

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
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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] emclgit	Conditional logit (McFadden's) choice model
[CM] emmixlogit	Mixed logit choice model
[CM] emmprobit	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] cmprobit	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] cmlogit postestimation	Postestimation tools for cmlogit
[CM] cmmixlogit postestimation	Postestimation tools for cmmixlogit
[CM] cmmprobit postestimation	Postestimation tools for cmmprobit

[CM] **cmrologit postestimation**

Postestimation tools for cmrologit

[CM] **cmprobit postestimation**

Postestimation tools for cmprobit

[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

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