

xtabond postestimation — Postestimation tools for xtabond

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Postestimation commands

The following postestimation commands are of special interest after `xtabond`:

Command	Description
<code>estat abond</code>	test for autocorrelation
<code>estat sargan</code>	Sargan test of overidentifying restrictions

The following standard postestimation commands are also available:

Command	Description
<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>	linear predictions and their SEs, residual errors
<code>predictnl</code>	point estimates, standard errors, testing, and inference for generalized predictions
<code>test</code>	Wald tests of simple and composite linear hypotheses
<code>testnl</code>	Wald tests of nonlinear hypotheses

predict

Description for predict

`predict` creates a new variable containing predictions such as linear predictions.

Menu for predict

Statistics > Postestimation

Syntax for predict

```
predict [type] newvar [if] [in] [, xb e stdp difference]
```

Options for predict

Main

`xb`, the default, calculates the linear prediction.

`e` calculates the residual error.

`stdp` calculates the standard error of the prediction, which can be thought of as the standard error of the predicted expected value or mean for the observation's covariate pattern. The standard error of the prediction is also referred to as the standard error of the fitted value. `stdp` may not be combined with `difference`.

`difference` specifies that the statistic be calculated for the first differences instead of the levels, the default.

margins

Description for margins

`margins` estimates margins of responses for linear predictions.

Menu for margins

Statistics > Postestimation

Syntax for margins

```

margins [marginlist] [, options]
margins [marginlist] , predict(statistic ...) [options]

```

Description

linear prediction; the default
not allowed with `margins`
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](#).

estat

Description for estat

`estat abond` reports the Arellano–Bond test for serial correlation in the first-differenced residuals.
`estat sargan` reports the Sargan test of the overidentifying restrictions.

Menu for estat

Statistics > Postestimation

Syntax for estat

Test for autocorrelation

```

estat abond [, artests(#)]

```

Sargan test of overidentifying restrictions

```

estat sargan

```

Option for `estat abond`

`artests(#)` specifies the highest order of serial correlation to be tested. By default, the tests computed during estimation are reported. The model will be refit when `artests(#)` specifies a higher order than that computed during the original estimation. The model can only be refit if the data have not changed.

Remarks and examples

[stata.com](http://www.stata.com)

Remarks are presented under the following headings:

estat abond
estat sargan

estat abond

`estat abond` reports the Arellano–Bond test for serial correlation in the first-differenced errors at order m . Rejecting the null hypothesis of no serial correlation in the first-differenced errors at order zero does not imply model misspecification because the first-differenced errors are serially correlated if the idiosyncratic errors are independent and identically distributed. Rejecting the null hypothesis of no serial correlation in the first-differenced errors at an order greater than one implies model misspecification; see [example 5](#) in [\[XT\] `xtdpd`](#) for an alternative estimator that allows for idiosyncratic errors that follow a first-order moving average process.

After the one-step system estimator, the test can be computed only when `vce(robust)` has been specified. (The system estimator is used to estimate the constant in `xtabond`.)

See [Remarks and examples](#) in [\[XT\] `xtabond`](#) for more remarks about `estat abond` that are made in the context of the examples analyzed therein.

estat sargan

The distribution of the Sargan test is known only when the errors are independent and identically distributed. For this reason, `estat sargan` does not produce a test statistic when `vce(robust)` was specified in the call to `xtabond`.

See [Remarks and examples](#) in [\[XT\] `xtabond`](#) for more remarks about `estat sargan` that are made in the context of the examples analyzed therein.

Methods and formulas

See [\[XT\] `xtdpd` postestimation](#) for the formulas.

Reference

Pinzon, E. 2015. `xtabond` cheat sheet. *The Stata Blog: Not Elsewhere Classified*.
<http://blog.stata.com/2015/11/12/xtabond-cheat-sheet/>.

Also see

[XT] [xtabond](#) — Arellano–Bond linear dynamic panel-data estimation

[U] [20 Estimation and postestimation commands](#)