Title

> **etpoisson postestimation** — Postestimation tools for etpoisson

Postestimation commands

The following standard postestimation commands are available after `etpoisson`:

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
* hausman	Hausman's specification test
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	potential-outcome means, observed-outcome means, conditional treatment effects, 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

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

predict

Description for predict

predict creates a new variable containing predictions such as counts, conditional treatment effects, probabilities, and linear predictions.

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	
<u>pomean</u>	potential-outcome mean (the predicted count); the default
<u>omean</u>	observed-outcome mean (the predicted count)
cte	conditional treatment effect at treatment level
pr(*n*)	probability $\Pr(y_j = n)$
pr(*a*,*b*)	probability $\Pr(a \leq y_j \leq b)$
xb	linear prediction
xbtreat	linear prediction for treatment equation

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**

pomean, the default, calculates the potential-outcome mean.

omean calculates the observed-outcome mean.

cte calculates the treatment effect, the difference of potential-outcome means, conditioned on treatment level.

`pr(n)` calculates the probability $\Pr(y_j = n)$, where n is a nonnegative integer that may be specified as a number or a variable.

`pr(a,b)` calculates the probability $\Pr(a \leq y_j \leq b)$, where a and b are nonnegative integers that may be specified as numbers or variables;

b missing ($b \geq .$) means $+\infty$;
`pr(20,.)` calculates $\Pr(y_j \geq 20)$;
`pr(20,b)` calculates $\Pr(y_j \geq 20)$ in observations for which $b \geq .$ and calculates $\Pr(20 \leq y_j \leq b)$ elsewhere.

`pr(.,b)` produces a syntax error. A missing value in an observation of the variable a causes a missing value in that observation for `pr(a,b)`.

`xb` calculates the linear prediction for the dependent count variable, which is $\mathbf{x}_j\boldsymbol{\beta}$ if neither `offset()` nor `exposure()` was specified; $\mathbf{x}_j\boldsymbol{\beta} + \text{offset}_j^\beta$ if `offset()` was specified; or $\mathbf{x}_j\boldsymbol{\beta} + \ln(\text{exposure}_j)$ if `exposure()` was specified.

`xbtreat` calculates the linear prediction for the endogenous treatment equation, which is $\mathbf{w}_j\boldsymbol{\gamma}$ if `offset()` was not specified in `treat()` and $\mathbf{w}_j\boldsymbol{\gamma} + \text{offset}_j^\alpha$ if `offset()` was specified in `treat()`.

`nooffset` is relevant only if you specified `offset()` or `exposure()` when you fit the model. It modifies the calculations made by `predict` so that they ignore the offset or exposure variable. `nooffset` removes the offset from calculations involving both the `treat()` equation and the dependent count variable.

`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 $\partial \ln L / \partial(\mathbf{w}_j\boldsymbol{\gamma})$.

The third new variable will contain $\partial \ln L / \partial \operatorname{atanh} \rho$.

The fourth new variable will contain $\partial \ln L / \partial \ln\sigma$.

margins

Description for margins

margins estimates margins of response for counts, conditional treatment effects, probabilities, and linear predictions.

Menu for margins

Statistics > Postestimation

Syntax for margins

margins [*marginlist*] [, *options*]

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

statistic	Description
<u>pom</u>ean	potential-outcome mean (the predicted count); the default
<u>om</u>ean	observed-outcome mean (the predicted count)
cte	conditional treatment effect at treatment level
pr(*n*)	probability $\Pr(y_j = n)$
pr(*a,b*)	probability $\Pr(a \leq y_j \leq b)$
xb	linear prediction
<u>xbt</u>reat	linear prediction for treatment equation

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

For the full syntax, see [R] **margins**.

Remarks and examples

[stata.com]

The average treatment effect (ATE) and the average treatment effect on the treated (ATET) are the parameters most frequently estimated by postestimation techniques after etpoisson.

You can use the margins command (see [R] **margins**) after etpoisson to estimate the ATE or ATET. See example 2 of [CAUSAL] **etpoisson** for an example of ATE estimation. See example 3 of [CAUSAL] **etpoisson** for an example of ATET estimation.

See example 1 of [CAUSAL] **etpoisson** for an example using lincom after etpoisson.

Methods and formulas

See *Methods and formulas* of [CAUSAL] **etpoisson** for details.

Also see

[CAUSAL] **etpoisson** — Poisson regression with endogenous treatment effects

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

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