

# Recent Advances in the Field of Trade Theory and Policy Analysis Using Micro-Level Data

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Cosimo Beverelli

(World Trade Organization)

# Binary dependent variable models in Stata

- Limited dependent variable models in cross section
- Panel data applications

## Limited dependent variable models in cross section

- Stata has two built in models for dealing with binary dependent variables
  - *Probit depvar indepvar1 indepvar2 ..., options*
  - *Logit depvar indepvar1 indepvar2 ..., options*
- Generally speaking, results from these two models are quite close. Except in special cases, there is no general rule to prefer one over the other
- Example: health insurance coverage
  - See “lim\_dep\_var.do” and explanations therein

## Panel data applications

- Probit and logit can both be estimated with random effects:
- To obtain probit and logit results with random effects by “id”:
  - *xtset id*
  - *xtprobit depvar indepvar1 indepvar2 ..., re*
  - *xtlogit depvar indepvar1 indepvar2 ..., re*
- Logit models can be consistently estimated with fixed effects, and should be preferred to probit in panel data settings
- To obtain logit results with fixed effects by “id”:
  - *xtset id*
  - *xtlogit depvar indepvar1 indepvar2 ..., fe*
- The “conditional logit” (clogit) estimation should be preferred, however, because it allows for clustered-robust standard errors
- Example: co-insurance rate and health services
  - See “lim\_dep\_var\_panel.do” and explanations therein