**IL 2022 Congressional Map**

The SEM of the statewide vote share (Vf) for the six individual elections in the composite is small (0.0042). The individual elections show relatively consistent statewide voting behavior. The absolute difference between the composite Vf and the mean of the individual elections is very small (0.0004) and a fraction of the SEM (0.0999).

Similarly, the absolute differences between the composite district vote shares and the means for the elections in it are very small (average: 0.0007) and fractions of the SEM (average: 0.0962). The white squares with black borders in the r(v) graph below are the composite value which occlude the means (crosses).

Chart, line chart

Description automatically generated

Hence, the two analytical starting points in the composite partisan profile are not appreciably different than the means of those for the individual elections.

The absolute difference between the estimated seat share (Sf) of the composite and the means for the individual elections is small (0.0119) but roughly one standard error (1.0366). [TODO: Discuss.]

Hence, the starting point for inferring a S(V) curve – the point Vf, Sf – is not significantly different than the means for the individual elections.

As one would expect given that, the absolute differences between the seat shares in the inferred S(V) curve (Sf) are small (averaging just 0.0058 in the local +/– 5% range around the statewide vote share shown with dotted lines below). The composite Sf’s closely track the mean Sf’s in the local range.

Chart, line chart

Description automatically generated

The absolute differences between the fractional (percentage) measures of bias calculated on the composite and the means of the metrics computed on the individual elections is small (average: 0.0056).

The difference for declination (measured in degrees) is, however, significant (3.9968 or ~4 degrees). The SEM is also large (3.8996 or ~4 degrees). [TODO: Discuss.]

[TODO: Insert metrics figure w/ error bars]

The absolute differences between the measures of responsiveness – big ‘R’, little ‘r’, and the number of responsive districts (Rd) – for the composite and the means for the individual elections are small (0.1099, 0.2023, and 0.4402 for values typically in the low single digits), and the differences are all roughly one standard error or less.

[end]