Description

xthdidregress estimates average treatment effect on the treated (ATETs) that may vary over time and over treatment cohorts. Treatment cohorts are groups subject to treatment at different points in time. xthdidregress provides four estimators: extended two-way fixed effects (TWFE), regression adjustment (RA), inverse-probability weighting (IPW), and augmented inverse-probability weighting (AIPW). See [CAUSAL] teffects intro for a discussion of RA, IPW, and AIPW estimators.

Quick start

Estimate ATETs of treatment treat on outcome y with group grpvar; use the RA estimator and model y with covariate x on xtset data

```
xthdidregress ra (y x) (treat), group(grpvar)
Same as above, but use the TWFE estimator
    xthdidregress twfe (y x) (treat), group(grpvar)
Use the IPW estimator and model treat using covariate z
    xthdidregress ipw (y) (treat z), group(grpvar)
Use the AIPW estimator, model y using covariate x, and model treat using covariate z
```

Use the AIPW estimator, model y using covariate x, and model treat using covariate z xthdidregress aipw (y x) (treat z), group(grpvar)

```
Same as above, but use the not-yet-treated group as the control group xthdidregress aipw (y x) (treat z), group(grpvar) /// controlgroup(notyet)
```

Same as above, but cluster at the county level

```
xthdidregress aipw (y x) (treat z), group(grpvar) ///
controlgroup(notyet) vce(cluster county)
```

Menu

```
Statistics > Longitudinal/panel data > Difference in differences (DID) > Heterogeneous DID (TWFE)
Statistics > Longitudinal/panel data > Difference in differences (DID) > Heterogeneous DID (RA)
```

Statistics > Longitudinal/panel data > Difference in differences (DID) > Heterogeneous DID (IPW)

Statistics > Longitudinal/panel data > Difference in differences (DID) > Heterogeneous DID (AIPW)

Syntax

For syntax, methods, and all other information on xthdidregress, see [CAUSAL] xthdidregress. Stata, Stata Press, and Mata are registered trademarks of StataCorp LLC. Stata and Stata Press are registered trademarks with the World Intellectual Property Organization of the United Nations. StataNow and NetCourseNow are trademarks of StataCorp LLC. Other brand and product names are registered trademarks or trademarks of their respective companies. Copyright © 1985–2025 StataCorp LLC, College Station, TX, USA. All rights reserved.

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