Postestimation commands

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

Command	Description
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
lincom	point estimates, standard errors, testing, and inference for linear combinations of parameters
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 parameters
predict	conditional means and residuals
predictnl	point estimates, standard errors, testing, and inference for generalized predictions
test	Wald tests of simple and composite linear hypotheses
testnl	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(*#*)]

statistic	Description
Main	
mean	conditional mean of the outcome; the default
residuals	residuals
score	score; equivalent to residuals

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

statistic	Description
Main	
mean	conditional mean of the outcome; the default
<u>res</u>iduals	not allowed with margins
<u>sc</u>ore	not allowed with margins

options	Description
SE	
vce(*vcetype*)	*vcetype* may be delta, unconditional, or <u>boot</u>strap
<u>rep</u>s(#)	equivalent to vce(bootstrap, reps(#))
seed(#)	set random-number seed to #; must also specify reps(#)
nose	do not estimate standard errors
Reporting	
citype(*citype*)	method to compute bootstrap confidence intervals; default is citype(<u>p</u>ercentile)

citype	Description
<u>p</u>ercentile	percentile confidence intervals; the default
bc	bias-corrected confidence intervals
<u>norm</u>al	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

  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**

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