

**Measuring the Inclusiveness of the Philippine Financial System
using Two-level Nested Logit, Multivariate Probit and
Financial Inclusion Index**

By

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Abstract

The study constructed econometric models for financial inclusion based on two-level nested logit (NL) and multivariate probit (MVP). Results show that nesting the correlated outcomes of a polytomous response variable could improve the ability of the multinomial model in predicting an outcome with small choice probability. Simultaneous estimation of multiple correlated discrete response variables produced parameter estimates with lower standard error, and provided more similar predictive performance in training and test datasets. The study also introduced a financial inclusion index (FII) in the Philippines, explored different scenarios in its construction, and assessed its performance against a set of tests based from the economic price index theory.

Keywords: nested logit, multivariate probit, financial inclusion index