Title

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Bayesian estimation — Bayesian estimation commands

Description Video examples Also see

Description

Bayesian estimation in Stata is similar to standard estimation—simply prefix the estimation commands with `bayes:` (see [BAYES] **bayes**). You can also refer to [BAYES] **bayesmh** and [BAYES] **bayesmh evaluators** for fitting more general Bayesian models.

The following estimation commands support the `bayes` prefix.

Command	Entry	Description
Linear regression models		
`regress`	[BAYES] **bayes: regress**	Linear regression
`hetregress`	[BAYES] **bayes: hetregress**	Heteroskedastic linear regression
`tobit`	[BAYES] **bayes: tobit**	Tobit regression
`intreg`	[BAYES] **bayes: intreg**	Interval regression
`truncreg`	[BAYES] **bayes: truncreg**	Truncated regression
`mvreg`	[BAYES] **bayes: mvreg**	Multivariate regression
Binary-response regression models		
`logistic`	[BAYES] **bayes: logistic**	Logistic regression, reporting odds ratios
`logit`	[BAYES] **bayes: logit**	Logistic regression, reporting coefficients
`probit`	[BAYES] **bayes: probit**	Probit regression
`cloglog`	[BAYES] **bayes: cloglog**	Complementary log–log regression
`hetprobit`	[BAYES] **bayes: hetprobit**	Heteroskedastic probit regression
`binreg`	[BAYES] **bayes: binreg**	GLM for the binomial family
`biprobit`	[BAYES] **bayes: biprobit**	Bivariate probit regression
Ordinal-response regression models		
`ologit`	[BAYES] **bayes: ologit**	Ordered logistic regression
`oprobit`	[BAYES] **bayes: oprobit**	Ordered probit regression
`hetoprobit`	[BAYES] **bayes: hetoprobit**	Heteroskedastic ordered probit regression
`ziologit`	[BAYES] **bayes: ziologit**	Zero-inflated ordered logit regression
`zioprobit`	[BAYES] **bayes: zioprobit**	Zero-inflated ordered probit regression
Categorical-response regression models		
`mlogit`	[BAYES] **bayes: mlogit**	Multinomial (polytomous) logistic regression
`mprobit`	[BAYES] **bayes: mprobit**	Multinomial probit regression
`clogit`	[BAYES] **bayes: clogit**	Conditional logistic regression

Count-response regression models

poisson	[BAYES] **bayes: poisson**	Poisson regression
nbreg	[BAYES] **bayes: nbreg**	Negative binomial regression
gnbreg	[BAYES] **bayes: gnbreg**	Generalized negative binomial regression
tpoisson	[BAYES] **bayes: tpoisson**	Truncated Poisson regression
tnbreg	[BAYES] **bayes: tnbreg**	Truncated negative binomial regression
zip	[BAYES] **bayes: zip**	Zero-inflated Poisson regression
zinb	[BAYES] **bayes: zinb**	Zero-inflated negative binomial regression

Generalized linear models

glm	[BAYES] **bayes: glm**	Generalized linear models

Fractional-response regression models

fracreg	[BAYES] **bayes: fracreg**	Fractional response regression
betareg	[BAYES] **bayes: betareg**	Beta regression

Survival regression models

streg	[BAYES] **bayes: streg**	Parametric survival models

Sample-selection regression models

heckman	[BAYES] **bayes: heckman**	Heckman selection model
heckprobit	[BAYES] **bayes: heckprobit**	Probit regression with sample selection
heckoprobit	[BAYES] **bayes: heckoprobit**	Ordered probit model with sample selection

Longitudinal/panel-data regression models

xtreg	[BAYES] **bayes: xtreg**	Random-effects linear regression
xtlogit	[BAYES] **bayes: xtlogit**	Random-effects logit regression
xtprobit	[BAYES] **bayes: xtprobit**	Random-effects probit regression
xtologit	[BAYES] **bayes: xtologit**	Random-effects ordered logit regression
xtoprobit	[BAYES] **bayes: xtoprobit**	Random-effects ordered probit regression
xtmlogit	[BAYES] **bayes: xtmlogit**	Random-effects multinomial logit regression
xtpoisson	[BAYES] **bayes: xtpoisson**	Random-effects Poisson regression
xtnbreg	[BAYES] **bayes: xtnbreg**	Random-effects negative binomial regression

Multilevel regression models

mixed	[BAYES] **bayes: mixed**	Multilevel linear regression
metobit	[BAYES] **bayes: metobit**	Multilevel tobit regression
meintreg	[BAYES] **bayes: meintreg**	Multilevel interval regression
melogit	[BAYES] **bayes: melogit**	Multilevel logistic regression
meprobit	[BAYES] **bayes: meprobit**	Multilevel probit regression
mecloglog	[BAYES] **bayes: mecloglog**	Multilevel complementary log–log regression
meologit	[BAYES] **bayes: meologit**	Multilevel ordered logistic regression
meoprobit	[BAYES] **bayes: meoprobit**	Multilevel ordered probit regression
mepoisson	[BAYES] **bayes: mepoisson**	Multilevel Poisson regression
menbreg	[BAYES] **bayes: menbreg**	Multilevel negative binomial regression
meglm	[BAYES] **bayes: meglm**	Multilevel generalized linear model
mestreg	[BAYES] **bayes: mestreg**	Multilevel parametric survival regression

Time-series models		
`var`	[BAYES] **bayes: var**	Vector autoregression
DSGE models		
`dsge`	[BAYES] **bayes: dsge**	Linear DSGE model
`dsgenl`	[BAYES] **bayes: dsgenl**	Nonlinear DSGE model

Video examples

Introduction to Bayesian statistics, part 1: The basic concepts

Introduction to Bayesian statistics, part 2: MCMC and the Metropolis–Hastings algorithm

Also see

[BAYES] **bayes** — Bayesian regression models using the bayes prefix

[BAYES] **bayesmh** — Bayesian models using Metropolis–Hastings algorithm

[BAYES] **bayesmh evaluators** — User-defined evaluators with bayesmh

[BAYES] **Bayesian postestimation** — Postestimation tools for bayesmh and the bayes prefix

[BAYES] **Intro** — Introduction to Bayesian analysis

[BAYES] **Glossary**