

**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>	<a href="#">[R] regress</a>	Linear regression
<code>cnsreg</code>	<a href="#">[R] cnsreg</a>	Constrained linear regression
<code>mvreg</code>	<a href="#">[MV] mvreg</a>	Multivariate regression
Binary-response regression models		
<code>logistic</code>	<a href="#">[R] logistic</a>	Logistic regression, reporting odds ratios
<code>logit</code>	<a href="#">[R] logit</a>	Logistic regression, reporting coefficients
<code>probit</code>	<a href="#">[R] probit</a>	Probit regression
<code>cloglog</code>	<a href="#">[R] cloglog</a>	Complementary log-log regression
<code>binreg</code>	<a href="#">[R] binreg</a>	GLM for the binomial family
Count-response regression models		
<code>poisson</code>	<a href="#">[R] poisson</a>	Poisson regression
<code>nbreg</code>	<a href="#">[R] nbreg</a>	Negative binomial regression
<code>gnbreg</code>	<a href="#">[R] nbreg</a>	Generalized negative binomial regression
Ordinal-response regression models		
<code>ologit</code>	<a href="#">[R] ologit</a>	Ordered logistic regression
<code>oprobit</code>	<a href="#">[R] oprobit</a>	Ordered probit regression
Categorical-response regression models		
<code>mlogit</code>	<a href="#">[R] mlogit</a>	Multinomial (polytomous) logistic regression
<code>mprobit</code>	<a href="#">[R] mprobit</a>	Multinomial probit regression
<code>clogit</code>	<a href="#">[R] clogit</a>	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  
`sqreg` [R] [sqreg](#) Simultaneous-quantile regression  
`bsqreg` [R] [bsqreg](#) 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 a large dummy-variable set  
`rreg` [R] [rreg](#) Robust regression  
`cpoisson` [R] [cpoisson](#) Censored Poisson 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 regression  
`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](#) Fit population-averaged panel-data models by using GEE

### Multilevel mixed-effects models

`meqrlogit` [ME] [meqrlogit](#) Multilevel mixed-effects logistic regression (QR decomposition)  
`meqrpoisson` [ME] [meqrpoisson](#) Multilevel mixed-effects Poisson regression (QR decomposition)  
`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)

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## 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](#)