
Staggered Difference-in-Differences

Nokia 3210 Beamer Theme

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TWFE is Absolutely Fine*

The natural approach to staggered treatment:

$$Y_{it} = \alpha_i + \lambda_t + \tau D_{it} + \varepsilon_{it}$$

- Unit fixed effects. Time fixed effects. What could go wrong?
- $\hat{\tau}$ is a weighted average of all 2×2 comparisons...
- ...perfectly captures every possible estimand.

* It is not fine. (Goodman-Sausage, 2021)

The fix: stop collapsing everything into one number

Estimate $ATT(g,t)$ for each cohort g (time of first treatment) and calendar period t . Compare each cohort only to not-yet-treated or never-treated units.

Still need parallel trends

And no anticipation. Sorry. There is no free lunch, only cleaner identification.

Summary

Do

- Use did (R) or csdid (Stata)
- Plot your event study
- Report aggregation choices

Do not

- Run TWFE and call it a day
- Forget anticipation effects
- Present on PowerPoint

Conclusions

Don't ask Claude for help with estimation. Ask Nokia.