Title

> **Intro —** Introduction to choice models manual

Description   Remarks and examples

Description

Choice models (CM) are models for data with outcomes that are choices. The choices are selected by a decision maker, such as a person or a business, from a set of possible alternatives. For instance, we could model choices made by consumers who select a breakfast cereal from several different brands. Or we could model choices made by businesses who chose whether to buy TV, radio, Internet, or newspaper advertising.

Models for choice data come in two varieties—models for discrete choices and models for rank-ordered alternatives. When each individual selects a single alternative, say, he or she purchases one box of cereal, the data are discrete choice data. When each individual ranks the choices, say, he or she orders cereals from most favorite to least favorite, the data are rank-ordered data. Stata has commands for fitting both discrete choice models and rank-ordered models.

This manual documents commands for working with and summarizing choice data, for fitting models, and for interpreting the results of those models.

Remarks and examples

The entries in this manual are organized as follows:

> *Introductions*
> *Declaring and summarizing data*
> *Fitting choice models*
> *Postestimation*
> *Glossary*

Introductions

We recommend that you read the introductions first. In them, you will learn the language of choice models. We will show you how data for choice models are organized and how to explore these data using special summary statistic commands. You will learn about the models available for choice data and what makes each one unique. You will also learn about how to interpret results of these models. Choice models are known for being difficult to interpret, but Stata makes interpretation easy. So we start by telling you all about interpretation in the first introduction.

[CM] **Intro 1**	Interpretation of choice models
[CM] **Intro 2**	Data layout
[CM] **Intro 3**	Descriptive statistics
[CM] **Intro 4**	Estimation commands
[CM] **Intro 5**	Models for discrete choices
[CM] **Intro 6**	Models for rank-ordered alternatives
[CM] **Intro 7**	Models for panel data
[CM] **Intro 8**	Random utility models, assumptions, and estimation

Declaring and summarizing data

Before you fit a model with one of the cm commands, you will need to cmset your data.

[CM] **cmset**   Declare data to be choice model data

You can explore your data using the specialized commands for computing summary statistics for choice model data.

[CM] **cmchoiceset**   Tabulate choice sets
[CM] **cmsample**   Display reasons for sample exclusion
[CM] **cmsummarize**   Summarize variables by chosen alternatives
[CM] **cmtab**   Tabulate chosen alternatives

Fitting choice models

When you are ready to fit one of the choice models to your data, you can find information on syntax, additional examples, and methods and formulas in the entry for the command.

The following commands fit models for discrete choices:

[CM] **cmclogit**   Conditional logit (McFadden's) choice model
[CM] **cmmixlogit**   Mixed logit choice model
[CM] **cmmprobit**   Multinomial probit choice model
[CM] **nlogit**   Nested logit regression

The following commands fit models for rank-ordered alternatives:

[CM] **cmrologit**   Rank-ordered logit choice model
[CM] **cmroprobit**   Rank-ordered probit choice model

The following command fits models for discrete choices in panel data:

[CM] **cmxtmixlogit**   Panel-data mixed logit choice model

Postestimation

After you fit a model, postestimation commands allow you to estimate effects, obtain predictions, perform tests, and more. In particular, the margins command is invaluable in interpreting the results of choice models. The postestimation commands are documented in the following entries:

[CM] **margins**   Adjusted predictions, predictive margins, and
                                        marginal effects

[CM] **cmclogit postestimation**   Postestimation tools for cmclogit
[CM] **cmmixlogit postestimation**   Postestimation tools for cmmixlogit
[CM] **cmmprobit postestimation**   Postestimation tools for cmmprobit
[CM] **cmrologit postestimation**   Postestimation tools for cmrologit
[CM] **cmroprobit postestimation**   Postestimation tools for cmroprobit
[CM] **cmxtmixlogit postestimation**   Postestimation tools for cmxtmixlogit
[CM] **nlogit postestimation**   Postestimation tools for nlogit

Glossary

Finally, we provide a glossary that can be referred to as needed.

[CM] **Glossary**   Glossary

For suggested citations, see the FAQ on citing Stata documentation.