

Discrete Choice 1.0 for GAUSS 5.0



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Models Include:


- Nested logit model
- Conditional logit model
- Multinomial logit model
- Adjacent category multinomial logit model
- Stereotype multinomial logit model
- Poisson and negative binomial regression, left or right truncated, left or right censored, or zero-inflated models
- Logit, probit models
- Ordered logit, probit models

Requirements:

GAUSS Mathematical & Statistical System (GAUSS) Version 5.0.30+ or the GAUSS Engine/GAUSS Engine Pro/GAUSS Engine for Workgroups/GAUSS Enterprise Engine v5.0.30+

Platforms:

Available for Windows, LINUX, and UNIX: AIX4, Sun Sparc and HPUX11.

 Discrete Choice is a package for the fitting of a variety of models with categorical dependent variables. These models are particularly useful for researchers in the social, behavioral, and biomedical sciences, as well as economics, public choice, education, and marketing.

Output for these models includes full information maximum likelihood estimates with either standard and quasi-maximum likelihood inference. In addition, estimates of marginal effects are computed either as partials of the probabilities with respect to the means of the exogenous variables or optionally as the average partials of the probabilities with respect to the exogenous variables.

• Nested logit model

Is derived from the assumption that residuals have a generalized extreme value distribution and allows for a general pattern of dependence among the responses thus avoiding the IIA problem, i.e., the “independence of irrelevant alternatives.”

• Conditional logit model

Includes both variables that are attributes of the responses as well as, optionally, exogenous variables that are properties of cases.

• Multinomial logit model

Qualitative responses are each modeled with a separate set of regression coefficients.

• Adjacent category multinomial logit model

The log-odds of one category versus the next higher category is linear in the cutpoints and explanatory variables.

• Stereotype multinomial logit model

The coefficients of the regression in each category are linear functions of a reference regression.

• Poisson and negative binomial regression, left or right truncated, left or right censored, or zero-inflated models

Estimates model with Poisson or negative binomial distributed dependent variable. This includes censored models—the dependent variable is not observed but independent variables are available—and truncated models where not even the independent variables are observed. Also, a zero-inflated Poisson or negative binomial model can be estimated where the probability of the zero category is a mixture of a negative binomial consistent probability and an excess probability. The mixture coefficient can be a function of independent variables.

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