Title

> **scobit postestimation —** Postestimation tools for scobit

Postestimation commands

The following postestimation commands are available after `scobit`:

Command	Description
contrast	contrasts and ANOVA-style joint tests of estimates
estat ic	Akaike's, consistent Akaike's, corrected Akaike's, and Schwarz's Bayesian information criteria (AIC, CAIC, AICc, 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
etable	table of estimation results
* forecast	dynamic forecasts and simulations
lincom	point estimates, standard errors, testing, and inference for linear combinations of coefficients
* lrtest	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	probabilities, linear predictions and their SEs, etc.
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

*`forecast` and `lrtest` are not appropriate with svy estimation results.

predict

Description for predict

predict creates a new variable containing predictions such as probabilities, linear predictions, and standard errors.

Menu for predict

Statistics > Postestimation

Syntax for predict

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

> predict [*type*] *stub** [*if*] [*in*], <u>sc</u>ores

statistic	Description
Main	
pr	probability of a positive outcome; the default
xb	$\mathbf{x}_j\mathbf{b}$, linear prediction
stdp	standard error of the linear prediction

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.

nooffset is relevant only if you specified offset(*varname*) for scobit. 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 $\partial \ln L / \partial \ln\alpha$.

margins

Description for margins

margins estimates margins of response for probabilities and linear predictions.

Menu for margins

Statistics > Postestimation

Syntax for margins

margins $\big[$ *marginlist* $\big]$ $\big[$, *options* $\big]$

margins $\big[$ *marginlist* $\big]$, <u>predict</u>(*statistic* ...) $\big[$ <u>predict</u>(*statistic* ...) ... $\big]$ $\big[$ *options* $\big]$

statistic	Description
pr	probability of a positive outcome; the default
xb	$\mathbf{x}_j \mathbf{b}$, linear prediction
stdp	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**.

Remarks and examples

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 additional 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 jth observation and $\mathbf{b}$ is the estimated parameter vector.

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

▷ Example 1

In example 1 of [R] **scobit**, we fit the model scobit foreign mpg. To obtain predicted probabilities, we type

```
. use https://www.stata-press.com/data/r18/auto
(1978 automobile data)
. keep make mpg weight foreign
. scobit foreign 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	.2974049	.182352	.0714664	.871624

◁

Also see

[R] **scobit** — Skewed logistic regression

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