

cloglog postestimation — Postestimation tools for cloglog

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Postestimation commands

The following postestimation commands are available after `cloglog`:

Command	Description
<code>contrast</code>	contrasts and ANOVA-style joint tests of estimates
<code>estat ic</code>	Akaike's and Schwarz's Bayesian information criteria (AIC and BIC)
<code>estat summarize</code>	summary statistics for the estimation sample
<code>estat vce</code>	variance–covariance matrix of the estimators (VCE)
<code>estat (svy)</code>	postestimation statistics for survey data
<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>linktest</code>	link test for model specification
* <code>lrtest</code>	likelihood-ratio test
<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>suest</code>	seemingly unrelated estimation
<code>test</code>	Wald tests of simple and composite linear hypotheses
<code>testnl</code>	Wald tests of nonlinear hypotheses

* `forecast`, `hausman`, and `lrtest` are not appropriate with `svy` estimation results. `forecast` is also not appropriate with `mi` estimation results.

predict

Description for predict

`predict` creates a new variable containing predictions such as probabilities, linear predictions, standard errors, and equation-level scores.

Menu for predict

Statistics > Postestimation

Syntax for predict

```
predict [type] newvar [if] [in] [, statistic nooffset]
```

<i>statistic</i>	Description
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Main	
<code>pr</code>	probability of a positive outcome; the default
<code>xb</code>	linear prediction
<code>stdp</code>	standard error of the linear prediction
<code>score</code>	first derivative of the log likelihood with respect to $\mathbf{x}_j\beta$

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

`pr`, the default, calculates the probability of a positive outcome.

`xb` calculates the linear prediction.

`stdp` calculates the standard error of the linear prediction.

`score` calculates the equation-level score, $\partial \ln L / \partial (\mathbf{x}_j\beta)$.

`nooffset` is relevant only if you specified `offset(varname)` for `cloglog`. It modifies the calculations made by `predict` so that they ignore the offset variable; the linear prediction is treated as $\mathbf{x}_j\mathbf{b}$ rather than as $\mathbf{x}_j\mathbf{b} + \text{offset}_j$.

margins

Description for margins

`margins` estimates margins of response for probabilities and linear predictions.

Menu for margins

Statistics > Postestimation

Syntax for margins

```
margins [marginlist] [, options]
```

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

<i>statistic</i>	Description
<code>pr</code>	probability of a positive outcome; the default
<code>xb</code>	linear prediction
<code>stdp</code>	not allowed with <code>margins</code>
<code>score</code>	not allowed with <code>margins</code>

Statistics not allowed with `margins` are functions of stochastic quantities other than $e(\mathbf{b})$.

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

Remarks and examples

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

Once you have fit a model, you can obtain the predicted probabilities by using the `predict` command for both the estimation sample and other samples; see [U] [20 Estimation and postestimation commands](#) and [R] [predict](#). Here we will make only a few comments.

`predict` without arguments calculates the predicted probability of a positive outcome. With the `xb` option, it calculates the linear combination $\mathbf{x}_j \mathbf{b}$, where \mathbf{x}_j are the independent variables in the j th observation and \mathbf{b} is the estimated parameter vector.

With the `stdp` option, `predict` calculates the standard error of the linear prediction, which is not adjusted for replicated covariate patterns in the data.

▷ Example 1

In [example 1](#) in [\[R\] cloglog](#), we fit the complementary log-log model `cloglog foreign weight mpg`. To obtain predicted probabilities,

```
. use http://www.stata-press.com/data/r14/auto
(1978 Automobile Data)
. cloglog foreign weight mpg
(output omitted)
. predict p
(option pr assumed; Pr(foreign))
. summarize foreign p
```

Variable	Obs	Mean	Std. Dev.	Min	Max
foreign	74	.2972973	.4601885	0	1
p	74	.2928348	.29732	.0032726	.9446067

◀

Also see

[\[R\] cloglog](#) — Complementary log-log regression

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