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## Methodology

The Youth Electoral Significance Index (YESI) was first created in 2016 to illustrate the *potential of young voters, ages 18-29, to affect the outcomes* of that year's Presidential, Senate, and House races.

CIRCLE has now redeveloped YESI for the 2018 elections with updated data and information that reflects the latest ratings of races' competitiveness and, notably, an up-to-date analysis of state's electoral laws. We calculated a separate index for Senate, Governor, and House races, and we profile the top 10 states and districts from each index in this report.

We believe these rankings and profiles can serve as useful tool for understanding youth demographics more deeply and developing outreach and mobilization strategies for the 2018 election and beyond.

### **YESI's methodology consists of four steps, as described below:**

1. Build a conceptual model of youth electoral significance based on research about youth voting patterns and trends, and our retrospective analysis of the youth vote's influence on statewide races occurring between 2006 and 2014. This model suggested that three types of indicators likely influence youth electoral significance: 1) the size and characteristics of youth and overall eligible population demographics, along with the context of voting in the state (such as electoral laws); 2) youth voter turnout in midterm elections; 3) potential leverage of young voters, such as historical differences in the vote choice of youth and the overall electorate; and the expected competitiveness of the race in 2016.
2. Gather available data about the demographic composition of each community (state or congressional district), along with data such as past voter turnout, youth vote choice, share of votes cast by youth, and predicted competitiveness of the upcoming race. For state YESIs, we collected information about statewide electoral laws. Components of YESI data, data sources, and calculation methods are described in detail below.
3. Create composite indices (i.e., a score made up of multiple, related indicators) for the demographic makeup of each district or state, and determine how the conceptual pieces of YESI fit together. We made changes to the Facilitative Election Law Index, which is a way to account for ways in which states have passed and implemented election laws that facilitate registration and voting. For 2018, we rated states on automatic voter registration, same-day registration, online registration, pre-registration for 16- or 17-year olds, and ease of access to information about voting absentee, as a college student, and as an ex-felon.
4. Compute YESI by averaging standardized scores from each component of the data. This gives us an "unweighted" YESI score, which does not yet incorporate information on the competitiveness of the upcoming race. Because the possibility of youth influence on the outcome is highly dependent on how close the race is expected to be, we weigh that factor heavily and compute the final rankings by adding a "competitiveness" score to the unweighted YESI.

## Data Elements of YESI

### 1. Demographic data and context

We focus on the relative share of youth population in the eligible electorate and on the number of colleges and universities in the state or district. As part of the context of youth voting, we also include the extent to which each state has implemented laws that are designed to increase registration and voting, especially among youth.

Indicator	Operational Definition	Source	Units of data availability
<b>Size of youth population relative to the overall population</b>	% of adult citizen population who are aged 18 to 29	American Community Survey (ACS)	State CD
<b>Presence of sizable college student population</b>	Number of students (of all ages) enrolled in colleges and universities in the state or Congressional district, relative to the 18-29 citizen population in the same geographic location (expressed as % ratio). Students who are enrolled 100% online are excluded from the student count.	IPEDS (The Integrated Postsecondary Education Data System), ACS	State CD
<b>Newcomer Index</b>	The extent to which the population is made up of naturalized citizens and predominantly Spanish-speaking individuals. (Inverse score is used in the index, as a low % of newcomers predicts higher turnout)	American Community Survey	State CD
<b>Economic Challenge Index</b>	The degree to which the community faces economic challenges such as high unemployment rate and low income. (Inverse score is used in the index, as a low % of population with these characteristics predicts higher turnout.)	American Community Survey	State CD
<b>High Turnout Demographic Index</b>	The degree to which the community has a high proportion of individuals who share the backgrounds of high-turnout propensity individuals (higher level of educational attainment, % white in the community, % married)	American Community Survey	State CD
<b>State election laws that can facilitate youth vote</b>	We count online registration, automatic registration, pre-registration, same-day-registration, and ease of access to information about voting as students, absentees, or ex-felons on the state election website. With each law, we give up to two points if there is evidence of strong implementation and for website, one point if all three types of information is easily accessible.	National Conference of State Legislatures	State
<b>% of youth who have a mid-range vote propensity score</b>	% of 18-29s who fall into the "middle propensity score" category (propensity scores are calculated using demographic factors and voting history, and are highly correlated to voter turnout).	Catalist	State

## 1. Past Youth Voter Engagement

Indicator	Operational Definition	Source	Units of data availability
Baseline for youth voter engagement	State and congressional youth turnout in past few midterm election years	State: CPS 2006, 2010, 2014 (averaged) CD: Catalist (2014)	State CD

## 2. Potential Leverage of Youth Vote

Indicator	Operational Definition	Source	Units of data availability
Predicted competitiveness of the race in 2018	Average competitiveness rating from various expert sources and reports	Cook Political Report, Rothenberg & Gonzales, and Sabato Crystal Ball ratings as of 2/13/2018	State CD
Decisiveness of youth support for a party in most recent races	% voted for Democratic candidate vs. % voted for Republican candidate (among youth)	Exit polls (for youth by state), based on availability Aggregate data (for all 18+)	State (2014 and 2016) CD (2014)
Contrast between youth party support and older adults	% voting Democrat among 18-29s) - % voting Democrat among those 30+	Exit polls	State (2014 and 2016)

## Calculation of YESI

YESI is calculated so that a higher score means higher potential for youth electoral influence. We standardized the unit of measurement for this index by converting all continuous indicators (i.e., not categories or Yes/No) into Z-score. This allowed us to compare states and congressional districts to one another on a relative scale, ranging from 1st percentile (lowest) to 100th percentile (highest), making it easier to understand where each state/CD ranked compared to the average. On the [YESI site](#), we display the percentile rank for ease of interpretation: "50" is 50th percentile or median.

We chose to calculate YESI by averaging standardized scores of all indicators and demographic indices, and then adding 3 points if a state or district is considered a battleground by at least one expert.

### Senate and Gubernatorial YESI

YESI\_P\_W=mean (Z\_difference in democratic support by age, Z\_difference in democratic support by age, Average youth Turnout, Z\_YouthPopShare\_16, Z\_% of 18-29 year olds in college, Z\_Number of institute of higher ed per 10,000 youth, Election Law index, Z\_Newcomerindex\_inversed, Z\_Unemployment\_pov\_inversed, Z\_HighTurnOutDemographic, Z\_% youth rated with mid-range vote propensity score) + Presidential Battleground (+3 if yes)

**YESI – Congressional Districts**

The methodology for calculating the Congressional District YESI (YESI-CD) is similar to that for the Senate and Gubernatorial YESI, except that there are fewer data points available for congressional districts than for states. As we did for the state index, we calculated Congressional YESI scores that account for the predicted competitiveness in 2018, past turnout data, and the number of higher education institutions in the district. For predicted competitiveness, we incorporated the latest information on the House races that are predicted to be competitive based on three sources (Cook, Rothenberg and Sabato), and we added points that correspond to the most competitive rating among those three. For instance, if Cook rated a district as toss-up and the other two rated it as leaning, we gave the district a rating score of “toss-up.”

For House races, we do not have data on the specific direction and magnitude of youth support for a Democratic candidate, or how youth vote choice compared to that of older voters. Thus, we omitted these elements from the index calculation. We did include youth turnout in 2014 (data were available for districts in 44 out of 50 states), youth share of population, as well as the number of colleges and the number of students enrolled in colleges with addresses in each district. For the number of enrolled students, we excluded students enrolled as “100% distant education” from all universities in our sample, based on an assumption that these students are likely located outside of the district.

**A Note on Florida and Pennsylvania:** Due to recent court rulings against the district boundaries used in 2014 (and 2016) in Florida and Pennsylvania, we were unable to include any districts in these states in our ranking. YESI relies on past turnout and population statistics, and in those two states we were unable to obtain data that would allow us to estimate a past youth turnout base within the new geographic boundaries. However, their absence from our ranking does not mean that youth are not likely to have a significant impact in those two states, which are in fact very likely to feature competitive races where young people can make a difference, especially where there are large youth populations in college towns and elsewhere.