

[Description](#)[Remarks and examples](#)[Quick start](#)[Stored results](#)[Menu](#)[Methods and formulas](#)[Syntax](#)[Also see](#)[Options](#)

Description

`fmm: pointmass` is a degenerate distribution that takes on a single integer value with probability one. This distribution cannot be used by itself and is always combined with other `fmm` distributions, often to model zero-inflated outcomes.

Quick start

Zero-inflated Poisson regression of y on x_1 and x_2

```
fmm : (pointmass y) (poisson y x1 x2)
```

Same as above, but add predictors w_1 and w_2 to model the pointmass class probability

```
fmm : (pointmass y, lcprob(w1 w2)) (poisson y x1 x2)
```

Ordered logistic regression of y on x_1 and x_2 with inflation at 1

```
fmm : (pointmass y, value(1)) (ologit y x1 x2)
```

Menu

Statistics > FMM (finite mixture models) > General estimation and regression

Syntax

```
fmm [if] [in] [weight] [, fmmopts] : (pointmass deprvar [, options])
      (component1) [(component2) ...]
```

component is defined in [FMM] **fmm**.

<i>options</i>	Description
<code>lcprob(<i>varlist</i>)</code>	specify independent variables for class probability
<code>value(#)</code>	integer-valued location of the point mass

deprvar may contain time-series operators; see [U] 11.4.4 **Time-series varlists**.

<i>fmmopts</i>	Description
----------------	-------------

Model

<code>lcinvariant(<i>pclassname</i>)</code>	specify parameters that are equal across classes; default is <code>lcinvariant(none)</code>
<code>lcprob(<i>varlist</i>)</code>	specify independent variables for class probabilities
<code>lclabel(<i>name</i>)</code>	name of the categorical latent variable; default is <code>lclabel(Class)</code>
<code>lcbase(#)</code>	base latent class
<code>constraints(<i>constraints</i>)</code>	apply specified linear constraints

SE/Robust

<code>vce(<i>vcetype</i>)</code>	<i>vcetype</i> may be <code>oim</code> , <code>opg</code> , <code>robust</code> , or <code>cluster <i>clustvar</i></code>
---	---

Reporting

<code>level(#)</code>	set confidence level; default is <code>level(95)</code>
<code>nocnsreport</code>	do not display constraints
<code>noheader</code>	do not display header above parameter table
<code>nodvheader</code>	do not display dependent variables information in the header
<code>notable</code>	do not display parameter table
<code>display_<i>options</i></code>	control columns and column formats, row spacing, line width, display of omitted variables and base and empty cells, and factor-variable labeling

Maximization

<code>maximize_<i>options</i></code>	control the maximization process
<code>startvalues(<i>svmethod</i>)</code>	method for obtaining starting values; default is <code>startvalues(factor)</code>
<code>emopts(<i>maxopts</i>)</code>	control EM algorithm for improved starting values
<code>noestimate</code>	do not fit the model; show starting values instead
<code>collinear</code>	keep collinear variables
<code>coeflegend</code>	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](#).

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

Options

`lcprob(varlist)` specifies that the linear prediction for belonging to the point mass component includes the variables in *varlist*. `lcinvariant()` has no effect on these parameters.

`value(#)` specifies the value of *depvar* at which the latent class has a singular point mass. The default is `value(0)`. Only integer values are allowed for `#`.

Remarks and examples

For a general introduction to finite mixture models, see [FMM] [fmm intro](#). See [FMM] [Example 3](#) where `pointmass` is used to fit a zero-inflated Poisson model. See [FMM] [Example 4](#) where `pointmass` is used to fit a mixture cure model to survival data. Other examples are available; 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] **Example 3** — Zero-inflated models

[FMM] **Example 4** — Mixture cure models for survival data

[FMM] **Glossary**

[R] **zinb** — Zero-inflated negative binomial regression

[R] **zioprobit** — Zero-inflated ordered probit regression

[R] **zip** — Zero-inflated Poisson regression

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

Stata, Stata Press, Mata, NetCourse, and NetCourseNow are registered trademarks of StataCorp LLC. Stata and Stata Press are registered trademarks with the World Intellectual Property Organization of the United Nations. StataNow is a trademark of StataCorp LLC. Other brand and product names are registered trademarks or trademarks of their respective companies. Copyright © 1985–2025 StataCorp LLC, College Station, TX, USA. All rights reserved.



For suggested citations, see the FAQ on [citing Stata documentation](#).