that ideological factors often play an outsized role in explaining the choices of those donors (Ensley 2009). More specifically, the author determines that there is a statistically significant relationship between candidate ideology and candidate choice within both of the major U.S. political parties. However, the relationship is stronger for candidates of the Democratic Party. Interestingly, Democratic candidates who are more liberal or extreme in their ideology tend to have an enhanced ability to collect contributions from individuals. My paper will apply Ensley's theories and findings to the most recent presidential primary election cycle for Democratic candidates.

Ensley's concepts that include a focus on the ideologies of candidates to explain contributions remain an interest in more recent literature. For example, Barber (2016a) shows that legislative candidates adopt more extreme views in order to attract increased individual contributions. Additionally, Barber concludes that candidates make the adjustment because individual contributors seem to be more likely to contribute to candidates should their ideologies be more extreme on the political spectrum (Barber 2016a). In a later survey, Barber finds that the ideology of both the recipient candidate and their opponent(s) is a critical component in the calculation individuals make in the decision of whom to contribute to (Barber 2016b). Barber also finds that ideologically extreme donors, who tend to be the majority of party donors, are

even more likely to rate ideology as an important factor in their contribution decision-making than more moderate donors (Barber 2016b).

Michael J. Barber, Brandice Canes-Wrone, and Sharece Thrower (2017) show that one's contribution decisions are further influenced by ideology thanks to additional considerations. Namely, candidates' voting records being more aligned with potential donors' positions and occupational closeness to serving officials' committee assignments increases giving likelihood. Essentially, candidates already serving in elected capacities have a record and experience that potential contributors weigh in their contribution decisions. Barber et al. show the importance of tracking candidates' records when evaluating contribution dynamics. Previous scholarship on individual contributions has shown both that the ideology of candidates can be a strong factor at generating individual contributions to their campaigns, and that candidates can also strategically message their ideology towards the extreme to drive more contributions. As politics has become more divisive over time, it is critical to study the impact those dynamics have on individual campaign contributions, specifically in the context of the 2020 Democratic presidential primary election.

Momentum/Viability

In addition to candidates broadcasting a more extreme ideology to potential donors, scholars have also studied how perceptions of candidates' viability, as well as candidate-generated momentum, can impact individual campaign contributions. Bartels (1987) demonstrates with National Election Study data that presidential primary candidate viability as compared to basic candidate ratings is much more impactful in models predicting primary election dynamics. In other words, early victories can directly impact later success.

Brian Knight and Nathan Schiff (2010) build upon Bartels' findings, focusing on presidential primaries specifically and exploring the phenomenon of momentum in general. They look to better understand the effect of sequential primary election successes in presidential primaries and how those outcomes impact the performance of candidates later on in the cycle in their push to victory. Through a model on the 2004 Democratic presidential primary election, Knight and Schiff (2010) demonstrate how momentum could shift with sequential election contest results during the presidential primary cycle, and find momentum is enjoyed by candidates who experience early wins in the presidential primary elections. In the 2004 Democratic primary, eventual nominee John Kerry was victorious, coming off "surprising wins in early states" which were shown to "have up to five times the influence of late states" (Knight and Schiff 2010, p. 1148). Clearly, voters participating in the Democratic primary election were influenced by early voters' electoral preferences in making their voting choices in their state's primary election. It should be explored how early primary wins may affect individual campaign contributions as well.

In another vein, Craig Garthwaite and Timothy Moore attempted to gauge the effect of attention and perceived momentum on candidate performance and individual contributions. They found that in the 2008 U.S. presidential primary election, a celebrity endorsement for then-candidate Barack Obama led to increased financial contributions and votes, showing how momentum gained from endorsements and sequential successes can significantly impact contributions (Garthwaite and Moore 2012).

Further, polling in presidential primary elections not only informs the public, but can also have an important impact on how possible contributors perceive the viability of the candidates and their campaigns. Ester Fuchs, Scott Adler, and Lincoln Mitchell (2000) examine how

perceived viability can affect the financial contributions candidates receive, concluding that a candidate can have an increased ability to raise campaign funds following positive polling results and media coverage. Fuchs et al. (2000) show that contributors have been influenced by polls and media coverage, hoping their contributions go towards a candidate who has a chance to prevail, which coincides with Bartels' (1987) findings showing that viability serves as an impactful indicator for primary election support by voters.

David Rothschild and Neil Malhotra (2014) investigate opinion polling's effect on campaign dynamics. Their findings confirm that for policy issues, polling coverage has an effect on individual attitudes, hardening of views on issues, and in turn, candidates (Rothschild and Malhotra 2014). The concept of individuals making contribution decisions based on momentum and polling results runs parallel to calculations individuals make with their own votes as well, tying electoral attitudes with financial contribution decisions.

Media Coverage/"Big Events"

Popular media coverage and events that shake up electoral races have become staples of the American political system, and their effects can reach past electoral implications to campaign contributions as well. Diana Mutz (1995) explores the effects of specific media coverage of the presidential primary race on individual campaign contribution frequency. Dubbed 'horse-race coverage,' Mutz shows this dynamic to have a determining effect on campaign contribution frequency. These strategic considerations carry weight in political candidate contribution decisions made by individual donors (Mutz 1995).

Additionally, Mutz finds that positive and negative mass media portrayals of candidates and their opinions are often important in the development of strategic considerations (Mutz 1995). These strategic considerations are shown to be important in the development of voter

choice and similarly thought to be important in the determination of money flows into candidate campaigns. Positive and negative horse-race 'spin' as well as media portrayals of candidate status in the race "draw potential donors' attention to the campaign and act as an important motivating force fueling a campaign's progress," having implications for political contributions among presidential primary candidates (Mutz 1995). Furthermore, Mutz explains that though candidates' lack of electoral viability also has a large impact on the calculus of potential donors, candidates may be saved by an increase in donations which has the ability to blunt the impact of negative viability. As media coverage continues to evolve and expand, it is important that these dynamics are reviewed in the context of modern election cycles.

Gaps in Existing Literature

There are abundant theories as to what drives individuals to make contributions to certain candidates, as has been explored above. In the literature, however, there remains a lack of exploration of these theories and principles as they apply to the Democratic presidential primary race in 2020. Thus, the fact remains that there are areas of study that need to be done with regard to the most recent election. One of the weaknesses in the research is the fact that the majority of the literature is based on election cycles prior to the 2000s, leaving a major gap in studies covering election cycles within the last two decades, a period of hyper-innovation in campaign fundraising technology and practices. Further, the complicating factors of a multitude of candidates in the 2020 Democratic primary cycle competing for individual donors, along with a sitting U.S. President running for re-election, demands further study.

III. Study Design

Theory & Expectations

Hypothesis #1 (Donor Choice)

I hypothesize that in comparing candidates in the 2020 Democratic presidential primary election, those who are perceived as front-runners or more viable will have a greater ability to attract donors who switch their contribution recipient from their first preference than those that are less viable at the time when donors choose to switch their contribution recipient. I contend this to be a likely result given the circumstances surrounding the 2020 presidential election, namely the fact that stakes were high for the Democratic Party as they mounted a challenge against an incumbent President. For supporters of the Democratic Party and their candidates, the President at the time was not of that party affiliation. Given that, the stakes were high for Democratic supporters to nominate a candidate who would be able to win the nomination comfortably as well as the general election. I suspect there is a large swath of individual donors who have moved to support frontrunners should they change their donation preference, as past literature suggests similar trends in support for voter choice as well (Bartels 1987; Knight and Schiff 2010). Additionally, campaign finance contributions represent more of a "personal investment" than a vote, given the financial stake that is placed in candidates upon making contributions. This can heighten donors' desire to ensure their contribution goes to a worthy cause/effort, in this case, candidates and campaigns with the greatest chance of success (perceived through polling and viability) (Knight and Schiff 2010).

Hypothesis #2 (Significant Changes)

I hypothesize that in comparing individual campaign contributions in the 2020 Democratic presidential primary election, those that occur around the time of numerous primary contests or "big events" are more likely to be novel (to a new candidate) than are those that occur around non-big events. As the cycle went on, Biden naturally rose in the polls and was

eventually seen as the presumptive nominee. As explained earlier, given the stakes for supporters

of Democratic candidates in the 2020 presidential election, I find it likely that individual donors

would remain partial to supporting candidates with the best-perceived chance of winning rather

than other candidates, and thus will be strategic about when and how to change their political

contributions (Knight and Schiff 2010; Garthwaite and Moore 2012). Additionally, donors would

be very likely to change their contribution recipient if their initial preference for the nomination

drops out of the race or otherwise experiences a phase of their campaign casting doubt on their

viability (Fuchs, Adler, and Mitchell 2000). Previous literature studying voter choice in primary

elections has suggested that there is a dynamic at play during those elections of frontrunners and

polling results pushing individuals to place their support behind the "best bet" for the

nomination, rather than candidates with campaigns that do not have a clear sense of viability

(Rothschild and Malhotra 2014). I believe that such electoral dynamics are likely applicable to

campaign fundraising dynamics as well.

Research Design, Operationalization, and Measurement

In order to accurately track the flow of monetary contributions from individuals to

presidential candidates, a method of properly identifying contribution records corresponding to

the same person is required. I implement this process for the whole of the FEC data available on

the OpenFEC API for the 2020 Democratic presidential primary election cycle, housing all

records on individual contributions made by individuals. As a means of doing so, I matched

donation records that have the same full name, five-digit ZIP Code, and state listed on the

disclosure record and assigned them unique IDs.

The individual-level contribution activity is then summarized first at the month-year level

and another at the quarterly level so that I can create Sankey plots to visualize the flow of

contributions to different candidates as well as identify significant changes in contribution flows by time period. Should a donor have given multiple times over a period to a specific candidate, their contribution total to that candidate is aggregated for that time frame. Because I am only considering within-individual changes as opposed to the total flow of campaign cash, should a donor have given to multiple candidates over a given period, the highest total donation is considered for the Sankey plot. If equal, I discard the observation for the period.

Having identified donor matches on that criteria, I assigned each matched donor an ID. The updated data with IDs assigned and full candidate names, contribution months, and contribution quarters are added to create appropriate Sankey plots showing contribution movement during the 2020 election cycle. These Sankey plots, as well as hard counts on switching activity, will be useful in determining when and to which candidates donor switching occurs. The question posed by hypothesis #1 can be answered by these methods.

As a means of investigating hypothesis #2, significant points of donor switching activity can be identified through breakpoint detection. The 'strucchange' package in R, in use for this project, formalizes a statistical method of conducting breakpoint detection, whereby structural changes within linear regression models can be identified in a variety of contexts. 'Strucchange' utilizes the fluctuation test and F test as a means of identifying significant changes in linear regression models, or breakpoints. The 'strucchange' package can synthesize data of many types in order to detect significant changes over time (Bai 1997; Bai and Perron 1998; Zeileis et al. 2002). Breakpoint detection allows the selective analysis of the entirety of contributions during the 2020 Democratic presidential primary cycle over time to identify significant changes in donor activity down to the day.

These breakpoints can then be compared to significant campaign developments that may have caused certain switching activity. To identify the front-runner at a given time for which a donor may have taken into account should they have switched donation preference, I used FiveThirtyEight's national polls and election forecasts. Additionally, I identified official drop-out dates for each candidate aside from the eventual nominee, as well as debate dates and more to serve as reference points to possibly explain significant changes in contribution flows.

IV. Results

Quarter-By-Quarter Flow of Money from Supporters of Different Candidates

As a means of initial data exploration and observations I looked at overall rates of donor switches by major candidates during the 2020 Democratic Presidential Primary, as displayed in Table 1. As an overview, Table 1 shows by candidate how many of the donors that initially contributed to them ended up switching to another candidate at some point throughout the 2020 Democratic Presidential Primary election cycle. Table 1 also shows the count of those that initially donated to each candidate in that cycle and the percentage out of those that switched their candidate preference.

Based on Table 1, the presidential primary candidate who had the most supporters switch from them as their initial preference, with 44.3% of their initial preference donors eventually switching to another candidate at some point during the cycle was Kamala Harris. The next highest two a tie between Amy Klobuchar and Jay Inslee, both of whose initial preference donors having eventually switched at a rate of 35.8%. The candidates with the lowest donor switch rates are Joe Biden at 0.5% (who would eventually win the Democratic Party's nomination for

President of the United States), Bernie Sanders at 4.1% (who would become the runner-up for

the nomination under Joe Biden), and Andrew Yang at 5.5%.

Candidate	Switched (%)	Switched	Did Not Switch	Total
Bennet	29.4	1,342	3,225	4,567
Biden	0.5	4,283	836,725	841,008
Booker	31.0	4,395	9,773	14,168
Bullock	27.6	1,018	2,673	3,691
Buttigieg	26.9	23,008	62,465	85,473
Castro	33.7	1,930	3,791	5,721
Gillibrand	31.0	1,051	2,337	3,388
Harris	44.3	12,812	16,101	28,913
Inslee	35.8	1,434	2,577	4,011
Klobuchar	35.8	13,116	23,516	36,632
O'Rourke	35.7	4,466	8,054	12,520
Sanders	4.1	9,481	220,078	229,559
Warren	27.2	31,077	83,325	114,402
Williamson	13.1	724	4,799	5,523
Yang	5.5	2,211	38,307	40,518

Table 1: Percentage of Donors Who Switched From Their Initial Preferences in the 2020
Democratic Presidential Primaries, Top 15 Candidates

Interestingly, none of the top 15 candidates by fundraising metrics included in Table 1

had donors that switched at a rate greater than 50%. In effect, no candidate had a majority of

their initial preference donor base switch to a different candidate at some point during the

primary election cycle–they would either stick with the initial candidate or stop giving entirely.

Table 2 was useful in diving a bit deeper and seeing the switches of donor preference in a

candidate-specific manner. Table 2 shows for each of the top seven candidates in the primary

race the percentage of their initial preference donors who switched, and who they ended up

switching to by the end of the primary election cycle. Much of the major percentage results

shown in Table 2 could be expected as the overwhelming majority of switchers from candidates switched to Joe Biden, the eventual Democratic presidential nominee, by the end of the cycle.

That being said, however, other interesting findings did result from viewing the data in this manner. For example, the most dramatic switch rate observed, other than those that switched to Biden, was seen in Andrew Yang donor switchers. 17.82% of Andrew Yang switchers switched to Bernie Sanders by the end of the 2020 Democratic Presidential Primary election cycle. The next most dramatic switch rate below that was the 16.14% of Bernie Sanders switchers who settled on Sanders as their final recipient. This data point represents those that initially donated to Bernie Sanders, switched to another candidate, and then eventually donated to Sanders again as their final recipient by the end of the cycle.

Switched From	To Biden	To Buttigieg	To Harris	To Klobuchar	To Sanders	To Warren	To Yang
Bennet	82.6	2.9	0.3	5.9	0.5	1.7	0.5
Biden	76.9	6.7	2.1	6.1	1.0	2.4	0.5
Booker	76.0	4.4	2.1	5.0	2.0	5.7	0.6
Bullock	79.3	2.9	0.3	8.2	0.8	1.8	0.7
Buttigieg	87.8	4.5	0.5	2.1	1.2	2.5	0.4
Castro	67.8	3.1	0.4	2.3	5.4	11.2	0.8
Gillibrand	62.9	6.6	5.5	6.9	1.7	7.0	0.4
Harris	78.3	4.2	2.9	3.1	1.3	7.0	0.3
Inslee	69.0	3.8	1.1	5.2	5.4	10.0	1.1
Klobuchar	91.5	1.5	0.2	3.5	0.4	1.9	0.1
O'Rourke	81.2	5.7	0.8	1.9	2.8	3.7	0.8
Sanders	75.7	0.8	0.2	0.5	16.1	5.3	0.7
Warren	84.6	0.7	0.2	1.2	8.1	4.5	0.2
Williamson	56.9	2.4	0.4	1.0	21.7	5.3	2.9
Yang	69.7	1.9	0.2	2.3	17.8	3.7	3.4

Table 2: Donor Switchers' Final Preferences in the 2020 Democratic Presidential Primaries (%), Top 7 Candidates

Now pivoting to viewing switcher data in plot form, Figures 1 and 2 show visually the flow of donor contributions by Federal Election Commission reporting quarter, proportional to the amount they donated.

For the purpose of the plot visualizations, if an individual only gave to at most a single candidate (regardless of the reporting period), they were treated collectively as a single 'alluvium' for the brevity of graphical representation. Other donors' money flows are plotted as is, although if they gave to multiple candidates in a given period, I picked out their highest-value donation destination to classify who the donor primarily supports.

Figure 2, below, is simply a percentage representation per period of Figure 1.

Both Figures 1 and Figure 2 show that when breaking down the flow of financial contribution activity between the top 7 candidates in the Democratic Presidential Primary race, when switching activity does occur between these time periods, the actual amounts moving between candidates are minimal compared to the financial contributions continuing to flow to each candidate from donors that have not switched preference.

A possibility to explain this would be that donors took a pause between FEC Quarters before selecting another candidate to begin contributing to. This may not be represented as a switch in the plot because in the quarter where they begin donating to a new candidate, they will not have switched to that candidate from the previous quarter, and a path will not be drawn to include their contribution between candidates.
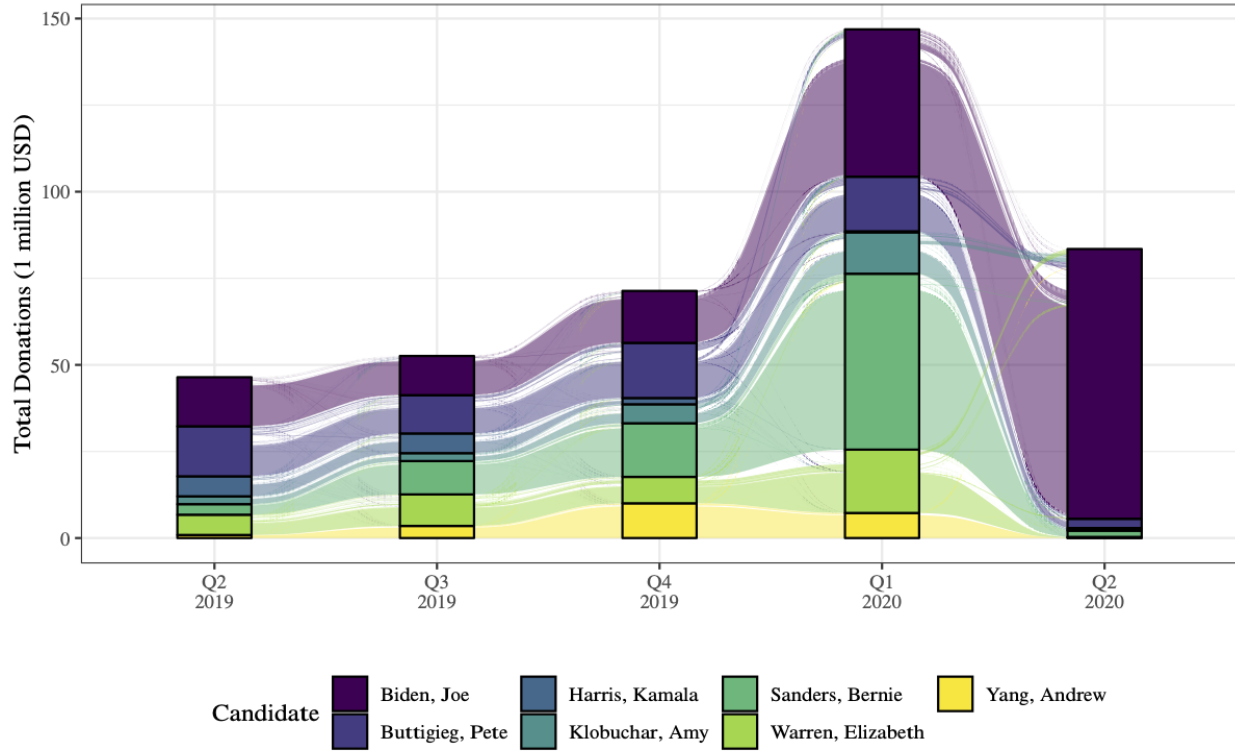
Figure 1: Sankey Diagram of Total Contributions (Million) in the 2020 Democratic Presidential Primaries, Top 7 Candidates, Quarterly
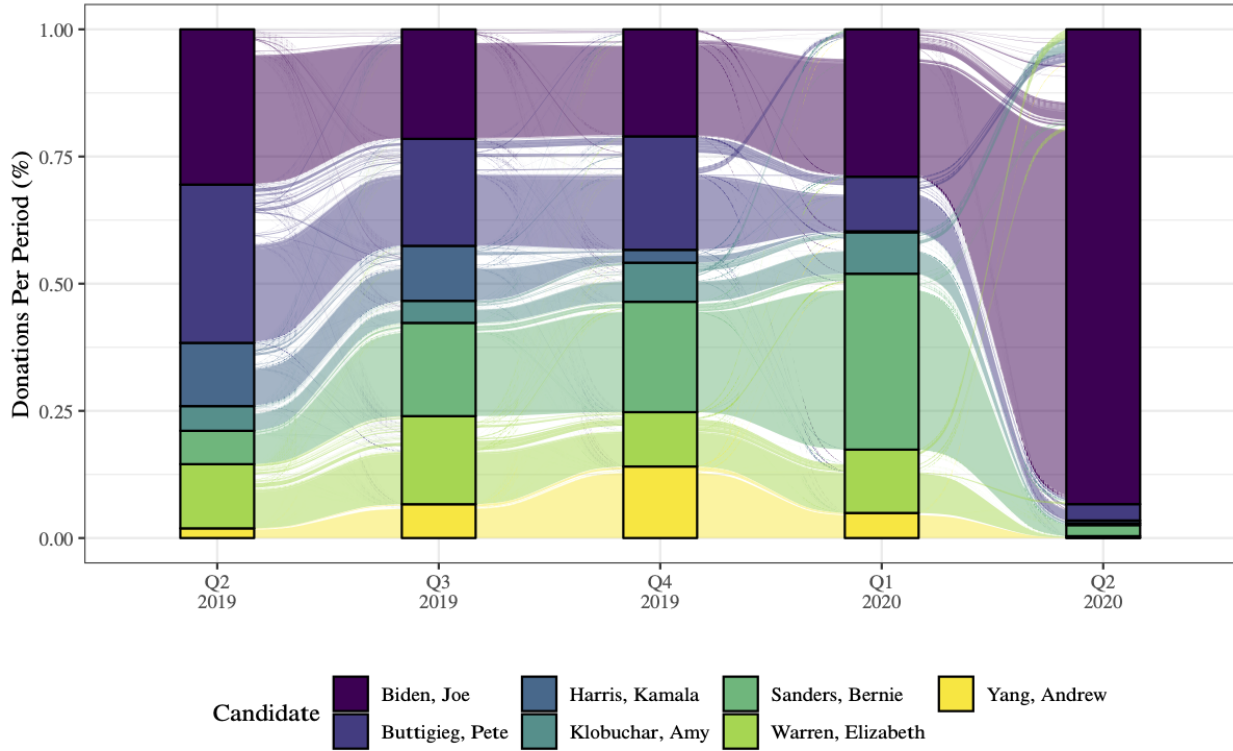
Figure 2: Sankey Diagram of Contribution Percentage Per Period in the 2020 Democratic Presidential Primaries, Top 7 Candidates, Quarterly 8

Below are also plot representations, both Figure 3 and Figure 4, of the flow of donor contributions to 2020 Democratic Presidential Primary candidates, but the donation flows are split by months as time periods, as opposed to FEC reporting quarters. Figure 4, below, is simply a percentage representation per period of Figure 3, above.
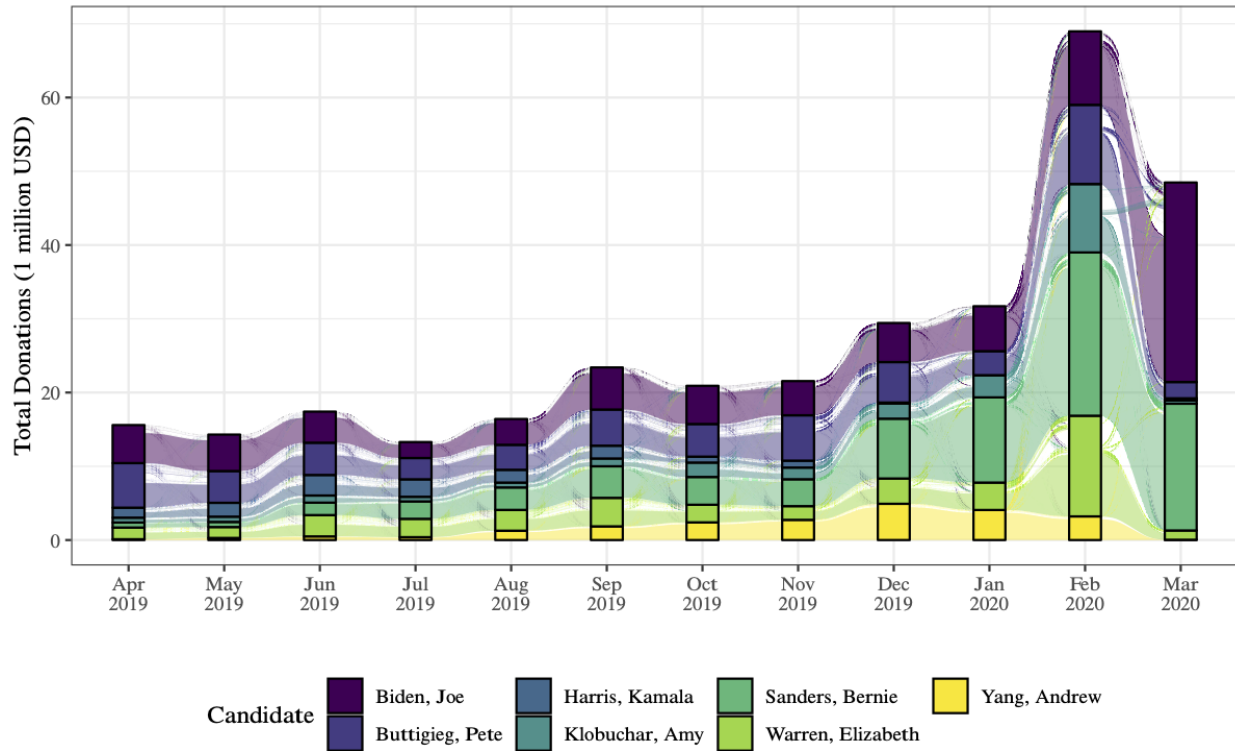
Figure 3: Sankey Diagram of Total Contributions (Million) in the 2020 Democratic Presidential Primaries, Top 7 Candidates, Monthly

What we see in these two plot representations of donor contribution flows throughout the primary election cycle are more switches between time periods. When comparing this dynamic to that of the plot representation of contribution flows by quarter, it suggests that switching tendency may happen more quickly than between quarters, closer to a month-to-month basis that is.

It also appears that the financial contribution amounts flowing between candidates upon donors switching their preferences become more pronounced as the cycle drags on. This dynamic suggests that as the frontrunner, and eventually the Democratic nominee, becomes clearer, donors are more likely to support that individual when switching their contribution preference as opposed to a different candidate.

Overall, while switching may be more prevalent for certain candidates over others, that does not necessarily mean the financial amount moving between candidates is necessarily large. For the majority of the primary election cycle, the plots show that the scale of financial contribution amounts by actual dollars contributed tends to be smaller than the amount of which is contributed by non-switchers, continuing to support their initial preferences.
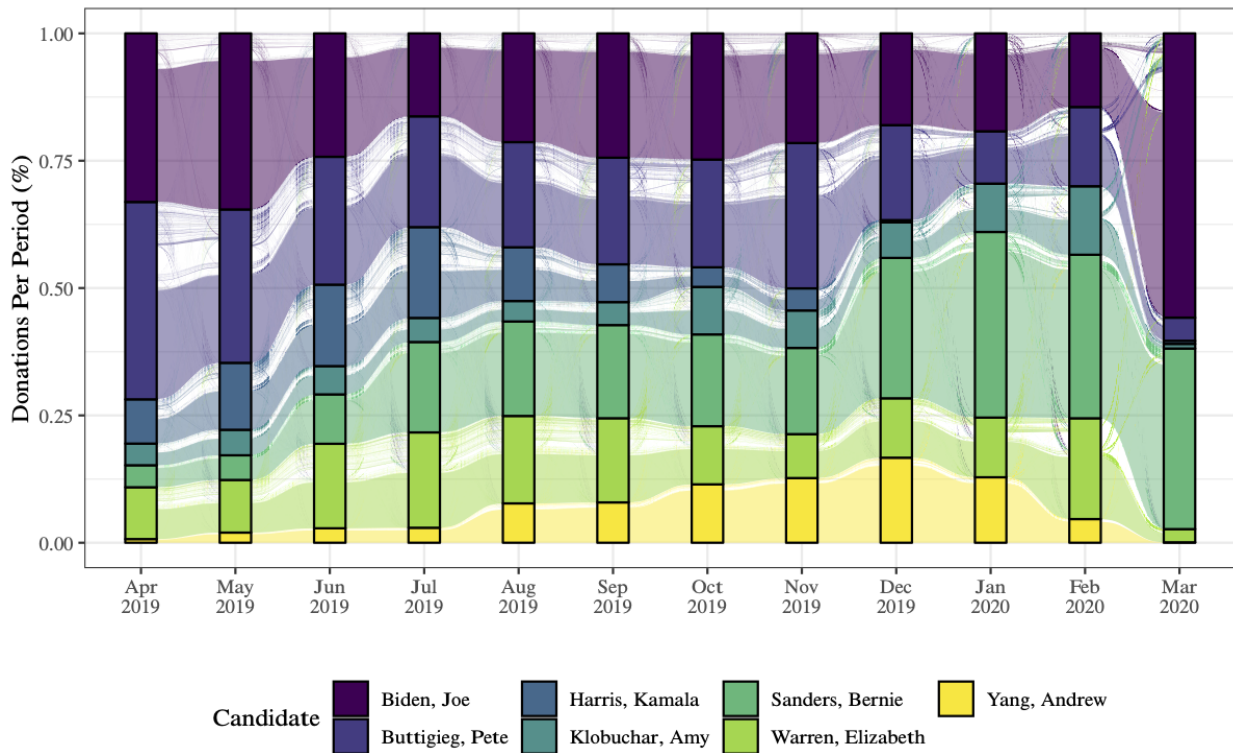

Figure 4: Sankey Diagram of Contribution Percentage Per Period in the 2020 Democratic Presidential Primaries, Top 7 Candidates, Monthly

Structural Changes in Switching Behavior

To further explore the dynamics of individual contributions in the 2020 Democratic presidential primaries, I utilized breakpoint detection. Specifically, breakpoint detection helps to identify significant changes in contribution activity from individuals over time (Bai 1997; Bai and Perron 1998; Zeileis et al. 2002). To begin, I completed breakpoint detection on the counts

of donor switches every day throughout the entirety of the primary cycle. Table 3 displays the

dates identified as significant breakpoints for all switching activities over time.

Donor Set	Breakpoints
Overall	6/25/2019
Overall	1/27/2020
Overall	8/10/2020

Table 3: Breakpoint Dates for Overall 2020 Democratic Presidential Primary Contributions

Table 3 suggests a concentration of inflection points in the contribution landscape during

the 2020 Democratic presidential primary. Take the June 25, 2019 breakpoint, for example. At

that time, the candidates who had announced their campaigns included Yang, Gabbard, Warren,

Klobuchar, Sanders, Buttigieg, Biden, and Bennet. Overall, the candidates included in this group

ranked as the highest fundraisers of individual contributions. The timeline suggests that at this

early point in the race, these candidates had propped up their raising of individual contributions

to a large capacity by this point. At that time, the former Vice President was perceived as the

frontrunner, but polls showed that Biden's polling average was decreasing over that month while

candidates such as Buttigieg, Warren, and Booker saw their polling averages increase. Over the

few days surrounding June 25, however, Biden saw a modest one-point increase in his polling

average.

January 27, 2020, the second overall breakpoint, still preceded any state primary election

dates, but at that time, polls showed Biden still held about a 6-point lead in polling averages in

the large candidate field. By the third breakpoint, August 10, 2020, Joe Biden was the

presumptive Democratic nominee for President, and this date is one day before Biden's

announcement of Kamala Harris as his running mate. The fact that an uptick in switch activity

occurred close in proximity to the Democratic National Convention, as by that point the contest

for the nomination was essentially closed, and donors who continued to make contributions likely moved their investment to Biden's campaign in an effort to follow suit.

Table 4, below, lists the identifiable breakpoints of switching activity of individuals changing their contribution recipient from each of the top 14 candidates in the Democratic Presidential Primary race to the eventual nominee, Joe Biden. Table 4 identifies breakpoints by individual days.

Candidate	2/22	2/23	2/24	2/25	2/26	2/27	2/28	4/26	5/4	5/5	5/8	5/26	8/8	8/10
Bennet		O							O					O
Booker			O							O				O
Bullock			O											
Buttigieg				O										O
Gillibrand				O										
Harris					O									O
Hickenlooper														
Inslee						O		O					O	
Klobuchar	O										O			O
Sanders												O		O
Warren							O							O
Williamson														O
Yang														O

Table 4: Breakpoint Dates in Switching Activity from Top 14 Candidates to Joe Biden

Table 5, below, is a representation of breakpoints in the same switching activity as Table 4, individual contributors switching recipients from the Top 14 Democratic candidates to Joe Biden, identified by week.

Candidate	2/16/2020	2/23/2020	4/26/2020	5/3/2020	5/24/2020	8/2/2020	8/9/2020
Bennet		O		O			O
Booker		O		O			O
Bullock		O					

Buttigieg			O					O
Gillibrand			O					
Harris			O					O
Inslee			O	O			O	
Klobuchar	O				O			O
O'Rourke								
Sanders						O		O
Warren			O					O
Williamson								O
Yang								O

Table 5: Breakpoint Weeks in Switching Activity from Top 14 Candidates to Joe Biden

Table 4 and 5 show that there is a clear rise in significant switching activity surrounding "big events" during the primary election cycle. The week of February 23, 2020, the first array of breakpoints, was the stretch between the Nevada Caucus and the South Carolina primary. Biden was coming off losses in Iowa and New Hampshire, and a slight rise in position in Nevada, but experienced a win with a wide margin in South Carolina that analysts have recognized as a likely turning point for Biden in the campaign. Additionally, Super Tuesday followed the South Carolina primary just a few days later, where Biden came away with a comfortable number of wins in states across the spectrum. Ostensibly, this newfound momentum gave way to a significant shift in donors away from Biden's opponents to his campaign. The breakpoint analysis backs up the theory that "big events" and momentum can lead to an uptick in both contributions and electoral prospects.

Super Tuesday led to further candidate dropouts, leaving only Biden and Sanders as the major candidates remaining in the race. It subsequently became clear that Biden was the presumptive nominee, which led to his winning the overwhelming majority of the remaining state contests. The second array of breakpoints coalesced around the week of May 3, 2020,

which followed about a month after Sanders dropped out of the race, suggesting that donors previously contributing to Biden's opponents waited for some time before contributing to the eventual nominee. The breakpoint set is capped off by the time around the week of August 9, 2020. That week includes Biden's announcement of Kamala Harris as his running mate, and is the week before the Democratic National Convention, where Biden was named the Democratic Party's official nominee for President. It makes sense that the codification of Biden as the nominee, and a major announcement, such as his running mate, would lead to a significant change in switching activity from Biden's opponents to his campaign as said donors are invested in winning the presidency, and are likely moved to support their party's nominee.

The breakpoint detection performed here only serves to identify significant or substantial movement in contribution switching activity. Not captured here is when donors may cease contributing to their initial preference candidate should their campaign be faltering or be witnessing a decrease in its poll position. It is possible that donors were considering switching their contribution recipients for some time prior to doing so. An interesting dynamic likely at play that informed those contributor's decisions to make a switch was likely successive primary wins and "big events," combined with polling data. A successive rise in polling paralleled now-President Joe Biden's primary wins beginning with South Carolina, more so through Super Tuesday, and beyond. These dynamics likely informed contributors in such a way that they could feel comfortable in making the financial decision to invest in Biden's and others' campaigns because it became safer over time, and more likely to be contributing to an eventual nomination win and the general election.

V. Conclusion

In this paper, I explored the dynamics of campaign financial contributions through the lens of what led donors to switch their donation recipient preference from their first choice, should they have switched at all. I looked at switcher counts and rates by the candidate before exploring the next recipient of future financial contributions by switching donors after they switched from their initial preferences. I also looked at these dynamics segregated by time periods of FEC reporting quarters and calendar months, whereby I could observe changing dynamics.

The tables and plots provide information on the prevalence of donor preference switching by the candidate and to whom their contributions are switched to, as well as the magnitude of the financial contributions moving between candidates. They show that the switching activity occurring throughout the primary election cycle did see the majority of donors eventually eventually moving to contribute to the frontrunner and eventual nominee, Joe Biden, while some donor bases of candidates showed more loyalty to their candidate, such as with Bernie Sanders and Andrew Yang. Additionally, while the amount of individual donors that did eventually switch their candidate recipient eventually contributed to Biden was substantial (share of donors who switched from other candidates to Biden stayed above 69%), no candidates' initial preference donor base had a majority of individuals eventually switch to a different presidential candidate. Interestingly, the switch rates of donors that started with Biden stayed predictably low at 0.5%, but when comparing the switch rates of Sanders, Yang, and Williamson donors to the rest of the field it seems that those rates stayed below 15%, while the rates for other candidates landed at nearly 27% and above. Sanders, Yang, and Williamson donor support tended to die with their campaigns while support from donors that started with other candidates was more prone to live on. In addition, there was a group of donors who did "shop around" and donated to

different candidates after donating to their initial preference before ending with contributions to their initial preference once again.

In terms of the magnitude of donor switching activity by dollar amount, that remained minimal throughout the cycle compared to dollar amounts continuing to be contributed candidates on a repeated basis, and not switched. Finally, contribution data suggests that contribution switches occur on a quicker basis than quarter and closer to a month-to-month basis and switcher activity by dollar amount becomes more pronounced as the cycle moves towards the convention date.

In this paper, I also utilized breakpoint detection to identify significant dates of contribution switching activity. What I found was a gradual building of momentum and "big events," paralleled with increasing position in the polls, leading to increased switching activity around major party primary contest dates and events. However, these results provide a general overview of switching activity, rather than more granular explanations of donor activity. These results should be read in such a way to identify catalysts of contribution switching.

The literature on this subject remained dated and without modern statistical analysis applicable to the campaign cycle. In this project, I have applied appropriate analytical methods in order to understand individual political contributions in a modern context. The large candidate field in the 2020 Democratic presidential primary process also provided for an enhanced ability to preview how contributions moved between candidates of different backgrounds. That being said, however, limitations exist in this work. Matching political developments to contribution activities remains a large task that could not be fully captured in this work, namely regarding the combination of ideological similarities between candidates as well as a full timeline of major events during the primary election cycle as well as poll averages during each individual day of

the election cycle. Additionally, more granular ID assignment techniques would be useful in order to ensure that all contributions made by the same individual donor are accounted for within each assigned ID.

Future work in this space should expand upon the reasons donors made the choice to switch their donation preference, should they have done so. Namely, it should be explored the timeline of which those switches occurred, such as after certain primary dates or when candidates made certain major announcements. Additionally, comparing switcher data to polling data and policy closeness of candidates offers a great opportunity to further understand the dynamics of contributor choice in this environment.

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