

Abstract of Research Papers

“Non-linear Engel Curves and the Incidence of Environmental Taxes” (Job Market Paper)

This paper uses two different estimation procedures to calculate the incidence of environmental taxes and compares the results. Both estimation procedures assume non-separability of leisure and so the labor response is included in estimates of household behavior. The first method is the Almost Ideal Demand System (AIDS) model of Deaton and Muellbauer. The AIDS model assumes linear Engel curves and if this assumption is violated then welfare estimates are biased. The Quadratic Almost Ideal Demand System (QUAIDS) model of Banks, Blundell and Lewbel extends the AIDS model to allow for non-linear Engel curves. Households consume three goods - a composite clean good, a composite energy good and leisure. Data on household consumption is from the Consumer Expenditure Survey. The AIDS model finds the energy good and leisure to be substitutes while the QUAIDS model finds no relationship between the two goods. Moreover the AIDS model is found to overestimate the welfare loss of environmental taxes on low-income households but underestimate the welfare loss of environmental taxes on high-income households.

“Optimal Taxation of Energy in the United States”

This paper examines the optimal tax design problem with externalities, and the structure of environmental taxes, within the context of modern optimal tax theory. This issue has been addressed by Cremer, Gahvari and Ladoux (JPubE, 1998) at a theoretical level and by Cremer, Gahvari and Ladoux (JPubE, 2003) numerically for a model calibrated on data from the French economy. The current paper extends those studies in three broad areas. First, we specify preferences that are non-separable in goods and labor supply; second we estimate the model empirically based on the U.S. data; third, we use the estimated model to simulate the optimal environmental taxes and the accompanying income taxes for the U.S. economy.

“Education Savings Bonds and Savings Behavior”

This paper examines the effect of tax incentives on household savings for education. I analyze the impact of the 1990 Education Savings Bond program, which allows for interest earnings to be exempt from income taxes in years where the household incurs a qualified education expense. Using the 1989 and 1992 Survey of Consumer Finance data sets, I use a difference-in-difference methodology to measure how asset levels and asset shares have changed over time for households with college-bound children as opposed to those without. Households without college-bound children do not need to save for education and thus are not affected by the program. The comparison between the savings behavior of the two groups, correcting for individual characteristics, reveals the impact of the Education Savings Bond Program. The results indicate that there is no significant response on the part of households to the tax incentives.