

Estimation — Estimation commands for use with mi estimate

[Description](#) [Also see](#)

Description

Multiple-imputation data analysis in Stata is similar to standard data analysis. The standard syntax applies, but you need to remember the following for MI data analysis:

1. The data must be declared as `mi` data.

If you already have multiply imputed data (saved in Stata format), use `mi import` to import it into `mi`; see [\[MI\] mi import](#).

If you do not have multiply imputed data, use `mi set` (see [\[MI\] mi set](#)) to declare your original data to be `mi` data and use `mi impute` (see [\[MI\] mi impute](#)) to fill in missing values.

2. After you have declared `mi` data, commands such as `svyset`, `stset`, and `xtset` cannot be used. Instead use `mi svyset` to declare survey data, use `mi stset` to declare survival data, and use `mi xtset` to declare panel data. See [\[MI\] mi XXXset](#).
3. Prefix the estimation commands with `mi estimate:` (see [\[MI\] mi estimate](#)).

The following estimation commands support the `mi estimate` prefix.

Command	Entry	Description
Linear regression models		
<code>regress</code>	[R] regress	Linear regression
<code>cnsreg</code>	[R] cnsreg	Constrained linear regression
<code>mvreg</code>	[MV] mvreg	Multivariate regression
Binary-response regression models		
<code>logistic</code>	[R] logistic	Logistic regression, reporting odds ratios
<code>logit</code>	[R] logit	Logistic regression, reporting coefficients
<code>probit</code>	[R] probit	Probit regression
<code>cloglog</code>	[R] cloglog	Complementary log–log regression
<code>binreg</code>	[R] binreg	GLM for the binomial family
Count-response regression models		
<code>poisson</code>	[R] poisson	Poisson regression
<code>nbreg</code>	[R] nbreg	Negative binomial regression
<code>gnbreg</code>	[R] nbgreg	Generalized negative binomial regression
Ordinal-response regression models		
<code>ologit</code>	[R] ologit	Ordered logistic regression
<code>oprobit</code>	[R] oprobit	Ordered probit regression
Categorical-response regression models		
<code>mlogit</code>	[R] mlogit	Multinomial (polytomous) logistic regression
<code>mprobit</code>	[R] mprobit	Multinomial probit regression
<code>clogit</code>	[R] clogit	Conditional (fixed-effects) logistic regression

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Fractional-response regression models

`fracreg` [R] **fracreg** Fractional response regression

Quantile regression models

`qreg` [R] **qreg** Quantile regression
`iqreg` [R] **iqreg** Interquantile range regression
`sreg` [R] **qreg** Simultaneous-quantile regression
`bsqreg` [R] **qreg** Bootstrapped quantile regression

Survival regression models

`stcox` [ST] **stcox** Cox proportional hazards model
`streg` [ST] **streg** Parametric survival models
`stcrreg` [ST] **stcrreg** Competing-risks regression

Other regression models

`glm` [R] **glm** Generalized linear models
`areg` [R] **areg** Linear regression with many indicator variables
`rreg` [R] **rreg** Robust regression
`truncreg` [R] **truncreg** Truncated regression

Descriptive statistics

`mean` [R] **mean** Estimate means
`proportion` [R] **proportion** Estimate proportions
`ratio` [R] **ratio** Estimate ratios
`total` [R] **total** Estimate totals

Panel-data models

`xtreg` [XT] **xtreg** Fixed-, between- and random-effects, and population-averaged linear models
`xtrc` [XT] **xtrc** Random-coefficients model
`xtlogit` [XT] **xtlogit** Fixed-effects, random-effects, and population-averaged logit models
`xtprobit` [XT] **xtprobit** Random-effects and population-averaged probit models
`xtcloglog` [XT] **xtcloglog** Random-effects and population-averaged cloglog models
`xtpoisson` [XT] **xtpoisson** Fixed-effects, random-effects, and population-averaged Poisson models
`xtnbreg` [XT] **xtnbreg** Fixed-effects, random-effects, and population-averaged negative binomial models
`xtgee` [XT] **xtgee** GEE population-averaged panel-data models

Multilevel mixed-effects models

`mixed` [ME] **mixed** Multilevel mixed-effects linear regression

Survey regression models

`svy:` [SVY] **svy** Estimation commands for survey data (excluding commands that are not listed above)

Only Taylor-linearized survey variance estimation is supported with `svy:`.

Also see

- [MI] [mi estimate](#) — Estimation using multiple imputations
- [MI] [mi estimate postestimation](#) — Postestimation tools for mi estimate
- [MI] [mi import](#) — Import data into mi
- [MI] [mi impute](#) — Impute missing values
- [MI] [mi set](#) — Declare multiple-imputation data
- [MI] [Workflow](#) — Suggested workflow
- [MI] [Intro](#) — Introduction to mi
- [MI] [Intro substantive](#) — Introduction to multiple-imputation analysis
- [MI] [Glossary](#)

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