

**xtivreg postestimation** — Postestimation tools for xtivreg

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## Postestimation commands

The following postestimation commands are available after `xtivreg`:

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

<i>statistic</i>	Description
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Main

<code>xb</code>	$\mathbf{Z}_{it}\hat{\boldsymbol{\delta}}$ , fitted values; the default
<code>ue</code>	$\hat{\mu}_i + \hat{\nu}_{it}$ , the combined residual
* <code>xbu</code>	$\mathbf{Z}_{it}\hat{\boldsymbol{\delta}} + \hat{\mu}_i$ , prediction including effect
* <code>u</code>	$\hat{\mu}_i$ , the fixed- or random-error component
* <code>e</code>	$\hat{\nu}_{it}$ , 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.

<i>FD_statistic</i>	Description
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Main

<code>xb</code>	$\mathbf{x}_j\mathbf{b}$ , fitted values for the first-differenced model; the default
<code>e</code>	$e_{it} - e_{it-1}$ , 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,  $\mathbf{Z}_{it}\hat{\boldsymbol{\delta}}$ .

`ue` calculates the prediction of  $\hat{\mu}_i + \hat{\nu}_{it}$ . 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  $\widehat{v}_{it}$ .

## 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] , predict(statistic ...) [options]
```

*For all but the first-differenced estimator*

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

*First-differenced estimator*

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

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](#)