Title

estimation — Estimation commands for use with mi estimate

Description

Multiple-imputation data analysis in Stata is similar to the 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. If you have complex data that are not declared as `mi` data, use `mi svyset` to declare survey data (see [MI] **mi svyset**), use `mi stset` to declare survival data (see [MI] **mi stset**), and use `mi xtset` to declare panel data (see [MI] **mi xtset**).

3. Prefix the estimation commands with `mi estimate:` (see [MI] **mi estimate**).

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

command	entry	description
Linear regression models		
`regress`	[R] **regress**	Linear regression
`cnsreg`	[R] **cnsreg**	Constrained linear regression
`mvreg`	[R] **mvreg**	Multivariate regression
Binary-response regression models		
`logistic`	[R] **logistic**	Logistic regression, reporting odds ratios
`logit`	[R] **logit**	Logistic regression, reporting coefficients
`probit`	[R] **probit**	Probit regression
`cloglog`	[R] **cloglog**	Complementary log-log regression
`binreg`	[R] **binreg**	GLM for the binomial family
Count-response regression models		
`poisson`	[R] **poisson**	Poisson regression
`nbreg`	[R] **nbreg**	Negative binomial regression
`gnbreg`	[R] **nbreg**	Generalized negative binomial regression
Ordinal-response regression models		
`ologit`	[R] **ologit**	Ordered logistic regression
`oprobit`	[R] **oprobit**	Ordered probit regression
Categorical-response regression models		
`mlogit`	[R] **mlogit**	Multinomial (polytomous) logistic regression
`mprobit`	[R] **mprobit**	Multinomial probit regression
`clogit`	[R] **clogit**	Conditional (fixed-effects) logistic regression
Quantile regression models		
`qreg`	[R] **qreg**	Quantile regression
`iqreg`	[R] **qreg**	Interquantile range regression
`sqreg`	[R] **qreg**	Simultaneous-quantile regression
`bsqreg`	[R] **qreg**	Quantile regression with bootstrap standard errors
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
`truncreg`	[R] **truncreg**	Truncated regression
Descriptive statistics		
`mean`	[R] **mean**	Estimate means
`proportion`	[R] **proportion**	Estimate proportions
`ratio`	[R] **ratio**	Estimate ratios

Panel-data models		
`xtreg`	[XT] **xtreg**	Fixed-, between- and random-effects, and population-averaged linear models
`xtmixed`	[XT] **xtmixed**	Multilevel mixed-effects linear regression
`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
`xtmelogit`	[XT] **xtmelogit**	Multilevel mixed-effects logistic regression
`xtmepoisson`	[XT] **xtmepoisson**	Multilevel mixed-effects Poisson regression
`xtgee`	[XT] **xtgee**	Fit population-averaged panel-data models by using GEE
Survey regression models		
`svy:`	[SVY] **svy**	Estimation commands for survey data (excluding commands that are not listed above)

Also see

[MI] **mi estimate** — Estimation using multiple imputations

[MI] **mi estimate postestimation** — Postestimation tools for mi estimate

[MI] **mi set** — Declare multiple-imputation data

[MI] **mi import** — Import data into mi

[MI] **mi impute** — Impute missing values

[MI] **workflow** — Suggested workflow

[MI] **intro substantive** — Introduction to multiple-imputation analysis

[MI] **intro** — Introduction to mi

[MI] **Glossary**