Title: Were/Are there any clues in the Texas 2020 Early Vote?
Alternative Title: Understanding Texas: 2016, 2018, and 2020.

Why is this an interesting topic?
- The last time Texas voted for a Democrat state-wide in a Presidential election was in 1972 (48 years ago!)
- This election cycle, it is possible that Texas goes Democratic.
- Just this morning, October 28th, Texas was moved from a lean Republican to a tossup per Cook Political Report
  - The last three paragraphs analyze Texas
  - Interesting excerpt, "In an analysis of polling errors in 2016 and 2018, my colleague David Wasserman wrote this week that polls in the Southwest "undershot Democrats' final margin in 17 of 19 cases, including by an average of 1.4 points in 2016 and 4.2 points in 2018."
- Yesterday, October 27th, the NBC News Political Unit Moved Texas from Lean Republican to a Tossup
- Additionally, one of the factors that has made Texas interesting this election cycle, is that as of Oct 28, (90.8%!) of the *total 2016 turnou*t has voted in the election. In part this is due to voters being encouraged to vote early due to the COVID-19 pandemic, in part due to the increasing population of Texas.
- However, political pundits/analysts are hesitant that the early vote can tell us anything about the preferences of the final electorate (which is fair considering the profiles of early voters and election day voters tend to be different, with early voters more Democratic and election day voters being more Republic, per polls)
- Thus, I thought it would be interesting to see if we could discover any patterns related to TX early voting that could tell us something about the final electorate.

Notes
- TX early voting ends Friday, Oct 30 while the general election doesn't take place until Tuesday, November 3rd
- The % of RVs is a probably a better metric than total voters, as mentioned, the population of Texas has increased, particularly in some large suburban counties
  - I think the best data for population in TX still comes from the 2010 census, but it would be interesting to see if there is anything new data to see just how much the population has changed in some of these counties. Personally, I have not looked yet.
  - Perhaps, the number of registered voters (RVs) in a county is the best metric we have as to the population growth in TX?
- Also, VP Candidate Kamala Harris visits TX on Friday + there is significant democratic ad spending in TX, this is again unlike previous campaign cycles

Interesting other pieces of work about Texas

TX 2020 General Election Early & Absentee Vote Report

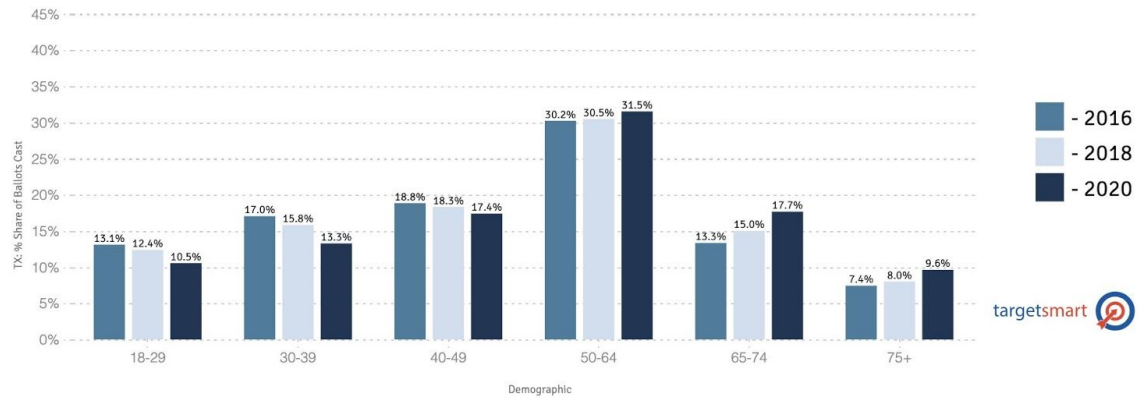**Last update:** Oct 27, 2020, 6:01:37 PM Eastern Daylight Time
In **Texas**, voters have cast **79.8%** of the total votes counted statewide in the 2016 general election.
At least **7,154,089** voters have cast ballots in the 2020 general election.

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Compare 2020 early votes to: ◯ Days out from election   -->◯ Final early/mail ◉ Final election

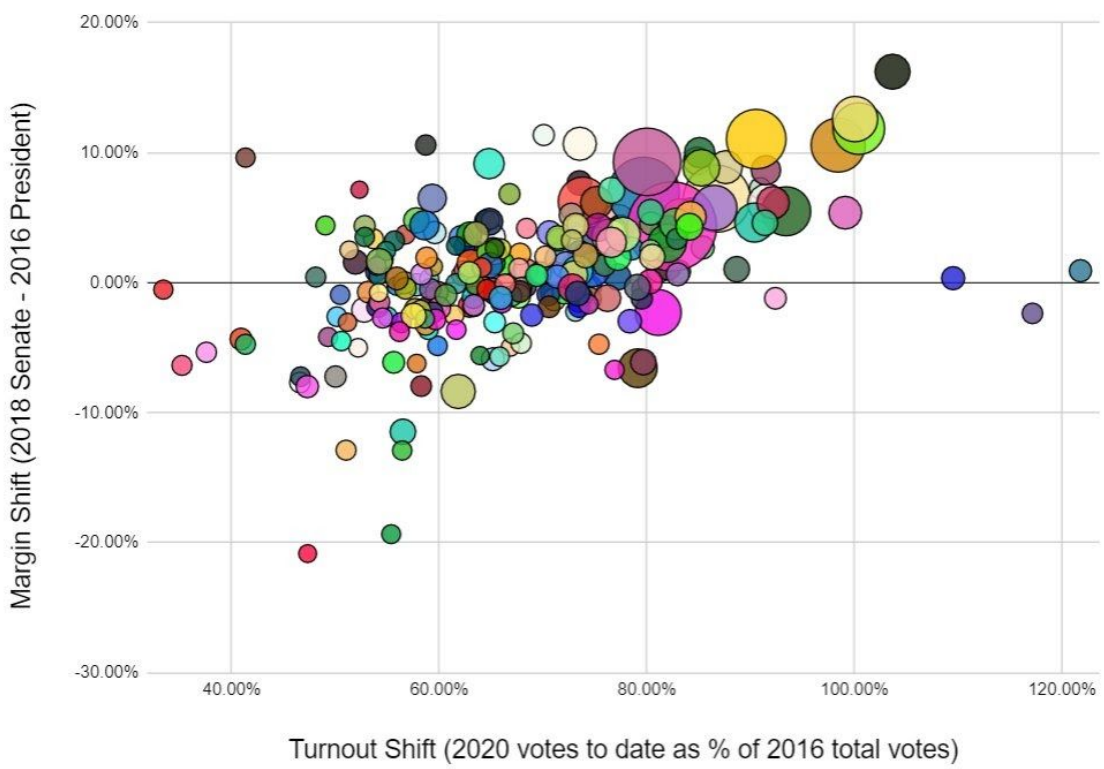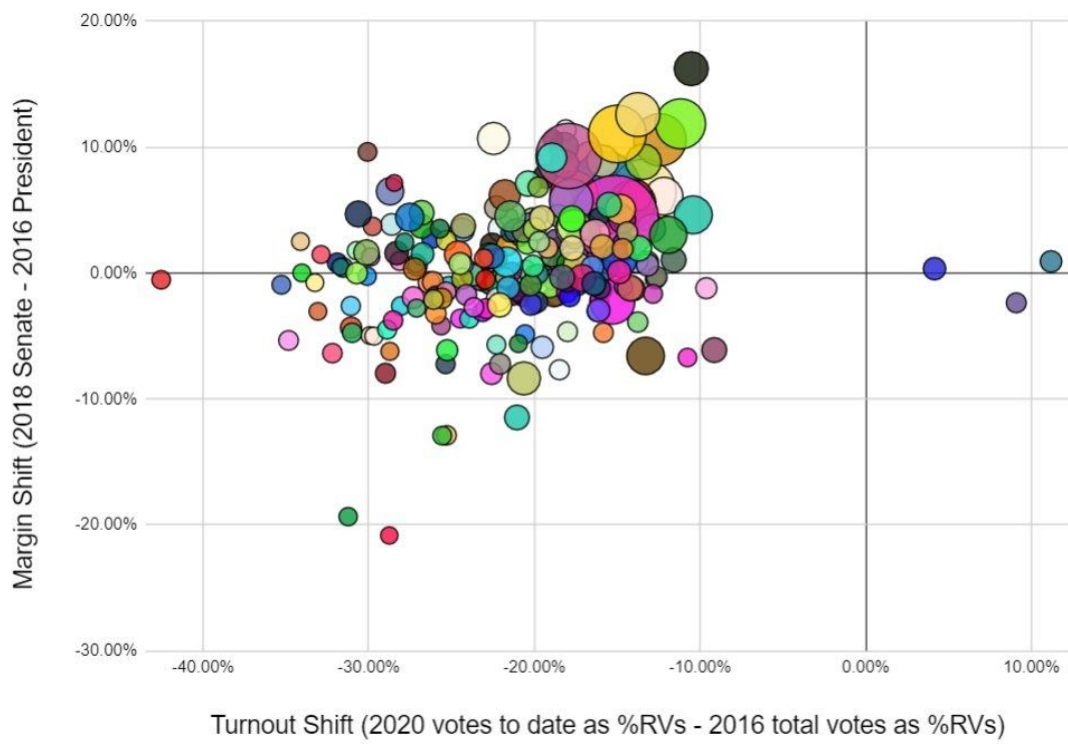| View Type:	State:	Geo Type:	Demographic:	Demographic Value:	Demographic 2:
State ⌄	TX ⌄	Statewide ⌄	Race + Education ⌄	African-American ⌄	Age ⌄

ℹ Race + Education divides Caucasian voters into those with and without a college degree, as research has shown that these groups exhibit quite different voting patterns. [1]
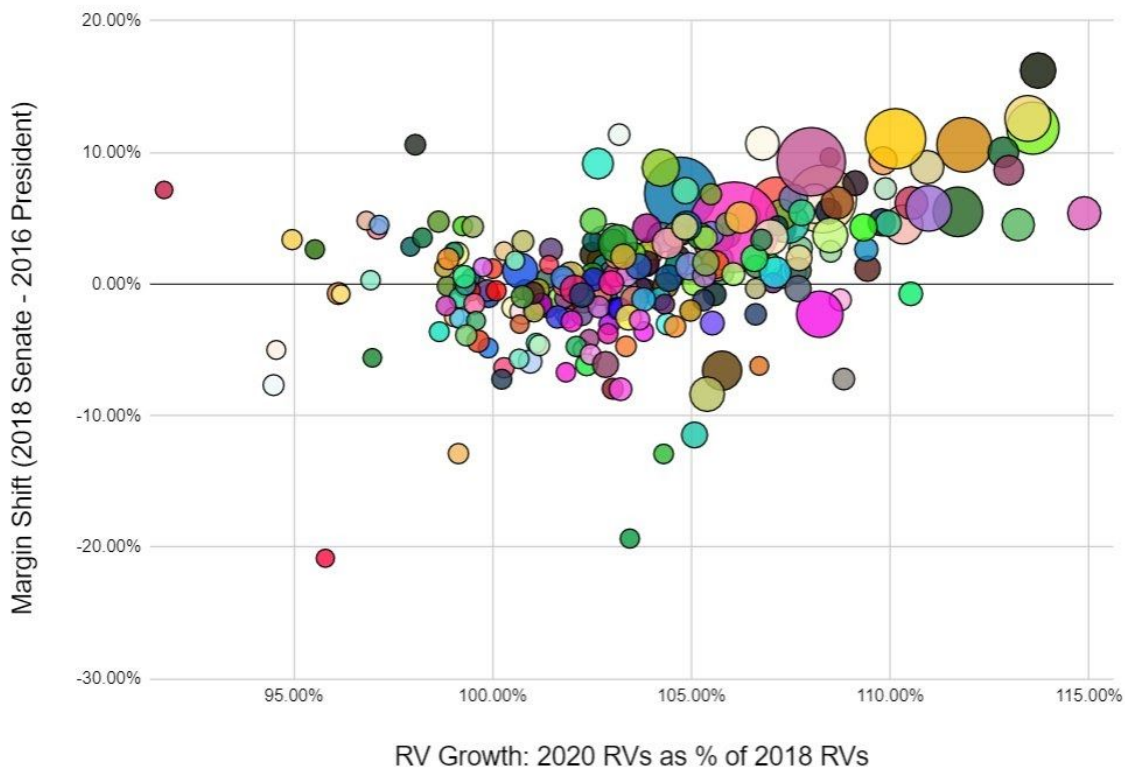
Age	2016	2018	2020
18-29	85,478 (13.1%)	73,094 (12.4%)	53,231 (10.5%)
30-39	111,188 (17.0%)	93,479 (15.8%)	67,000 (13.3%)
40-49	122,882 (18.8%)	108,276 (18.3%)	87,777 (17.4%)
50-64	197,250 (30.2%)	180,089 (30.5%)	159,075 (31.5%)
65-74	87,024 (13.3%)	88,664 (15.0%)	89,151 (17.7%)
75+	48,495 (7.4%)	47,295 (8.0%)	48,549 (9.6%)
Unknown	120 (0.0%)	34 (0.0%)	16 (0.0%)
Total	652,437	590,931	504,799

Source: https://twitter.com/tbonier/status/1321285937691824131
This is an example of *just* African American voters.
More comprehensive data is available *here*.

Margin Shift (2018 Senate - 2016 President)

Turnout Shift (2020 votes to date as %RVs - 2016 total votes as %RVs)

Margin Shift (2018 Senate - 2016 President)

Turnout Shift (2020 votes to date as % of 2016 total votes)

Source: https://twitter.com/jipkin/status/1320861948507021318

I love these graphs. Something similar to this combined with some soft analysis could provide value.

Key Resources/Data Sources (so far):

- 2020
  - Texas early voting by county numbers from the state of Texas
    - This is good, it tells us the total number of voters by county.
  - Texas Polling general election average from (538)
    - Note: you can click on the individual name of the pollster (under the pollster column to see the full crosstabs of the polls)
  - Target smart data (as seen in the first example)
    - https://targetearly.targetsmart.com/
  - Early vote all states
    - https://electproject.github.io/Early-Vote-2020G/index.html
- Other potentially useful article links:
  - Democratic win-loss margin vs. pre-election polling averages in '16 and '18 races for *president, senate and governor,* by different demographic regions in 2020.

Overview/main pieces of analysis/descriptions..

- **Main question: is there anything that the texas early voting data or historical polling can tell us about what is likely to happen in the general election?**

- - - Election day voters have different preferences than early voters, but still given the amount of information about the early voting data, is there anything we can guess?
  - Also, post election, we can analyze the split among these groups.
  - (Another potential analysis that I can do is analyzing certain subsets of the vote such as the latino vote)
  - * I know this isn't perfect but I hope that it can provide a good foundation for our project!
  - * Please let me know if there are any issues and questions!

Section #1
Are there any hints from the polling errors in previous election cycles?
- 2020
  - Specific polls from the 2020 Texas race that are weighted heavily in the current 538 Texas forecast.
    - Oct 20-26 UMassLowell (A/B, LV, Trump +1, Biden 47, Trump 48, Jorgensen 2, Hawkins 1)
    - Oct 20-25 Sienna/NYT (A+, LV, Trump +4, Biden 43, Trump 47, Jorgensen 3)
    - Oct 13-20 UT Tyler (B/C, LV, Biden +3, Biden 48, Trump 45, Jorgenson 2, Hawkins 1)
    - Oct 13-20 UT Tyler (B/C, RV, Biden +2, Biden 46, Trump 44, Jorgenson 2, Hawkins 1)
    - Oct 16-19 Quinnipiac (B+, LV, Even, Biden 47, Trump 47)
- 2018
  - 2018 election day: November 6th, 2018
  - Senate Race (Ted Cruz vs. Beto O'Rourke) 538 forecast
    - Actual results
      - Dem loses by 2.66%
      - This is an error of about D -2.6%

RACE NAME	PARTY	CANVASS VOTES	PERCENT
U. S. Senator -			
Ted Cruz(I)	REP	4,260,553	50.89%
Beto O'Rourke	DEM	4,045,632	48.33%
Neal M. Dikeman	LIB	65,470	0.78%

	Race Total	8,371,655	

- - - Final projections
      - 538 Classic Forecast = R+5.3
      - 538 Deluxe Forecast = R+5.2
    - Highly weighted polls (that we see in 2020)
      - Emerson (LV, R+3.1, Error = D-.4)
      - Oct 22-28 Quinnipiac (LV, R+5, error = D - 2.4)

- Oct 15-28 UT Tyler (LV, R +3.6, error = D -1)
- Oct 8-11 Sienna/NYT (LV, R +8.1, error = D -5.5)
- Oct 3-9 Quinnipiac (LV, R+9, error = D -6.4)
  - Governor's Race (Greg Abbot vs. Lupe Valdez) polls from 538
    - Actual results
      - Dem loses by 13.3%
      - 538 doesn't provide a forecast..

Governor -

Greg Abbott(I)	REP	4,656,196	55.81%
Lupe Valdez	DEM	3,546,615	42.51%
Mark Jay Tippetts	LIB	140,632	1.69%

	Race Total	8,343,443	

- Highly weighted polls (that we see in 2020)
  - Oct 22-28 Quinnipiac (LV, R+5, error = D -.7)
  - Oct 15-28 UT Tyler (LV, R +20, error = D -6.7)
  - Oct 8-11 Sienna/NYT (LV, R +22, error = D -8.7)
  - Oct 3-9 Quinnipiac (LV, R+20, error = D -6.7)

- 2016
  - 2018 election day: November 8th, 2018
  - Presidential Race (Clinton vs. Trump) 538 forecast
    - Actual results
      - Dem loses by 8.99%
      - 538 average at 8.5
      - This is an error of about D +.5%

RACE NAME	PARTY	CANVASS VOTES	PERCENT
President/Vice-President			
Donald J. Trump / Mike Pence	REP	4,685,047	52.23%
Hillary Clinton / Tim Kaine	DEM	3,877,868	43.24%
Gary Johnson / William Weld	LIB	283,492	3.16%

  - Quinnipiac, UT Tyler and Sienna/NYT not poll Texas during this election cycle

Could the polls be wrong in 2020? A lot depends on the region.

Democratic win-loss margin vs. pre-election polling averages in '16 and '18 races for president, senate and governor.

State/region	2016	2018	Average
Iowa	-4.3	-3.7	-4.1
Michigan	-3.9	-1.7	-2.4
Minnesota	-4.7	1.8	-0.4
Ohio	-4.2	-6.5	-5.3
Pennsylvania	-3.2	-2.0	-2.6
Wisconsin	-6.7	-1.2	-3.9
Midwest/Great Lakes average	-4.4	-2.5	-3.6
Arizona	-1.2	2.4	0.6
Nevada	1.9	4.9	3.4
Texas	2.7	3.8	3.4
Southwest average	1.4	4.2	2.9
Florida	-2.4	-3.3	-2.9
Georgia	-1.6	1.6	-0.5
North Carolina	-2.8	-	-2.8
Southeast average	-2.0	-3.5	-2.6

Note: Regional averages include contests in several states not listed.

Source: Official election results compiled by Cook Political Report, RealClearPolitics.com.
Graphic: Jiachuan Wu / NBC News

Section #2
What does the population growth in Texas tell us? What counties are people moving to? Where are they coming from? Is there anything about the demographic splits of those moving to Texas that give us any inkling of where might vote?

How does 538's model work:
https://fivethirtyeight.com/features/how-fivethirtyeights-2020-presidential-forecast-works-and-whats-different-because-of-covid-19/

Section #4

Is there any difference in ad spending/visits from previous campaign cycles that could suggest where this race is going?

- Total Clinton and Trump ad spending in 2016 [link](#)
  - Clinton: 1,745,334
  - Trump: 475,734
- Biden and Trump spending
  - Biden [6.2 million dollar ad buy](#)
  - [Bloomberg 15 million between Ohio and Texas](#) (unclear what percentage goes to each state)
  - Unclear that Trump is making a similar level investment

Section #5: Texas relative to the national average in other elections

The case for a blue Texas:

First, a look at what the national election analysts have to say.

@CookPolitical - Toss Up
@LarrySabado - Leans R
@FiveThirtyEight - 62% R
@TheEconomist - 72% R

Comparing this to '16.

@CookPolitical - Likely R
@LarrySabado - Safe R
@FiveThirtyEight - 94% R
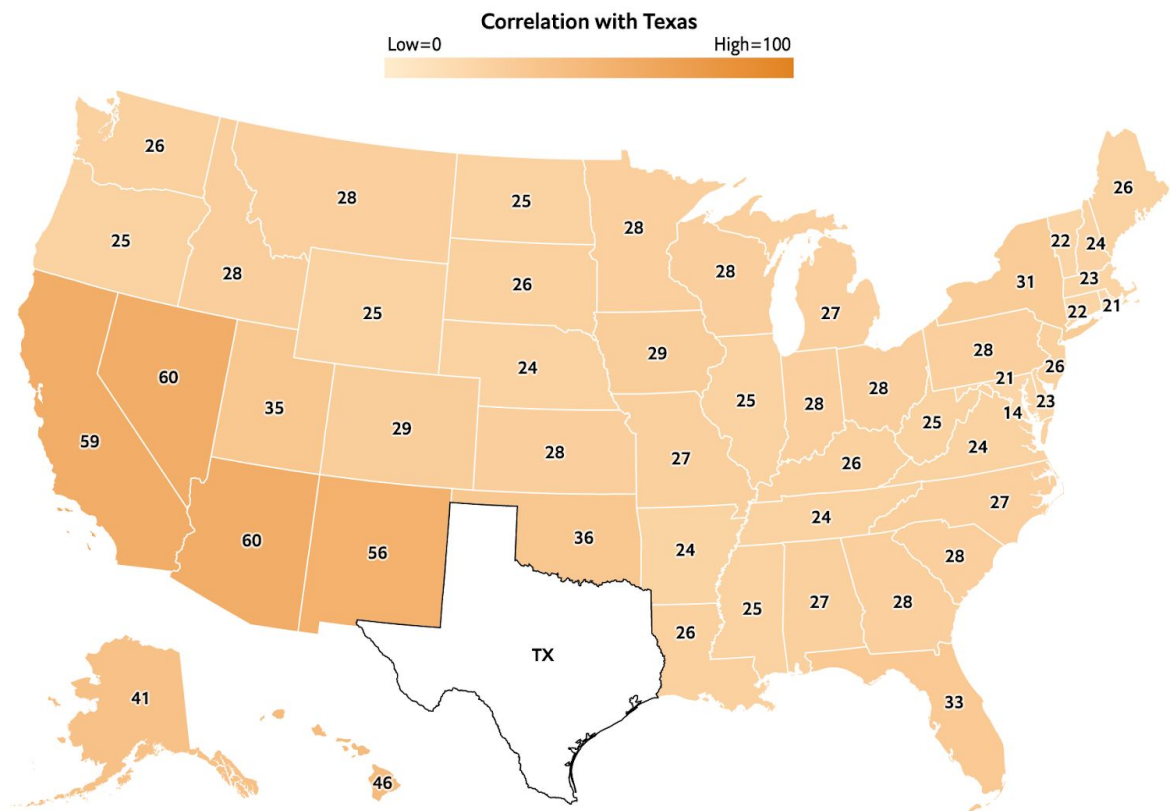@TheEconomist - NA

A couple things are different this year.

Texas has been shattering voter turnout this election. This is particularly interesting because of the state's poor historical performance. If you look at the voting-eligible population which represents an estimate of people eligible to vote *regardless of voter registration status* in an election there's a clear pattern.

Year	Texas	US Average	Difference	Texas Rank
2016	51.40%	59.20%	-7.80%	47th
2012	49.60%	58%	-8.40%	47th
2008	54.10%	61.60%	-7.50%	47th

This year is different. Nobody knows how many people will ultimately vote on election day, but I would be shocked if TX finishes in the bottom five again. With such a high turnout, Texas is a different state than in 2016.

538 Turnout Forecast	US VEP %	Texas Election Day Turnout	TX VEP%	Difference
147,000,000 (10%)	0.61	10% of total vote	56.91%	-4.09%
	0.61	20% of total vote	62.09%	1.09%
	0.61	30% of total vote	67.26%	6.26%
158,000,000 (Median)	0.66	10% of total vote	56.91%	-9.09%
	0.66	20% of total vote	62.09%	-3.91%
	0.66	30% of total vote	67.26%	1.26%
168,000,000 (90%)	0.7	10% of total vote	56.91%	-13.09%
	0.7	20% of total vote	62.09%	-7.91%
	0.7	30% of total vote	67.26%	-2.74%

The states highly correlated with Texas have moved to the left from '16 which is consistent with the national picture.

Correlation with Texas

Low=0   High=100

State	Correlation	2016 (Final Results)	2020 (538 Aggregate)	Shift
Nevada	0.6	Clinton +2.4	Biden +5.3	D +2.9
Arizona	0.6	Trump +3.5	Biden +2.6	D +6.1
California	0.59	Clinton +30	Biden +29.2	D -0.8
New Mexico	0.56	Clinton +8.2	Biden +11.7	D +6.3
National		Clinton +2.1	Biden +8.4	D +6.3

Add Texas '18…
NM SHIFT IS WRONG!

- 2020
  - Specific polls from the 2020 Texas race that are weighted heavily in the current 538 Texas forecast.
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    - Oct 20-26 UMassLowell (A/B, LV, Trump +1, Biden 47, Trump 48, Jorgensen 2, Hawkins 1)
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https://www.kut.org/post/nations-population-growth-slows-texas-sees-jump population increasing

If TX does shift, and the house becomes democratic in a year where districts are redraw from the census, it would mark a new national political map.

<u>Potential Research Questions:</u>
1. Was there any signal in the Texas early vote?
    a. Is there a relationship between the percentage of a county's registered voters that voted during early voting compared to what percentage of the county's registered voters voted on election day? Negative or positive?
    b. Does the relationship mentioned in part (a) have depend on any demographic factors? Population? Anything?
    c. We can also analyze in many other creative ways. For instance, by looking at the urban vs. rural counties. Partisan lean of the county (republican vs. democratic vote). Etc.
2. Are there any other interesting patterns in the early vote data?
    a. For example, during my preliminary analysis, it seemed like the fewer early voters came out on the average weekday vs. weekend. Are there any other interesting plots?
3. General descriptive analysis
    a. Polling errors as found in this document.. Did that continue this election cycle?
    b. Texas voter turnout compared to previous election cycles via the election turnout project. (I believe it greatly exceeded all previous cycles.)
    c. Was there a spike in counties visited by Kamala Harris the Friday before the election?