

## Abstract

This thesis consists of four papers in applied microeconometrics. Three papers are related to the problem of estimating the wage and income effects on labor supply, while the last paper assesses the performance of feasible specification tests for the Tobit model.

"A Monte Carlo evaluation of labor supply models" analyzes the sources of the large variations in reported wage and income elasticities. A result is that the commonly used maximum-likelihood estimator is sensitive to measurement errors in variables used to construct the individuals' budget sets. An iterative least squares estimator is proposed, which performs well in small samples under several forms of specification and measurement errors.

"Assessing the impact of taxes on female labor supply using a finite mixture approach" expands the standard analysis of female labor supply to permit heterogeneity in preferences by using a finite mixture model. The approach is used to illustrate the labor supply effect of a tax reform, corresponding to the 1983-1992 changes in the Swedish income-tax schedule. A result is an expected reduction in tax revenues of about 17 %. Opposed to the traditional model, the extended model produces results that are consistent with microeconomic theory.

"Labor supply and division bias in wages" is devoted to the problem of division bias in wages. Deriving hourly wage rates as the ratio of annual labor earnings to annual hours of work result in a negative correlation between the wage rate and hours of work. This division bias causes inconsistent estimates of the wage and income elasticities. To propose a simple method to adjust the likelihood function two uncontroversial assumptions are utilized. First, wages are assumed to be stochastic with a known distribution. Second, earnings from market work are assumed to be measured without errors. The suggested correction produces unbiased estimates, while neither complicating the estimation procedure nor relying on inefficient estimators.

"A note on the performance of simple specification tests for the Tobit model" investigates the small sample properties of a selection of specification tests for the Tobit model. Emphasis has been put solely on tests which are computationally tractable. The size of these tests are presented, as well as their ability to detect certain kinds of heteroscedasticity and non-normality in the error term. Empirical economists using the Tobit model are suggested to use a general information matrix (IM) test for potential misspecification of their model.

**Keywords:** *labor supply, Monte Carlo simulation, heterogeneity in preferences, finite mixtures, taxes, tax simulation, measurement error, wage rates, division bias, Tobit model, specification tests.*

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