Chapter 1: The Effects of the Earned Income Tax Credit on Child Achievement and Long-Term Educational Attainment (Job Market Paper)

The Earned Income Tax Credit (EITC) is a significant source of government assistance to low income families. Total outlay reached over $50 billion in 2008, with more than 97 percent of aid received by families with children (Internal Revenue Service 2011). Despite its size and pro-child goals, relatively little is known about how the EITC affects children directly. Until recently, studies focused only on indirect measures of child well-being such as poverty, parental labor supply, marriage, fertility, and consumption. This study directly links EITC receipt throughout all ages of childhood to both contemporaneous achievement and long-run educational attainment. I take advantage of both Federal tax code changes and state EITC adoptions, which result in large variation in EITC generosity across state, time, and family size. Using the 1979 National Longitudinal Survey of Youth (NLSY), I find that EITC expansions improve both contemporaneous and long-run educational outcomes of children. An increase in the maximum EITC of $1,000 (2008 dollars) in a given year significantly increases math achievement by about 0.072 nationally normed standard deviations. This change in EITC generosity during childhood also increases the probability of graduating high school or receiving a GED at age 19 by about 2.1 percentage points and increases the probability of completing one or more years of college by age 19 by about 1.4 percentage points. Estimated effects are larger for boys and minority children, and I find evidence that an expansion in the EITC is more effective at improving educational outcomes for children who are younger during the expansion. An increase in the maximum EITC of $1,000 also results in other changes in the household, including an increase in net family income inclusive of EITC and welfare payments of about $888 and an increase in maternal labor force participation.

Chapter 2: An Evaluation of Empirical Bayes’ Estimation of Value-Added Teacher Performance Measures (with Cassandra Guarino, Mark Reckase, Paul Thompson, and Jeff Wooldridge, resubmission invited by the Journal of Educational and Behavioral Statistics)

Empirical Bayes’ (EB) estimation is a widely used procedure to calculate teacher value-added. It is primarily viewed as a way to make imprecise estimates more reliable. In this paper we review the theory of EB estimation and use simulated data to study its ability to properly rank teachers. We compare the performance of EB estimators with that of other widely used value-added estimators under different teacher assignment scenarios. We find that, although EB estimators generally perform well under random assignment of teachers to classrooms, their performance generally suffers under non-random teacher assignment.
Under nonrandom assignment, estimators that explicitly (if imperfectly) control for the teacher assignment mechanism perform the best out of all the estimators we examine. We also find that shrinking the estimates, as in EB estimation, does not itself substantially boost performance.

Chapter 3: Income, Labor Supply, and Marriage Dissolution

There are many competing theories on how income might affect the likelihood of divorce. Family income itself likely reduces the risk of divorce, as it results in a more stable economic environment with less stress (pure income effect). However, when the resources and labor supply of partners are considered separately, the predictions aren’t as clear. Becker’s model of marriage stability relies on specialization and trade of both partners – That is, the husband typically specializes in labor market activities and the wife in home activities. When women have an increase in resources or labor market opportunities, this can destabilize marriage since the partners are no longer as reliant on one another. An increase in economic resources might be particularly important for low income women, as this could allow them to leave marriages they would not have otherwise due to economic constraints. A competing, more modern theory is that both men and women now expect that both partners contribute financially. In this view, a working wife would be a more attractive partner and contribute to marriage stability. Apart from no clear predictions on the direction of the effect, the endogeneity of income creates challenges for estimating causal impacts on divorce. Couples with higher income might also have other unobservable characteristics which make them more (or less) able to make marriage last. Also, couples might change economic resources in response to an increased possibility of divorce. Using exogenous variation in family income resulting from expansions in the EITC, I estimate how family income affects marriage dissolution for low income respondents of the NLSY. Early results suggest that an increase in family income increases the likelihood of future divorce.