The Pandemic and the Presidency:

Analyzing the Impact of the Emergence and Severity of the COVID-19 Disease on the 2020

United States General Election Cycle

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The United States General Election between Republican incumbent President Donald Trump and Democratic challenger Joseph Biden faced unprecedented challenges due to the emergence and spread of the coronavirus disease (COVID-19) throughout the election cycle. The response to the pandemic by the federal government, helmed by President Trump, was of continued debate during the election, with some criticizing and some praising the public health and economic measures put in place. By Election Day in November of 2020, the US was among the hardest-hit nations in the world, with more than 80,000 daily cases and nearly 250,000 lives lost (Johns Hopkins Coronavirus Resource Center, 2021).

In the aftermath of the election, many have pointed to Trump's handling of the election as a significant, or even primary, factor for his electoral failure. While some (Whiteley et al., 2020) argue that had Trump responded more competently to public health needs during the pandemic, he could have won re-election, others argue that Biden would have won the election regardless (Masket, 2021). In this paper, I will focus not on the outcome of the election, but rather on how the coronavirus pandemic affected Trump's approval ratings and average polling percentages during the course of the campaign.

I will evaluate the role of the COVID-19 pandemic over the course of the election cycle, identifying if Trump's approval rating and polling percentages were impacted significantly by

the rate of cases and deaths due to the pandemic. I will also evaluate public opinion polling about Trump's handling of the pandemic and how that may have played a role in his electoral failure.

Existing Literature

What drives individuals to vote has been the focus of study for over sixty years. Downs (1957) and Riker & Ordeshook (1968) propose that an individual will be more likely to choose to vote if their probability of being pivotal is higher, they stand to gain significant benefit from the candidate winning, the costs of voting are lower, and if they have higher sense of civic duty to vote. The 2020 electoral cycle, however, posed unique differences as opposed to a typical election year due to the extraneous shocks caused by the pandemic.

Retrospective voting literature (Fiorina 1981, Ashworth 2012), posits that voters sanction incumbents electorally for their handling of negative shocks. Further, the literature finds that voters hold incumbents accountable both for their policy decisions as a result of the shock, but also for shocks beyond their control, such as natural disasters or terrorist attacks. (Heersink et al., 2020) Research surrounding natural disasters and their effect on public policy (Abney and Hill 1966, Malhotra and Kuo 2008) finds that incumbents are rewarded for positive economic performance and also for policies that provide relief and support programs in times of crisis, such as extreme weather.

The effect of major pandemics on voting behavior has been far less studied, primarily due to the relative rareness of these events, particularly during election cycles. One comparison is the 1918 Spanish Flu Pandemic. Despite over 600,000 deaths caused by the Flu, it had a negligible effect on the year's midterm elections (Abad and Maurer, 2020). As such, it is not an obvious

conclusion that the mere existence of a pandemic would have significant effects on an election, even one as salient as the 2020 General Election.

Notes on Data Used

The polling data collected and used in this study comes from FiveThiryEight's publicly available datasets courtesy of data.world. The polls used for analysis were aggregated by FiveThirtyEight from a variety of polling firms, universities, and other reputable sources. The national health data (including new cases and death rates) comes from Our World in Data's online aggregation of Johns Hopkins University's data repository. Links to these data repositories can be found at the conclusion of the paper.

Overview of Election Cycle

On January 9, 2020, the World Health Organization announced an outbreak of a coronavirus-type pneumatic disease in Wuhan, China. Following this announcement, the US Centers for Disease Control and Prevention began screening for the disease at select United States airports, confirming the first case in the US on January 20, 2020. Over a week later, on January 31, President Trump and the White House announced a travel ban on foreign nationals who had traveled to China within 14 days. The first death in the United States from COVID-19 occurred nearly a month later, on February 29.

In early to mid-March, the prevalence of the disease began to increase quickly. The World Health Organization declared a pandemic on March 11, and President Trump declared a national emergency on March 13, releasing up to $50 billion dollars in federal funding to combat the coronavirus and its spread. Shortly thereafter, several states began "stay-at-home" orders or

lockdowns, including closing restaurants, bars, gyms, schools, and other public venues. On

March 26, President Trump signed the CARES Act into law, which provided $2 trillion in aid to

businesses, hospitals, schools, and local governments.

Over the course of 2020, the COVID-19 pandemic hit the United States particularly

strongly in comparison to other large countries. By May 28, 100,000 Americans lost their lives to

the disease; by September 22, the death toll hit 200,000. Only Brazil, Spain, and Mexico have

recorded higher death rates per capita among large countries. Aside from the profound loss of

life, the spread of the pandemic in the United States also had deleterious effects on the US

economy, including a swift rise in the unemployment rate and a steep decline in the stock market

in the early days of the lockdown orders.

Throughout the course of the pandemic, President Trump routinely attempted to

downplay the severity of the disease and its spread. On February 10, 2020, he claimed, "a lot of

people think that [coronavirus] goes away in April with the heat..." On February 26, as US cases

began to increase, he claimed "when you have 15 people, and the 15 within a couple of days is

going to be down to close to zero, that's a pretty good job we've done." This behavior continued

throughout the spring, summer, and fall of 2020. He reiterated his desires to keep the economy

afloat and praised his and his government's responses to the challenges caused by COVID-19.

Reaction to Trump's handling of the crisis varied over the course of the pandemic. At the

outset in January, Trumps' approval rating hovered around 43%. During the initial months of the

disease, he enjoyed a bump in approval of around 3%, nearing 46% of Americans approving of

his job as President. As the pandemic began to take hold in the country, however, Trump's

approval rating began to fall precipitously. He experienced a steady decline from April to July
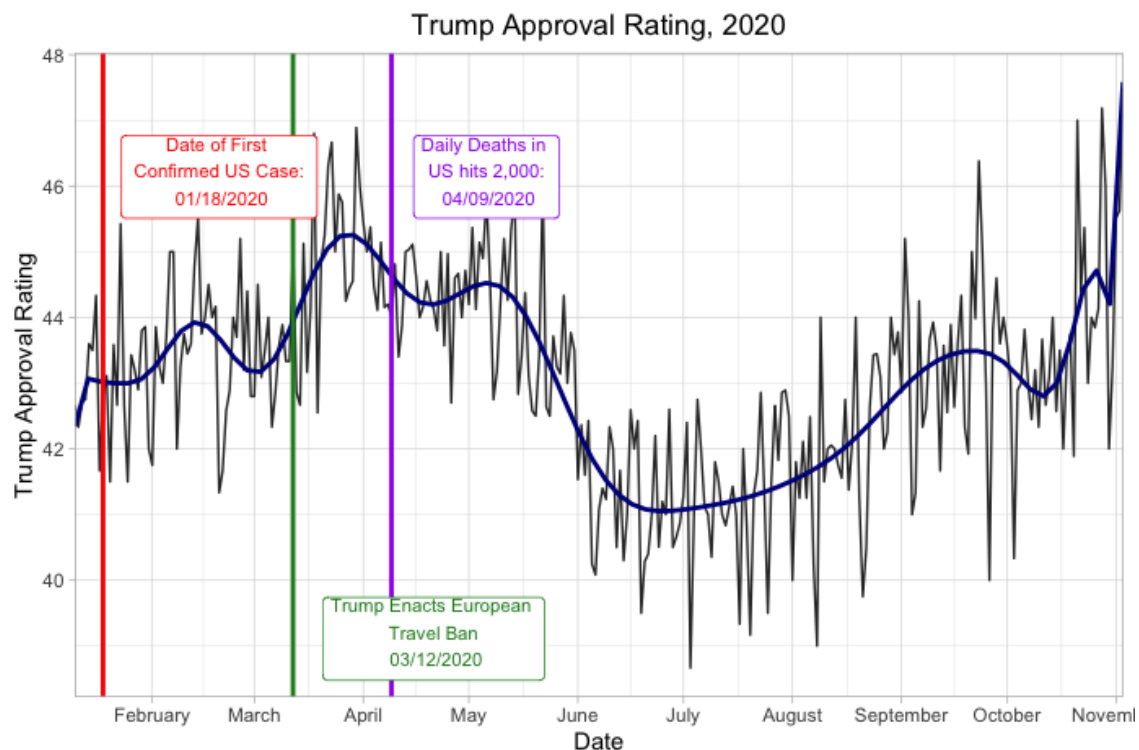
2020:

Figure 1: President Trump's Approval Rating, 2020.

Trump's polling average in national general election forecasting polls also followed a similar pattern: a drop in the early months of the pandemic followed by a rise in the late-summer and fall. Unlike his approval ratings, however, he did not experience a significant increase in polling in average polling percentage in February or March.
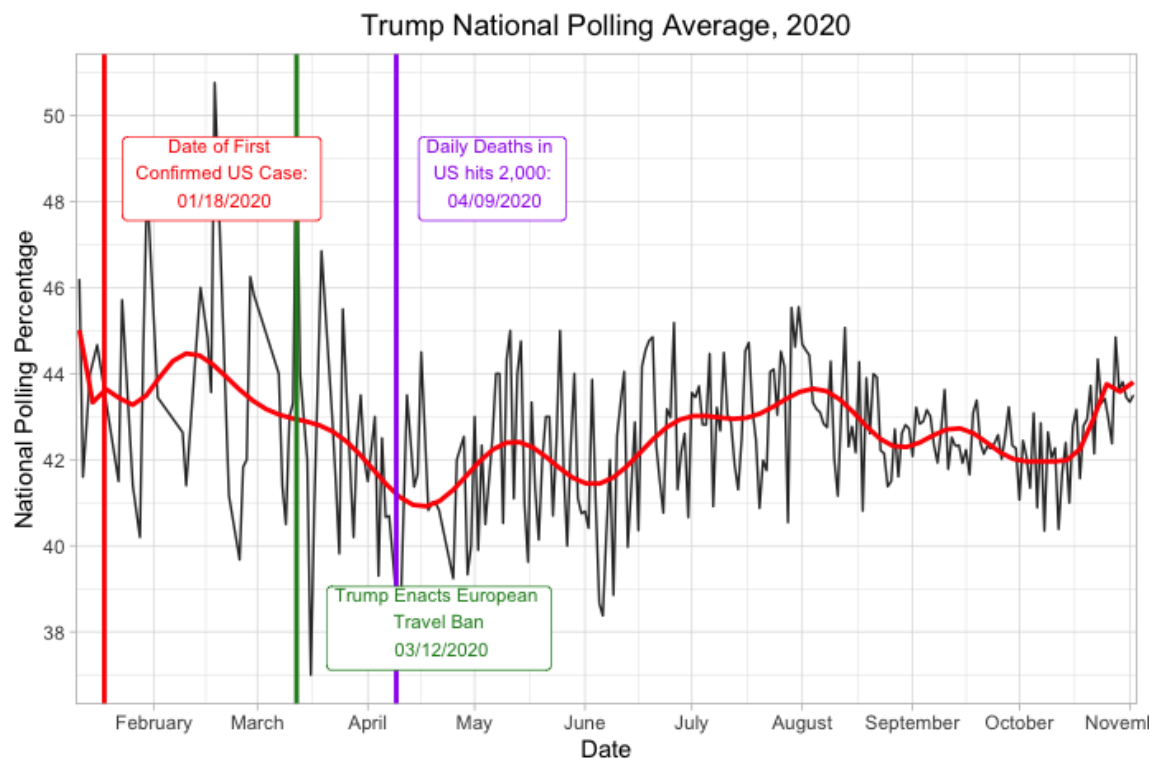
Trump National Polling Average, 2020

Figure 2: Trump General Election Polling Percentages, 2020

While Trump's approval rating rose, his polling averages fell fairly consistently over the first quarter of the year. It then follows that while some may have increased their approval of the President, they did not change their voting intentions when polled.
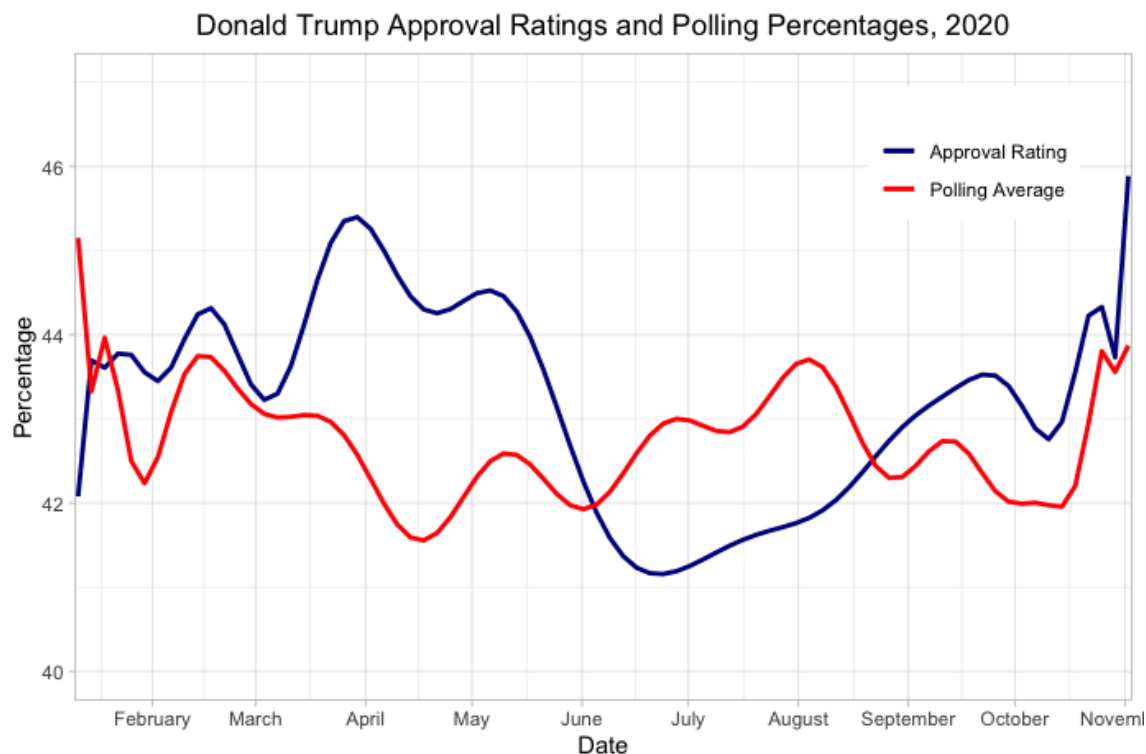
Figure 3: Trump Approval Rating and Polling Average, 2020

Many factors could be at play in this phenomenon. First, March of 2020 saw former Vice President Joe Biden take the mantle of challenger, beating out US Senator Bernie Sanders for the Democratic nomination. In addition, more national polls began to focus on the battle between Biden and Trump specifically, as opposed to Trump and a hypothetical Democratic nominee. These changes in the electoral campaign landscape outside of the pandemic may have had a significant impact on polling trends.

Another potential reason for the rise in approval ratings during the early days of the pandemic could be the rally 'round the flag' effect, a short-run increase in popular support of a country's government or political leaders during periods of crisis. Though typically applied to foreign wars (Mueller, 1970), the United States has seen similar rises in approval following

major crises, such as former President George W. Bush's extreme approval bump following the events of September 11, 2001.

While it appears obvious that the drop in both Trump's approval rating and average polling percentage is significantly related to an increase in the number of COVID-19 cases and deaths in the United States, this relationship is not statistically significant over the course of the entire campaign. In fact, the effect of the number of national coronavirus cases does not have a statistically significant relationship with either Trump's approval rating nor his national polling percentages. Additionally, the number of new deaths per day has a small but highly statistically significant relationship with Trump's polling percentage, but not with his approval rating. (See Table 1, Appendix) When taking a large view, this tracks. The drops in Trump's approval and polling began when the number of cases were very small. As the pandemic wore on, cases and deaths skyrocketed, but this did not dovetail with a steep decline in these factors.

To account for this, I studied the rate of change of new cases and deaths on a month to month basis. When regressing the month's average polling numbers and approval ratings with the rate of change between the average number of new deaths and new cases, I too saw small effects. The rate of changes in the number of new deaths had a small but significantly significant impact (See Table 2, Appendix) on Trump's approval rating; however, the change in average number of new cases did not.

This evidence suggests that the severity of the crisis (measured in terms of numerical counts of COVID cases and deaths) alone did not portend Trump's approval or polling ratings. While there are statistically significant negative impacts of the number of deaths per day on Trump's polling average and the monthly rate of change in the average number of deaths on Trump's approval, these impacts, these effects are small. As the pandemic continued to increase

and impact the lives of more Americans, Trump did not see an increased negative impact in polls.

Coronavirus Public Opinion Polling and Trump Approval Rating and Polling Averages

Like general presidential approval and general election polls, public opinion about President Trump's response to the coronavirus pandemic was mixed. Republicans held the highest approval ratings of Trump's handling of the pandemic, followed by self-reported Independents and Democrats respectively. These approval ratings remained fairly steady within these groups, with Republicans averaging around 80% support, Independents 40%, and Democrats 18%. These vastly divergent approval ratings of Trump's COVID response shed light on significantly partisan opinions of the federal government's handling of the disease.
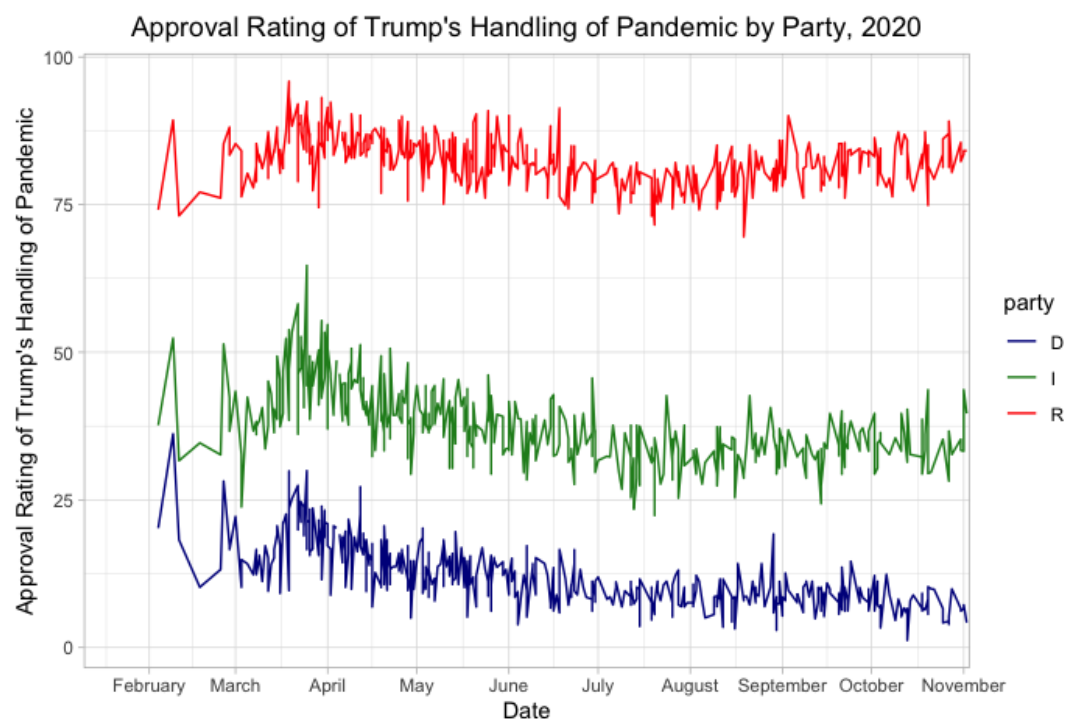

Figure 4: Approval Rating of Trump's Response to COVID-19 by Party

Upon a further inspection of these approval ratings as a whole, rather than segregated by party, we see a positive and statistically significant impact of the approval of Trump's handling of the pandemic on general approval of Trump's presidency. It follows, therefore, that there is a correlation between an increase in the approval of Trump's response to the pandemic and an increase in the overall approval of Trump's job performance.

	Estimate	Std. Error	t value	Pr(>|t|)	Significance
Intercept	32.4580	1.0410	31.18	<2e-16	***
Approval of Trump's Handling of Pandemic	0.2554	0.0248	10.30	<2e-16	***

Table 3: Relationship Between Approval Rating of Trump's Handling of Pandemic and Trump's Overall Presidential Approval Rating

In aggregate, the overall approval rating for President Trump's response to the pandemic faced a decline from March until the middle of July, followed by a less steep rise in approval from August to November.
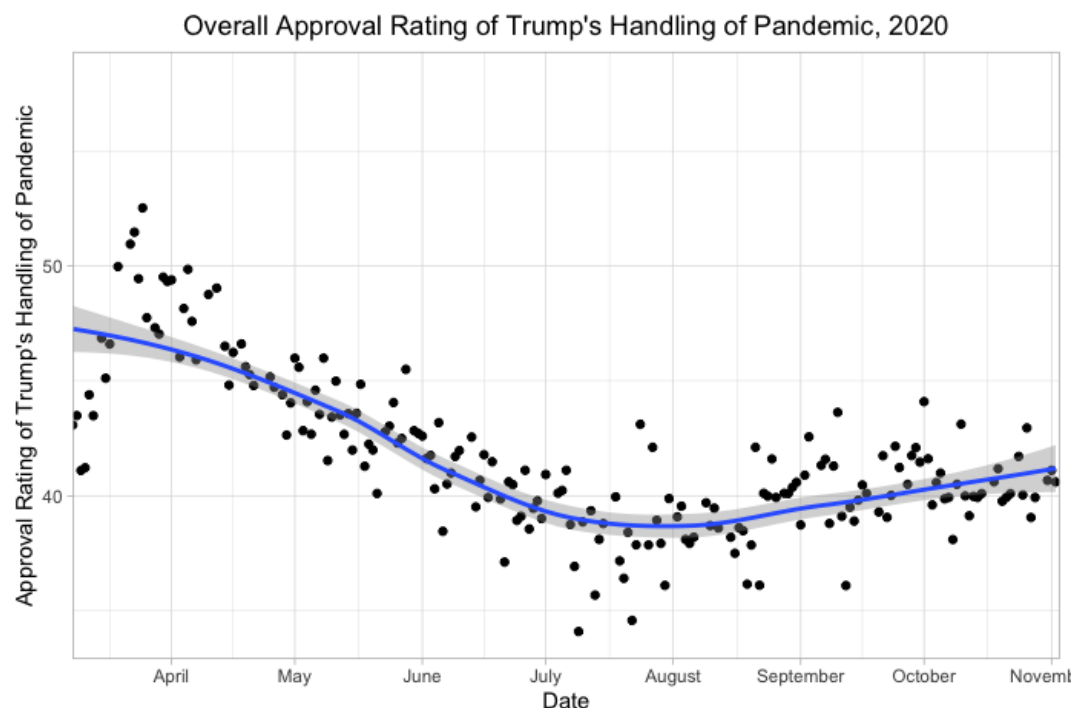
Figure 5: Approval Rating of Trump's Response to Pandemic, 2020

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Interestingly, however, the relationship between overall approval of Trump's handling of the pandemic does not have a statistically significant relationship with Trump's average polling percentage. Independents' approval ratings of Trump's performance with the coronavirus pandemic too does not have a statistically significant relationship with Trump's average polling percentages.

The lack of a statistically significant relationship between approval ratings of Trump's response to COVID-19 and polling numbers may support the theory that voters already had predetermined voting preferences before the pandemic, and even as their approval of his performance with the disease changed, their voting preference did not. It also could be plausible that other, more salient factors were primary in determining vote preference, so the impact of Trump's handling of the virus is not causally related to his polling numbers.

In addition, pollsters studied the American public's concern about the pandemic on two dimensions: concern about the economy and concern about contracting the disease.

Pollsters surveyed Americans about whether they felt very, somewhat, not very, or not at all concerned about the economy as a result of the coronavirus pandemic. I then divided this data into two groups: concerned (which includes respondents who answered "very" or "somewhat") and unconcerned (which includes responses of "not very" and "not at all"). When regressing these responses on Trump's average polling numbers, we see a statistically significant and negative relationship.[1] This aligns with the common conception that perceived economic conditions make a substantive impact on incumbents' electoral outcomes. (Lewis-Beck and Martini, 2020). If more Americans are concerned about the state of the economy due to the pandemic, they may be more likely to attribute the perceived failings of the economy to the current government, which is helmed by President Trump.

	Estimate	Std. Error	t value	Pr(>|t|)	Significance
Intercept	47.19057	1.99308	23.677	<2e-16	***
Concern about the Economy	-0.05637	0.02342	-2.407	0.0179	*

Table 4: Relationship Between Concern about the Economy Due to the Pandemic and Trump's Overall Election Polling Average

Likewise, pollsters surveyed Americans over the course of the election cycle about their concern about getting infected by the virus. Like concern about the economy, I separated the responses into "concerned" and "not concerned" groups. Also like the concern about the economy, there was a negative and statistically significant relationship between concern about

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[1] When regressing the amount of Americans concerned about the economy on Trump's approval rating, there too is a negative relationship, though it is not statistically significant to the .1 level.

getting infected and Trump's average electoral polling results, though this relationship has a smaller coefficient in magnitude.[2]

	Estimate	Std. Error	t value	Pr(>|t|)	Significance
Intercept	43.97078	1.53054	28.729	<2e-16	***
Concern about Getting Infected	-0.02590	0.01271	-2.637	0.0199	*

Table 4: Relationship Between Concern about the Economy Due to the Pandemic and Trump's Overall Election Polling Average

These findings suggest that the pandemic did have an effect on how Americans chose to vote in the 2020 general election. More concern about infection and the economy correlated with lower support for the incumbent President, showing that perhaps the President's handling of the pandemic did have some effect on his electoral outcome. This finding is in line with the conventional wisdom expressed by many pundits and media personalities after Trump's electoral failure.

Discussion

Immediately following the 2020 presidential race, many media personalities and pundits posited that the pandemic altered the course of the campaign. The findings in this paper do not support the theory that the severity of the pandemic affected Trump's approval ratings and polling percentages during the course of the campaign. This is not to say that the pandemic did not have an impact on the campaign: the handling of the virus was of continued debate throughout the cycle, and President Trump himself contracted the disease mere weeks before

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[2] Like with concern about the economy, when regressing the amount of Americans concerned about infection on Trump's approval rating, there too is a negative relationship, but it is not statistically significant to the .1 level.

Election Day. This study does not claim to find that the pandemic had no effect on the campaign or electoral failure of Donald Trump, rather that voters did not appear to significantly penalize Trump in their approval ratings or general election poll responses for the expanding number of cases and deaths due to COVID as the electoral cycle continued. In fact, the relationship between increasing concern about the economy and infection and decreasing election polling averages for Trump does show the possibility that the pandemic had an impact on individuals' voting preferences.

To expand upon these findings, further analysis of the effect of the number of cases and deaths on Trump's approval rating and polling average could be done on a state by state, or if the data exists, county by county level. I performed preliminary analysis on Pennsylvania and Arizona, two states that voted for Trump in 2016 and Biden in 2020, and found no statistically significant relationship between the rate of change of the number of cases and deaths on Trump's approval rating and polling percentage. Further study of other states may enhance the robustness of these findings.

The findings of this paper rely on the accuracy of polling. The data used comes from FiveThirtyEight, an aggregator of polls. Because the polls are not all from the same company, there could be significant variance in how they are conducted and what sorts of bias or error could be present. FiveThirtyEight vets each polling source and only includes those that are probabilistically sampled and accurate. As seen in 2016, and, to a lesser extent 2020, political polls face significant scrutiny from the public due to their perceived inaccuracies. While respondent selection and accuracy concerns remain significant hurdles in the 21st century, research has found that polling has not become less accurate over time. In fact, polling now is more accurate than in decades past (Jennings and Wlezien, 2018). This paper makes no claim

that every poll used in the data is completely accurate; rather, the aggregation of the polls seeks to normalize the polls and eliminate any significant outliers.

Conclusion

Throughout 2020, incumbent President Donald Trump's approval and general election poll percentages averaged in the mid-forties. While the coronavirus pandemic was an extraordinary shock to the daily lives of Americans and was a common topic of debate between politicians and in the media, Trump's standing remained largely unchanged, remaining in the mid-forties. As such, the circumstances of 2020 may have done little to impact America's view of their President, instead crystallizing already-unfavorable opinions.

Data Repositories:

- *Presidential Approval Polls:*

  https://data.world/fivethirtyeight/polling-data-behind-the-latest-polls-dashboard/file/president_approval_polls.csv

- *Presidential General Election Polls:*

  https://data.world/fivethirtyeight/polling-data-behind-the-latest-polls-dashboard/file/president_polls.csv

- *Covid Approval Polls:*

  https://data.world/fivethirtyeight/covid-19-polls/file/covid_approval_polls_adjusted.csv

- *Covid Concern Polls:*

  https://data.world/fivethirtyeight/covid-19-polls/file/covid_concern_polls_adjusted.csv

- *Covid Health Data:* https://github.com/owid/covid-19-data/tree/master/public/data

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Appendix:

Table 1:

Trump Average Polling Percentage = Intercept + New Daily Deaths (smoothed)*x

Coefficients:

	Estimate	Std. Error	t value	Pr(>|t|)	Significance
Intercept	43.0827826	0.2271105	189.700	< 2e-16	***
New Deaths (smoothed)	-0.0006528	0.0002176	-2.999	0.00301	**

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Table 2:

Trump Approval Rating = Intercept + Month Rate of Change (Daily Deaths) *x

	Estimate	Std. Error	t value	Pr(>|t|)	Significance
Intercept	42.670140	0.2056760	207.463	8.46e-13	***
Monthly Rate of Change (Average Daily Deaths)	-0.0011232	0.0004516	-2.487	0.0474	*