Advanced Topics in Statistical Methods

PLSC 504

Exercise Four

November 1, 2017

The research question in this exercise is the influence of ideology on Supreme Court voting over time. In particular, the conventional wisdom states that political actors often become more politically moderate over time. To test this hypothesis, you'll examine data on the voting patterns of justices sitting on the Supreme Court during the Vinson, Warren, Burger, and Rehnquist courts (1946-1994) ($N = 32$, $T = 49$, unbalanced). The variables are:

- `justice` (the justice identifier variable),
- `year` (the year identifier),
- `civlib` (the percentage of liberal votes cast by that justice in civil rights and liberties decisions in that year),
- `econs` (the percentage of liberal votes cast by that justice in economics decisions in that year),
- `score` (the normed "Segal/Cover" (1989) score of the justice, ranging from -1 (most conservative) to 1 (most liberal)) and
- `tenure` (the number of years the justice has served on the Court, as of that year).

If the conventional wisdom is correct, one possible manifestation is that the effect of `score` on voting liberalism should be positive, but the interaction of `score` and `tenure` should be negative (as justices moderate their extremism later in their careers).

Your assignment is as follows:

1. First, examine voting liberalism in civil rights and liberties cases (`civlib`).
    - Estimate both fixed- and random-effects models for this outcome, and discuss your results, both substantively and statistically.
    - Evaluate the statistical plausibility of random effects, and compare the two sets of results in terms of model specification (hint: use `pbgtest` and `phtest` in R).
    - Discuss and consider the issue of *dynamics*. In particular, fit and discuss one or more models that addresses concerns about change over time.
2. Repeat the above steps for the variable on economics cases (`econs`). Briefly discuss your findings.
3. Talk in general terms about which model(s) you prefer for these analyses, and why.

This assignment is due *electronically, in PDF format* at 5:00 p.m. ET on Thursday, November 9, 2017, and is worth the usual 50 points.