Tillman argues that pre-electoral coalition increase the identifiability of possible governments and thereby augment electoral decisiveness. In effect, turnout should increase whenever pre-electoral coalitions form. To support his claim, Tillman reports fixed-effects panel regressions which predict turnout from various specifications of the existence and strength of pre-electoral coalitions. In the following, I reanalyze his contribution from several angles. In doing so, I concentrate on Tillman’s primary predictors: the presence of a pre-electoral coalition and the voting percentage a pre-electoral coalition achieved. My brief assessment exposes major flaws in Tillman’s modeling strategy.

# Can the data support any causal effect at all?

Generally speaking, fixed-effects panel regression models estimate the causal effect of some treatment by comparing the outcome on the same observation unit at different points in time. Consequently, a certain amount of (co-)variation *within* the units is required to estimate any causal effect. The figure below shows how within-differences in turnout and PECs align for every country in the data, and it gives reason to doubt Tillman’s analysis.

Figure 1 Correlation of Within-Changes in Turnout and PECs

A close up of a keyboard

Description automatically generated

1. The correlation between turnout and PECs varies substantially across countries, ranging from indirect (e.g. Italy and New Zealand) to null (e.g. Denmark and Japan) to direct (e.g., Germany and Greece). It should thus be questioned how representative of the data Tillman’s reported mean effect is.
2. On many occasions the correlation depends on outliers. For instance, the figure implies a direct association between the formation of PECs and turnout in the UK. However, the implication turns entirely on the 1983 and 1987 elections. Likewise, a strong association between turnout and the result for PECs is implied for Portugal. Again, the implication depends entirely on just two elections: 1979 and 1980.
3. Countries contribute unequally to Tillman’s analysis. Pre-electoral coalitions formed in every French and Israelian election. Since the treatment does not vary, these cases drop out. Moreover, almost half of all countries do not exhibit substantially strong associations for either treatment. Hence, Tillman’s results may be driven by strong positive outliers such as Greece respectively Portugal. Jackknife resampling supports that impression (see Figure 2), but it does invalidate Tillman’s conclusions.

Figure 2 Jackknifed Coefficients and Standard Errors

A picture containing object, antenna

Description automatically generated

# The effect of PECs is probably spurious

Turnout has been declining for decades in practically every democracy worldwide. Fixed effects analyses should routinely safeguard against mistaking such trends in the outcome for treatment effects. The simplest possible way to do so is to include time dummies. As can be seen from Models 2 and 5 in Table 1 the association between PECs and turnout entirely disappears once year dummies have been included. Moreover, treatment effects may vary over time. However, since interaction effects with year dummies are collectively indistinguishable from 0 (Model 3 and 6), the statistical evidence does not support changing returns from PECs.[[1]](#footnote-1)

Table 1 Fixed-effects regression including time trends

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | *Dependent variable: Turnout* | | | | | |
|  | (1) | (2) | (3) | (4) | (5) | (6) |
| PEC | 0.016\*\* | 0.002 | 0.052 |  |  |  |
|  | (0.008) | (0.008) | (0.036) |  |  |  |
| Vote % PEC |  |  |  | 0.038\*\* | 0.022 | 0.046 |
|  |  |  |  | (0.017) | (0.015) | (0.047) |
| ENEP | -0.013\*\*\* | -0.001 | -0.002 | -0.013\*\*\* | -0.001 | -0.002 |
|  | (0.004) | (0.003) | (0.003) | (0.004) | (0.004) | (0.004) |
| Disproportionality | 0.001 | 0.0003 | 0.001 | 0.002 | 0.001 | 0.002 |
|  | (0.002) | (0.002) | (0.002) | (0.002) | (0.002) | (0.002) |
| PR | 0.049 | 0.050\* | 0.069\* | 0.063 | 0.064\*\* | 0.092\*\*\* |
|  | (0.037) | (0.029) | (0.039) | (0.039) | (0.029) | (0.030) |
| Plurality | -0.042 | -0.006 | 0.011 | -0.044 | -0.007 | -0.024 |
|  | (0.042) | (0.035) | (0.055) | (0.039) | (0.033) | (0.052) |
| Closeness | 0.001 | -0.001 | -0.001 | 0.001 | -0.001 | -0.001 |
|  | (0.001) | (0.001) | (0.001) | (0.001) | (0.001) | (0.001) |
| Econ. Growth | 0.002 | -0.001 | -0.002 | 0.001 | -0.001 | -0.0002 |
|  | (0.001) | (0.001) | (0.002) | (0.002) | (0.002) | (0.002) |
| Log Income | -0.007\* | 0.006\*\*\* | 0.006\*\*\* | -0.007 | 0.007\*\*\* | 0.006\*\* |
|  | (0.004) | (0.002) | (0.002) | (0.004) | (0.002) | (0.003) |
| Disprop. \* PR | -0.007\* | -0.008\*\* | -0.010\*\* | -0.008\*\* | -0.009\*\*\* | -0.011\*\* |
|  | (0.004) | (0.004) | (0.004) | (0.004) | (0.004) | (0.004) |
| Plural. \* Closen. | -0.002 | 0.001 | 0.0001 | -0.002 | 0.0004 | 0.0004 |
|  | (0.002) | (0.002) | (0.003) | (0.002) | (0.002) | (0.003) |
| Year dummies? | No | Yes | Yes | No | Yes | Yes |
| Interaction w/i year dummies? | No | No | Yes | No | No | Yes |
| Observations | 226 | 226 | 226 | 222 | 222 | 222 |
| Adjusted R2 | 0.155 | 0.485 | 0.440 | 0.170 | 0.502 | 0.481 |
| F Statistic | 6.940\*\*\* (df = 10; 197) | 5.505\*\*\* (df = 51; 156) | 3.238\*\*\* (df = 87; 120) | 7.338\*\*\* (df = 10; 193) | 5.727\*\*\* (df = 51; 152) | 3.478\*\*\* (df = 90; 113) |
| *Note:* | \*p<0.1; \*\*p<0.05; \*\*\*p<0.01; Country clustered, robust SEs in parentheses | | | | | |

1. Results are substantially similar when a cubic trend is used instead. [↑](#footnote-ref-1)