Title

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fmm: intreg — Finite mixtures of interval regression models

Description

`fmm: intreg` fits mixtures of interval regression models; see [FMM] **fmm** and [R] **intreg** for details.

Quick start

Mixture of two interval regressions on `x1` of the interval-measured dependent variable with lower endpoint `y_lower` and upper endpoint `y_upper`

```
fmm 2: intreg y_lower y_upper x1
```

Same as above, but with class probabilities depending on `z1` and `z2`

```
fmm 2, lcprob(z1 z2): intreg y_lower y_upper x1
```

With robust standard errors

```
fmm 2, vce(robust): intreg y_lower y_upper x1
```

Constrain coefficients on `x1` to be equal across classes

```
fmm 2, lcinvariant(coef): intreg y_lower y_upper x1
```

Menu

Statistics > FMM (finite mixture models) > Continuous outcomes > Interval regression

Syntax

Basic syntax

`fmm` # `: intreg` *depvar*$_{\text{lower}}$ *depvar*$_{\text{upper}}$ [*indepvars*] [, *options*]

Full syntax

`fmm` # [*if*] [*in*] [*weight*] [, *fmmopts*]:

`intreg` *depvar*$_{\text{lower}}$ *depvar*$_{\text{upper}}$ [*indepvars*] [, *options*]

where # specifies the number of class models.

The values in *depvar*$_{\text{lower}}$ and *depvar*$_{\text{upper}}$ should have the following form:

Type of data		*depvar*$_{\text{lower}}$	*depvar*$_{\text{upper}}$
point data	$a = [\,a, a\,]$	a	a
interval data	$[\,a, b\,]$	a	b
left-censored data	$(\,-\infty, b\,]$	.	b
right-censored data	$[\,a, +\infty\,)$	a	.
missing		.	.

options	Description
Model	
`noconstant`	suppress the constant term
`offset(`*varname*`)`	include *varname* in model with coefficient constrained to 1

indepvars may contain factor variables; see **[U] 11.4.3 Factor variables**.

depvar$_{\text{lower}}$, *depvar*$_{\text{upper}}$, 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] intreg**.

fmmopts	Description
Model	
lcinvariant(*pclassname*)	specify parameters that are equal across classes; default is lcinvariant(none)
lcprob(*varlist*)	specify independent variables for class probabilities
lclabel(*name*)	name of the categorical latent variable; default is lclabel(Class)
lcbase(*#*)	base latent class
constraints(*constraints*)	apply specified linear constraints
SE/Robust	
vce(*vcetype*)	*vcetype* may be oim, opg, robust, or cluster *clustvar*
Reporting	
level(*#*)	set confidence level; default is level(95)
nocnsreport	do not display constraints
noheader	do not display header above parameter table
nodvheader	do not display dependent variables information in the header
notable	do not display parameter table
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	
maximize_options	control the maximization process
startvalues(*svmethod*)	method for obtaining starting values; default is startvalues(factor)
emopts(*maxopts*)	control EM algorithm for improved starting values
noestimate	do not fit the model; show starting values instead
collinear	keep collinear variables
coeflegend	display legend instead of statistics

varlist may contain factor variables; see [U] **11.4.3 Factor variables**.

by, collect, statsby, and svy are allowed; see [U] **11.1.10 Prefix commands**.

vce() and weights are not allowed with the svy prefix; see [SVY] **svy**.

fweights, iweights, and pweights are allowed; see [U] **11.1.6 weight**.

collinear and coeflegend do not appear in the dialog box.

See [U] **20 Estimation and postestimation commands** for more capabilities of estimation commands.

For a detailed description of *fmmopts*, see *Options* in [FMM] **fmm**.

pclassname	Description
cons	intercepts and cutpoints
coef	fixed coefficients
errvar	covariances of errors
scale	scaling parameters
all	all the above
none	none of the above; the default

Remarks and examples

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For a general introduction to finite mixture models, see [FMM] **fmm intro**. For general information about interval regression, see [R] **intreg**. 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] **intreg** — Interval regression

[SVY] **svy estimation** — Estimation commands for survey data

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