County Election Administration Dataset Codebook

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Reference article: Ritter, Michael J., and Caroline J. Tolbert. 2024. "Measuring County Election Administration in the United States." *Election Law Journal*.

Using the Data to Calculate the Index

The codebook lists the variables from the "cea_with_components_2016_2018_2020.xls" data file.

There are 19 components used to produce the county election administration index. The index itself is included in the aforementioned data file, as well as each of the 19 components. The component values indicate, on a 0 to 1 scale, how a county (or county-equivalent) election jurisdiction ranked comparatively relative to other such jurisdictions in the United States during a given year. Higher values indicate higher performance on a component measure.

If one wishes to precisely reproduce the county election administration index, one should first note that 5 of the 19 components are state-level measures, and 14 of the 19 are county-level measures. Election jurisdictions may be missing 1 or more components, but they are not penalized in the calculation of the index for missing components; the only difference in these cases is that the denominators used to calculate the index would be lower.

Because the county election administration index includes more county- than state-level components, higher weights are placed on county-level components. To implement this weighting scheme, as described by Ritter and Tolbert (2024, 6-7), "county weights are calculated by dividing the number of available county components by the overall number of components, whereas state weights are equal to the number of state components divided by the overall number of components." For example, if a jurisdiction reports a total of 17 component measures, and 12 of these are county components, and 5 are state components, the county weight would be 0.706 (12/17 = 0.706), and the state weight would be 0.294 (5/17 = 0.294).

With this understanding of the weighting scheme established, the final calculation of a county's (or county-equivalent's) index value is performed by following these steps:

(1) Add together county component values to calculate a county numerator value. Next, count the number of available county measures, with this being the county denominator value. Next, divide the county numerator value by county denominator value. Last, multiply this value by the county weight.

(2) Add together state component values to calculate a state numerator value. Next, count the number of available state measures, with this being the state denominator value. Next, divide the state numerator value by state denominator value. Last, multiply this value by the state weight.

(3) The values from (1) and (2) are added together to calculate the county election administration index, which follows a theoretical range of 0 to 1. This value is then multiplied by 100 so the index has a theoretical range of 0 to 100.

Here's an illustration of these calculations applied to Autauga County, Alabama, for 2016:

During this year, Autauga County reported 12 county components, and there were 4 state component measures available, for a total of 16 components. So, the county weight is 0.75 (12/16 = 0.75), and the state weight is 0.25 (4/16 = 0.25).

(1) County-level component calculations:

0.76 + 0.25 + 0.25 + 0.83 + 1 + 0.59 + 0.25 + 0.32 + 0.04 + 0.24 + 0.42 + 0.71 = (5.66/12) x 0.75 = 0.3538

(2) State-level component calculations:

1 + 1 + 0 + 1 = (3/4) x .25 = 0.1875

(3) Add county and state components together:

0.3538 + 0.1875 = 0.5413

Autauga county election administration index value = 0.5413 x 100 = 54.13

Variable Labels

***In order as listed in "cea_with_components_2016_2018_2020.xls" data file

Variable Label	Variable Description
year	Year
fips_code	Federal Information Processing Standard (FIPS) code for jurisdiction.
jurisdiction	Name of jurisdiction.
eric_score	Score for state participation in Election Registration Information Center (ERIC). State index component
audit_score	Score for whether state has post-election audit law. State index component
risk_limiting_score	Score for whether state has risk-limiting audit law. State index component
ovr_score	Score for whether state has online voter registration (OVR). State index component
look_up_score	Score for degree of availability of voter lookup tools in state. State index component
disability_access_score	Score for disability access. Captures difference between disabled and non-disabled group voter turnout. County index component
illness_score	Score for commonality of illness or disability reason for not voting. County index component
res_vtg_score	Score for residual voting rate. Captures what percentage of cast ballots not counted. County index component

wait_time_score	Score for average wait time to vote. County index component
prov_ballots_rej_score	Score for percentage of provisional ballots that are rejected. County index component
prov_ballots_cast_score	Score for percentage of ballots cast as provisional ballots. County index component
uocava_ret_score	Score for percentage of Uniformed and Overseas Citizens Absentee Voting Act (UOCAVA) ballots unreturned. County index component
uocava_rej_score	Score for percentage of UOCAVA ballots rejected. County index component
mballots_nonret_score	Score for percentage of domestic mail ballots unreturned. County index component
mballots_rej_score	Score for percentage of domestic mail ballots rejected. County index component
completion_score	Score for what percentage of relevant Election Assistance Commission (EAC) Election Administration and Voting Survey (EAVS) statistics recorded. County index component.
reg_rej_score	Score for percentage of new voter registration forms rejected. County index component.
reg_prob_score	Score for commonality of voter registration problem reason for not voting. County index component.
reg_score	Score for voter registration rate. County index component.

cea	County Election Administration index value

Consult article, or email michael.ritter@wsu.edu, if you have questions or comments about the county election administration index.