Description

\texttt{fmm: truncreg} fits mixtures of truncated linear regression models; see \text{[FMM] fmm} and \text{[R] truncreg} for details.

Quick start

Mixture of two truncated normal distributions of $y$ with truncation from below at 0
\begin{verbatim}
fmm 2: truncreg y, ll(0)
\end{verbatim}

Mixture of two truncated regression models of $y$ on $x_1$ and $x_2$ with truncation from below at 0
\begin{verbatim}
fmm 2: truncreg y x1 x2, ll(0)
\end{verbatim}

As above, but where \texttt{lower} is a variable containing the truncation point for each observation
\begin{verbatim}
fmm 2: truncreg y x1 x2, ll(lower)
\end{verbatim}

With class probabilities depending on $z_1$ and $z_2$
\begin{verbatim}
fmm 2, lcprob(z1 z2): truncreg y x1 x2, ll(0)
\end{verbatim}

With robust standard errors
\begin{verbatim}
fmm 2, vce(robust): truncreg y x1 x2, ll(0)
\end{verbatim}

Constrain coefficients on $x_1$ and $x_2$ to be equal across classes
\begin{verbatim}
fmm 2, lcinvariant(coef): truncreg y x1 x2, ll(0)
\end{verbatim}

Menu

Statistics $>$ FMM (finite mixture models) $>$ Continuous outcomes $>$ Truncated regression
Syntax

Basic syntax

   fmm # : truncreg depvar [indepvars] [, options]

Full syntax

   fmm # [ if ] [ in ] [ weight ] [, fmmopts] : truncreg depvar [indepvars] [, options]

where # specifies the number of class models.

<table>
<thead>
<tr>
<th>options</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>noconstant</td>
<td>suppress the constant term</td>
</tr>
<tr>
<td>ll(varname</td>
<td>#)</td>
</tr>
<tr>
<td>ul(varname</td>
<td>#)</td>
</tr>
<tr>
<td>offset(varname)</td>
<td>include varname in model with coefficient constrained to 1</td>
</tr>
</tbody>
</table>

indepvars may contain factor variables; see [U] 11.4.3 Factor variables.
depvar and indepvars may contain time-series operators; see [U] 11.4.4 Time-series varlists.

For a detailed description of options, see Options in [R] truncreg.
fmmopts | Description
---|---
Model
\texttt{lcinvariant}(pclassname) | specify parameters that are equal across classes; default is \texttt{lcinvariant}(none)
\texttt{lclprob}(varlist) | specify independent variables for class probabilities
\texttt{lclabel}(name) | name of the categorical latent variable; default is \texttt{lclabel(Class)}
\texttt{lbase}(#) | base latent class
\texttt{constraints}(constraints) | apply specified linear constraints
SE/Robust
\texttt{vce}(vcetype) | \texttt{vcetype} may be \texttt{oim}, \texttt{robust}, or \texttt{cluster clustvar}
Reporting
\texttt{level}(#) | set confidence level; default is \texttt{level(95)}
\texttt{nocnsreport} | do not display constraints
\texttt{noheader} | do not display header above parameter table
\texttt{nodvheader} | do not display dependent variables information in the header
\texttt{notable} | do not display parameter table
\texttt{display_options} | control columns and column formats, row spacing, line width, display of omitted variables and base and empty cells, and factor-variable labeling
Maximization
\texttt{maximize_options} | control the maximization process
\texttt{startvalues}(svmethod) | method for obtaining starting values; default is \texttt{startvalues(factor)}
\texttt{emopts}(maxopts) | control \texttt{EM} algorithm for improved starting values
\texttt{noestimate} | do not fit the model; show starting values instead
\texttt{collinear} | keep collinear variables
\texttt{coeflegend} | display legend instead of statistics
\texttt{varlist} may contain factor variables; see [U] 11.4.3 Factor variables.
by, \texttt{statsby}, and \texttt{svy} are allowed; see [U] 11.1.10 Prefix commands.
\texttt{vce()} \texttt{vce()} and weights are not allowed with the \texttt{svy} prefix; see [SVY] \texttt{svy}.
\texttt{fweight}s, \texttt{iweight}s, and \texttt{pweight}s are allowed; see [U] 11.1.6 weight.
\texttt{coeflegend} does not appear in the dialog box.
See [U] 20 Estimation and postestimation commands for more capabilities of estimation commands.
For a detailed description of \texttt{fmmopts}, see Options in [FMM] \texttt{fmm}.

\texttt{pclassname} | Description
---|---
\texttt{cons} | intercepts and cutpoints
\texttt{coef} | fixed coefficients
\texttt{errvar} | covariances of errors
\texttt{scale} | scaling parameters
all | all the above
none | none of the above; the default
Remarks and examples

For a general introduction to finite mixture models, see [FMM] fmm intro. For general information about truncated regression, see [R] truncreg. For examples using fmm, see examples in Contents.

Stored results

See Stored results in [FMM] fmm.

Methods and formulas

See Methods and formulas in [FMM] fmm.

Also see

[FMM] fmm — Finite mixture models using the fmm prefix
[FMM] fmm intro — Introduction to finite mixture models
[FMM] fmm postestimation — Postestimation tools for fmm
[FMM] Glossary
[R] truncreg — Truncated regression
[SVY] svy estimation — Estimation commands for survey data