Title

> **xtivreg postestimation —** Postestimation tools for xtivreg

Postestimation commands

The following postestimation commands are available after `xtivreg`:

Command	Description
* `contrast`	contrasts and ANOVA-style joint tests of estimates
`estat summarize`	summary statistics for the estimation sample
`estat vce`	variance–covariance matrix of the estimators (VCE)
`estimates`	cataloging estimation results
`etable`	table of estimation results
`forecast`	dynamic forecasts and simulations
`hausman`	Hausman's specification test
`lincom`	point estimates, standard errors, testing, and inference for linear combinations of coefficients
`margins`	marginal means, predictive margins, marginal effects, and average marginal effects
`marginsplot`	graph the results from margins (profile plots, interaction plots, etc.)
`nlcom`	point estimates, standard errors, testing, and inference for nonlinear combinations of coefficients
`predict`	linear predictions, first-differenced error components
`predictnl`	point estimates, standard errors, testing, and inference for generalized predictions
* `pwcompare`	pairwise comparisons of estimates
`test`	Wald tests of simple and composite linear hypotheses
`testnl`	Wald tests of nonlinear hypotheses

*`contrast` and `pwcompare` are not appropriate after `xtivreg, fd`.

predict

Description for predict

predict creates a new variable containing predictions such as fitted values and predictions.

Menu for predict

Statistics > Postestimation

Syntax for predict

For all but the first-differenced estimator

> predict [*type*] *newvar* [*if*] [*in*] [, *statistic*]

First-differenced estimator

> predict [*type*] *newvar* [*if*] [*in*] [, *FD_statistic*]

statistic	Description
Main	
xb	$\mathbf{Z}_{it}\widehat{\boldsymbol{\delta}}$, fitted values; the default
ue	$\widehat{\mu}_i + \widehat{\nu}_{it}$, the combined residual
*xbu	$\mathbf{Z}_{it}\widehat{\boldsymbol{\delta}} + \widehat{\mu}_i$, prediction including effect
*u	$\widehat{\mu}_i$, the fixed- or random-error component
*e	$\widehat{\nu}_{it}$, the overall error component

Unstarred statistics are available both in and out of sample; type predict ... if e(sample) ... if wanted only for the estimation sample. Starred statistics are calculated only for the estimation sample, even when if e(sample) is not specified.

FD_statistic	Description
Main	
xb	$\mathbf{x}_j\mathbf{b}$, fitted values for the first-differenced model; the default
e	$e_{it} - e_{it-1}$, the first-differenced overall error component

These statistics are available both in and out of sample; type predict ... if e(sample) ... if wanted only for the estimation sample.

Options for predict

▭ Main ▭

xb, the default, calculates the linear prediction, that is, $\mathbf{Z}_{it}\widehat{\boldsymbol{\delta}}$.

ue calculates the prediction of $\widehat{\mu}_i + \widehat{\nu}_{it}$. This is not available after the first-differenced model.

xbu calculates the prediction of $\mathbf{Z}_{it}\widehat{\boldsymbol{\delta}} + \widehat{\mu}_i$, the prediction including the fixed or random component. This is not available after the first-differenced model.

u calculates the prediction of $\widehat{\mu}_i$, the estimated fixed or random effect. This is not available after the first-differenced model.

e calculates the prediction of $\widehat{\nu}_{it}$.

margins

Description for margins

margins estimates margins of response for fitted values.

Menu for margins

Statistics > Postestimation

Syntax for margins

margins [*marginlist*] [, *options*]

margins [*marginlist*] , <u>pred</u>ict(*statistic* ...) [*options*]

For all but the first-differenced estimator

statistic	Description
xb	$\mathbf{Z}_{it}\widehat{\boldsymbol{\delta}}$, fitted values; the default
ue	not allowed with margins
xbu	not allowed with margins
u	not allowed with margins
e	not allowed with margins

First-differenced estimator

statistic	Description
xb	$\mathbf{x}_j\mathbf{b}$, fitted values for the first-differenced model; the default
e	not allowed with margins

Statistics not allowed with margins are functions of stochastic quantities other than e(b).

For the full syntax, see [R] **margins**.

Also see

[XT] **xtivreg** — Instrumental variables and two-stage least squares for panel-data models

[U] **20 Estimation and postestimation commands**

For suggested citations, see the FAQ on citing Stata documentation.