

Gray Kimbrough

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Education

Ph.D. Economics, University of North Carolina at Greensboro, May 2016.

Dissertation: "Commuting, Gender, and Military Service: Three Essays in Applied Microeconomics"

M.A. Applied Economics, University of North Carolina at Greensboro, May 2009.

B.S. Biology, Duke University, May 2004.

Employment

Federal Housing Finance Agency, Economist, July 2017–present.

Conducted research focused on potential risks of programs under which the FHLBanks acquire mortgages from member institutions.

Analyzed the models used by the FHLBanks to determine their adequacy, conducting back testing, benchmarking, and other analysis as needed.

Provided analytical and economic expertise in support of examinations of the safety and soundness of the FHLBanks.

ADP, Lead Data Scientist, February 2015–July 2017.

Evaluated the quality, suitability for research, and potential for product development of unique sources of administrative data including payroll, benefits, and time worked.

Led research projects to exploit the advantages of proprietary data, communicating results to business users, clients, and academic researchers.

PwC, Senior Associate, April 2013–February 2015.

Performed validations of a range of complex analytical models, including credit card fraud risk models, loss forecasting models, and asset valuation models.

Constructed Policies and Procedures for the management of model risk for clients in the financial services industry, consistent with OCC 2011-12 and other regulatory guidance.

Freddie Mac, Senior Economic Modeler, July 2011–April 2013.

Championed and led efforts to revamp, re-estimate, and fully document a credit scoring model used to qualify borrowers for loan modification.

Constructed a system to produce regular reports monitoring the performance of two models used to predict credit risk for mortgage servicing applications.

University of North Carolina at Greensboro, Research Assistant, Teaching Assistant, and Instructor, August 2005–July 2011.

Research Interests

Applied Microeconomics, Labor Economics, Household Finance, and Time Use.

Working Papers

1. "What Drives Gender Differences in Commuting? Evidence from the American Time Use Survey" (Job Market Paper, under review)

A wealth of research has shown that the commutes of American women are shorter, both in time and distance, than those of American men. This study takes advantage of a large, nationally representative dataset, the American Time Use Survey (ATUS), to examine gender differences in commute character and time. A method of calculating commuting time that accounts for stops along the journey is applied to ATUS data; analysis of gender differences in the number, type, and length of stops demonstrates the need for this commuting measure. Explanations for women's shorter commutes are reviewed and tested alongside predicted relationships from a simple labor supply model. Controlling for marital status and the presence of children, women are more likely to be accompanied by children for their commute, and women tend to make longer stops than men. Multivariate regression results support two previously proposed explanations for the gender commuting time gap, based on gender differences in wages and types of jobs held. Contrary to the previously proposed Household Responsibility Hypothesis, this analysis provides evidence that greater household responsibility does not explain women's shorter commutes.

2. "Measuring Commuting in the American Time Use Survey" (Revise and resubmit)

Commuting plays an important role in labor supply and daily time use, acting as both a fixed time cost of labor force participation and as a constraint on time for other activities. Research into the relationships between commuting and other activities has been hampered by the lack of suitably comprehensive datasets. Data from the American Time Use Survey (ATUS) can be used to bridge this gap, offering the opportunity to examine commuting behavior and its relationship to demographics, labor market characteristics, and the amount of time spent on other activities. However, many commuting trips are likely misclassified using stock measures of work-related travel in the ATUS. This analysis proposes a method of addressing this shortcoming, adapting a methodology applied to the National Household Transportation Survey (NHTS). Detailed time information in the ATUS and NHTS allows for the comparison of both aggregate commuting measures and the timing of commuting in the two surveys. The analysis is further extended to compare to information in another commonly used dataset, the American Community Survey. This analysis demonstrates the comparability of commuting estimates from the ATUS using the described trip tour methodology.

3. "The Educational Legacy of the Greatest Generation: Paternal Military Service and Baby Boomer Educational Attainment" (under review)

The American "high school movement" of the early 20th century resulted in a dramatic rise in high school graduation rates, a trend that continued into the middle of the century interrupted only by World War II. Previous work has characterized the pre-World War II transformation of secondary education, but less attention has been focused on the continued increase in educational attainment after the War, culminating in Baby Boomer children graduating from high school at a greater rate than any previous generation. High rates of military service and subsequent subsidies for factors shown to be associated with children's educational attainment offer a possible explanation. This paper links Baby Boomer children to their fathers using U.S. Census data to examine this relationship. Through linear regression and propensity score matching, this analysis finds that father's veteran status is associated with greater educational attainment for children, particularly for WWII veterans. Exploiting discontinuities in military service allows for further examination of the exogeneity of this relationship, but does not provide strong evidence that this is due to an exogenous effect of military service and GI Bill subsidies rather than positive selection into military service.

Other Publications

1. "ATUS-Commuting: Stata Code to Calculate Commuting Time in the American Time Use Survey." 2017. *Journal of Open Research Software*, 5(1), p.25. DOI: <http://doi.org/10.5334/jors.162>

Conference Presentations

“Gender and Commuting Behavior: Evidence from the American Time Use Survey.” Time Use Across the Life Course Conference, College Park, MD, June 2016.

“Determinants of Vacation Leave-Taking Among American Workers.” International Association of Time Use Researchers Conference, Ankara, Turkey, August 2015.

“Measuring Commuting in the American Time Use Survey.” Perspectives on Time Use in the U.S. Conference, Washington, DC, June 2014.

“What Drives Gender Differences in Commuting Behavior?” (poster). International Perspectives on Time Use Conference, College Park, MD, June 2011.

“The Educational Legacy of the Greatest Generation: Paternal Military Service and Baby Boomer Educational Attainment.” Economic History Association Annual Meeting, Evanston, IL, Sept. 2010.

“The Spatial Character of the Housing Depression and Recovery in the 1930s” (with Ken Snowden). Economic History Association Annual Meeting, Austin, TX, September 2007.

Teaching

University of North Carolina at Greensboro, Instructor.

Undergraduate-level course: Introductory Microeconomics, Fall 2009, Spring and Fall 2010.

University of North Carolina at Greensboro, Teaching Assistant and Laboratory Instructor.

Graduate-level courses: Data Project in Economics, Applied Microeconomics, and Applied Econometrics, Fall 2007, Spring and Fall 2008.

Professional Activities

Referee for *Demography*, *Journal of Economic and Social Measurement*, and *Southern Economic Journal*.

Research Workshops Attended

Upper Midwest Workshop in Population Studies, Minnesota Population Center, Minneapolis, MN, January 13-15, 2010.

American Time Use Survey Data Extract Builder (ATUS-X) Workshop, Joint Program in Survey Methodology, College Park, MD, June 22-24, 2009.

National Historical Geographical Information System (NHGIS) Workshop, Minnesota Population Center, Minneapolis, MN, June 28-29, 2007.

Integrated Public Use Microdata Series (IPUMS) Workshop, Minnesota Population Center, Minneapolis, MN, June 25-27, 2007.

Grants, Fellowships, & Awards

Wachovia Foundation Fellowship, University of North Carolina at Greensboro, 2007-2008.

Bryan School Academic Excellence Award, University of North Carolina at Greensboro, 2006.

References

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