Title

> **hetprobit postestimation** — Postestimation tools for hetprobit

Description   Syntax for predict   Menu for predict   Options for predict
Remarks and examples   Also see

Description

The following postestimation commands are available after `hetprobit`:

Command	Description
contrast	contrasts and ANOVA-style joint tests of estimates
estat ic	Akaike's and Schwarz's Bayesian information criteria (AIC and BIC)
estat summarize	summary statistics for the estimation sample
estat vce	variance–covariance matrix of the estimators (VCE)
estat (svy)	postestimation statistics for survey data
estimates	cataloging estimation results
forecast[1]	dynamic forecasts and simulations
lincom	point estimates, standard errors, testing, and inference for linear combinations of coefficients
linktest	link test for model specification
lrtest[2]	likelihood-ratio test
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 coefficients
predict	predictions, residuals, influence statistics, and other diagnostic measures
predictnl	point estimates, standard errors, testing, and inference for generalized predictions
pwcompare	pairwise comparisons of estimates
suest	seemingly unrelated estimation
test	Wald tests of simple and composite linear hypotheses
testnl	Wald tests of nonlinear hypotheses

[1] `forecast` is not appropriate with `svy` estimation results.

[2] `lrtest` is not appropriate with `svy` estimation results.

Syntax for predict

> predict [*type*] *newvar* [*if*] [*in*] [, *statistic* <u>nooff</u>set]

> predict [*type*] { *stub** | *newvar*_{reg} *newvar*_{lnsigma2} } [*if*] [*in*] , <u>sc</u>ores

statistic	Description
Main	
<u>pr</u>	probability of a positive outcome; the default
xb	linear prediction
<u>sigma</u>	standard deviation of the error term

These statistics are available both in and out of sample; type predict ... if e(sample) ... if wanted only for the estimation sample.

Menu for predict

Statistics > Postestimation > Predictions, residuals, etc.

Options for predict

[Main]

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

xb calculates the linear prediction.

sigma calculates the standard deviation of the error term.

nooffset is relevant only if you specified offset(*varname*) for hetprobit. 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 $\mathbf{x}_j\mathbf{b} + \text{offset}_j$.

scores calculates equation-level score variables.

The first new variable will contain $\partial \ln L / \partial(\mathbf{x}_j\boldsymbol{\beta})$.

The second new variable will contain $\partial \ln L / \partial(\mathbf{z}_j\boldsymbol{\gamma})$.

Remarks and examples

Once you have fit a model, you can use the predict command to obtain the predicted probabilities for both the estimation sample and other samples; see [U] **20 Estimation and postestimation commands** and [R] **predict**. predict without arguments calculates the predicted probability of a positive outcome. With the xb option, predict calculates the index function combination, $\mathbf{x}_j\mathbf{b}$, where $\mathbf{x}_j$ are the independent variables in the jth observation and $\mathbf{b}$ is the estimated parameter vector. With the sigma option, predict calculates the predicted standard deviation, $\sigma_j = \exp(\mathbf{z}_j\boldsymbol{\gamma})$.

▷ Example 1

We use predict to compute the predicted probabilities and standard deviations based on the model in example 2 in [R] **hetprobit** to compare these with the actual values:

```
. predict phat
(option pr assumed; Pr(y))

. gen diff_p = phat - p

. summarize diff_p
```

Variable	Obs	Mean	Std. Dev.	Min	Max
diff_p	1000	-.0107081	.0131869	-.0466331	.010482

```
. predict sigmahat, sigma

. gen diff_s = sigmahat - sigma

. summarize diff_s
```

Variable	Obs	Mean	Std. Dev.	Min	Max
diff_s	1000	.1558882	.1363698	.0000417	.4819107

◁

Also see

[R] **hetprobit** — Heteroskedastic probit model

[U] **20 Estimation and postestimation commands**