

etpoisson postestimation — Postestimation tools for etpoisson

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Postestimation commands

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

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>hausman</code>	Hausman's specification test
<code>lincom</code>	point estimates, standard errors, testing, and inference for linear combinations of coefficients
* <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, probabilities, and treatment effects
<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

* `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 nooffset]
```

```
predict [type] { stub* | newvarreg newvartreat newvarathrho newvarlnsigma }
      [if] [in] , scores
```

<i>statistic</i>	Description
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Main

<u>p</u> omean	potential-outcome mean (the predicted count); the default
<u>o</u> mean	observed-outcome mean (the predicted count)
cte	conditional treatment effect at treatment level
pr(<i>n</i>)	probability $\Pr(y_j = n)$
pr(<i>a, b</i>)	probability $\Pr(a \leq y_j \leq b)$
xb	linear prediction
<u>x</u> btreat	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 $\mathbf{x}_j\beta$ if neither `offset()` nor `exposure()` was specified; $\mathbf{x}_j\beta + \text{offset}_j^\beta$ if `offset()` was specified; or $\mathbf{x}_j\beta + \ln(\text{exposure}_j)$ if `exposure()` was specified.

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

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

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

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

<i>statistic</i>	Description
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<code>pomean</code>	potential-outcome mean (the predicted count); the default
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<code>omean</code>	observed-outcome mean (the predicted count)
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<code>cte</code>	conditional treatment effect at treatment level
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<code>pr(<i>n</i>)</code>	probability $\Pr(y_j = n)$
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<code>pr(<i>a</i>,<i>b</i>)</code>	probability $\Pr(a \leq y_j \leq b)$
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<code>xb</code>	linear prediction
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<code>xbtreat</code>	linear prediction for treatment equation
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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 [TE] [etpoisson](#) for an example of ATE estimation. See [example 3](#) of [TE] [etpoisson](#) for an example of ATET estimation.

See [example 1](#) of [TE] [etpoisson](#) for an example using `lincom` after `etpoisson`.

Methods and formulas

See [Methods and formulas](#) of [TE] [etpoisson](#) for details.

Also see

[TE] [etpoisson](#) — Poisson regression with endogenous treatment effects

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