

**nprgress series postestimation** — Postestimation tools for nprgress series

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## Postestimation commands

The following standard postestimation commands are available after `nprgress series`:

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>etable</code>	table of estimation results
<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>	conditional means and residuals
<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 conditional mean of the outcome, residuals, or score of the mean function.

## Menu for predict

Statistics > Postestimation

## Syntax for predict

```
predict [type] newvar [if] [in] [, statistic atsample tolerance(#)]
```

<i>statistic</i>	Description
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Main

<code>mean</code>	conditional mean of the outcome; the default
<code>residuals</code>	residuals
<code>score</code>	score; equivalent to <code>residuals</code>

These statistics are available for the estimation sample only.

## Options for predict

Main

`mean`, the default, calculates the conditional mean of the outcome variable.

`residuals` calculates the residuals.

`score` is a synonym for `residuals`.

`atsample` restricts predictions to the range of covariates in the data. If requested predictions extend beyond the range of the data, `atsample` will compute predictions only for observations within the range of the original data and will exclude those observations that are beyond the range of the data.

By default, predictions will not be computed if any covariate is set to a value outside the range of the data, unless `atsample` or `tolerance()` is specified.

`tolerance(#)` sets the tolerance for predictions outside the range of the covariates.

By default, predictions will not be computed if any covariate is set to a value outside the range of the data, unless `tolerance()` or `atsample` is specified.

## margins

### Description for margins

`margins` estimates margins of the conditional mean.

### Menu for margins

Statistics > Postestimation

### Syntax for margins

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

<i>statistic</i>	Description
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Main

<code>mean</code>	conditional mean of the outcome; the default
<code>residuals</code>	not allowed with <code>margins</code>
<code>score</code>	not allowed with <code>margins</code>

<i>options</i>	Description
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SE

<code>vce(<i>vcetype</i>)</code>	<i>vcetype</i> may be <code>delta</code> , <code>unconditional</code> , or <code>bootstrap</code>
<code>reps(#)</code>	equivalent to <code>vce(bootstrap, reps(#))</code>
<code>seed(#)</code>	set random-number seed to #; must also specify <code>reps(#)</code>
<code>nose</code>	do not estimate standard errors

Reporting

<code>citype(<i>citype</i>)</code>	method to compute bootstrap confidence intervals; default is <code>citype(percentile)</code>
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<i>citype</i>	Description
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<code>percentile</code>	percentile confidence intervals; the default
<code>bc</code>	bias-corrected confidence intervals
<code>normal</code>	normal-based confidence intervals

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

For the full syntax, see [R] [margins](#).

## Options for margins

SE

`vce(delta)`, `vce(unconditional)`, and `vce(bootstrap)` specify how the VCE and, correspondingly, standard errors are calculated.

`vce(delta)` is the default. The delta method is applied to the formula for the response and the VCE of the estimation command. This method assumes that values of the covariates used to calculate the response are given or, if all covariates are not fixed using `at()`, that the data are given.

`vce(unconditional)` specifies that the covariates that are not fixed be treated in a way that accounts for their having been sampled. The VCE is estimated using the linearization method. This method allows for heteroskedasticity or other violations of distributional assumptions in the same manner as `vce(robust)`, which is the default for [npregress series](#).

`vce(bootstrap)` specifies that bootstrap standard errors be reported; see [R] [vce\\_option](#). We recommend that you select the number of replications using `reps(#)` instead of specifying `vce(bootstrap)`, which defaults to 50 replications. Be aware that the number of replications needed to produce good estimates of the standard errors varies depending on the problem.

`reps(#)` specifies the number of bootstrap replications to be performed. Specifying this option is equivalent to specifying `vce(bootstrap, reps(#))`.

`seed(#)` sets the random-number seed. You must specify `reps(#)` with `seed(#)`.

`nose` suppresses calculation of the VCE and standard errors.

Reporting

`citype(citype)` specifies the type of confidence interval to be computed. By default, bootstrap percentile confidence intervals are reported as recommended by [Cattaneo and Jansson \(2018\)](#). *citype* may be one of `percentile`, `bc`, or `normal`.

## Remarks and examples

[stata.com](#)

For examples of margins after [npregress series](#), see [example 3](#) and [example 4](#) in [R] [npregress series](#).

For an example of `marginsplot`, see [example 4](#) in [R] [npregress series](#).

## Methods and formulas

The formulas used by `predict` and `margins` for the conditional mean function and the mean marginal effect of a covariate are given in [Methods and formulas](#) of [R] [npregress series](#).

## Reference

Cattaneo, M. D., and M. Jansson. 2018. Kernel-based semiparametric estimators: Small bandwidth asymptotics and bootstrap consistency. *Econometrica* 86: 955–995. <https://doi.org/10.3982/ECTA12701>.

## Also see

- [R] [npregress series](#) — Nonparametric series regression
- [R] [bootstrap postestimation](#) — Postestimation tools for bootstrap
- [U] [20 Estimation and postestimation commands](#)

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