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RprobitB: Bayes Estimation of Latent Class Mixed Multinomial Probit Models in R

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Abstract

RprobitB is an R package for Bayes estimation of multinomial probit models on discrete choice panel data. Its strength lies in modeling heterogeneous choices, because it is capable to approximate any underlying mixing distributions through a mixture of normal distributions. The number of latent classes do not need to be prespecified but can be updated within the algorithm on a weight-based strategy. Furthermore, the package provides great numerical stability since it does not require initialization nor approximation or maximization of any likelihood function. In this paper, we show how to estimate (mixed) probit models using **RprobitB** and make a comparison to other R packages that estimate probit models.

Keywords: Mixed multinomial probit models, Bayesian analysis, unobserved heterogeneity, R.

1. Introduction

2. Models and software

Cameron and Trivedi (2013)

3. Illustrations

```
R> x = 1
```

4. Summary and discussion

Computational details

The results in this paper were obtained using R 4.1.0 with the **RprobitB** 0.1.0 package. R itself and all packages used are available from the Comprehensive R Archive Network (CRAN) at https://CRAN.R-project.org/.

Acknowledgments

References

Cameron AC, Trivedi PK (2013). *Regression Analysis of Count Data*. 2nd edition. Cambridge University Press, Cambridge.

A. Installation

B. Command references

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