

# KAMILA SOMMER

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## EDUCATION

- 2004 – 2010      **Georgetown University**, Ph.D. Economics  
Dissertation: “Essays in Quantitative Macroeconomics”  
Advisor:          Jonathan Heathcote  
Defended:        With Honors, February 2010
- 2000 – 2004      **Virginia Union University**, B.S. Mathematics and Computer Science  
Class of 2004 Valedictorian

## EMPLOYMENT

- **Board of Governors, Federal Reserve System. April 2012 – present.**  
Economist in the *Household and Real Estate Finance* section in the Division of Research and Statistics. Monitors trends in the housing and MBS markets; supports FOMC rounds, forecasts and FED’s internal policy research; builds micro-founded macro models of household behavior with applications to topics such as housing, student loans or social security.
- **Fannie Mae. April 2010 – April 2012**  
Economist in the *Underwriting and Pricing* division. Developed proprietary microeconomic models for assessing the mortgage credit risk; with a special focus on the Desktop Underwriter (DU) risk model, DU eligibility criteria and DU risk tolerance.

## ACADEMIC PROFESSIONAL EXPERIENCE

- **Federal Reserve Bank of Minneapolis, Research Department. September 2008 – January 2010**  
Research assistant to Dr. Jonathan Heathcote, Senior Economist. Provided general research support and data analysis of changes in the U.S. wealth and income distribution. Worked with the Survey of Consumer Finances data and various housing data sets.
- **Federal Reserve Bank of Richmond, Regional Department. Spring 2004**  
Research assistant to Dr. Raymond E. Owens, Research Economist and Vice-President. Assisted in design of regional statistical surveys; analyzed and provided reports on researched trends in suburbanization.
- **University of Chicago, National Opinion Research Center (NORC). Summer 2003**  
Research assistant to Dr. Rachel Harter, Senior Statistician and Vice-President. Investigated options for extending capabilities of the NORC’s Small Domain Estimator, an econometric tool producing employment estimates for the Illinois Department of Employment Security.

## ACADEMIC RESEARCH

- **“The Equilibrium Effect of Fundamentals on House Prices and Rents.”**  
*Joint with Paul Sullivan and Randal Verbrugge. (Accepted with minor revisions at the JME.)*
- **“Fertility Choice in a Life Cycle Model with Idiosyncratic Uninsurable Earnings Risk.”**  
*(Submitted)*
- **“Implications of the U.S. Tax Policy for House Prices and Rents”**  
*Joint with Paul Sullivan. (In progress)*
- **“Owner-Occupied Housing in the CPI: Quantitative Theoretical Investigation of Per-Period Cost”**  
*Joint with Paul Sullivan and Timothy Erickson. (In progress)*

## TEACHING EXPERIENCE

**Principal Instructor:** Principles of Macroeconomics (Summer 2007), Short Course in Calculus (Summer 2006 and 2007), 1<sup>st</sup> Course in Calculus (Fall 2005); **Assistant:** Micro Theory (Spring 2008), Econometrics (Spring 2007), International Finance (Fall 2006), Probability and Statistics (Spring 2005), Principles of Macroeconomics (Spring 2004), Principles of Microeconomics (Fall 2004)

#### CONFERENCE AND SEMINAR PRESENTATIONS/DISCUSSIONS

##### *PRESENTER*

Federal Reserve System Conference on Urban Economics, Philadelphia FED, Philadelphia, October 2012  
NBER Summer Institute, Aggregate Implications of Microeconomic Consumption Behavior, Boston, July 2010  
IREBS Conference on Real Estate Economics and Finance, Regensburg, Germany, June 2010  
Midwest Macro Meetings, Michigan State University, East Lansing, April 2010  
Housing Urban Macro Labor Conference (HUML), Chicago FED, Chicago, March 2010  
Federal Reserve Bank of Minneapolis Research Seminar, Minneapolis, September 2008  
Conference on Income Distribution and Family, Kiel, Germany, September 2008  
European Macro Workshop, Glasgow, UK, June 2008  
NBER Summer Institute, Aggregate Implications of Microeconomic Consumption Behavior, Boston, July 2008  
Summer Econometric Society Meetings, Pittsburgh, June 2008  
IZA Summer School in Labor Economics, Munich, Germany, May 2008  
Midwest Macro Meetings, Philadelphia, June 2008  
Georgetown University Macroeconomics Seminar, Washington DC, May 2008

##### *DISCUSSANT*

American Real Estate and Urban Economics Association (AREUEA) Conference, Washington DC, May 2012  
Housing Urban Macro Labor (HUML) Conference, Boston FED, Boston, April 2012  
Housing Urban Macro Labor (HUML) Conference, Atlanta FED, Atlanta, March 2011

#### AWARDS

- Merit-based Georgetown University Teaching and Research Scholarship. 2004 – 2010
- Merit-based Scholarship for GSOEP/CNEF Equivalence Files Workshop, Cornell University. September 2007
- Full Academic Scholarship, Virginia Union University. Fall 2000 – Spring 2004

#### COMPUTER SKILLS

**Computing:** Fortran 90, Fortran 77, Matlab, UNIX. Some computing in Gauss and Mathematica, OpenMP  
**Econometrics:** Stata, SAS, E-Views

#### LANGUAGES

Czech (native), German (fluent)

#### PERSONAL INFORMATION

Maiden name: Vetechova  
Date of birth: May 17, 1981  
Citizenship: Czech Republic  
Visa: G-4 with work permit

#### REFERENCES

##### **Dr. Jonathan Heathcote**

FRB Minneapolis  
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Phone: 612.204.6385

##### **Professor Mark Huggett**

Georgetown University  
E-mail: [mh5@georgetown.edu](mailto:mh5@georgetown.edu)  
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##### **Professor Victor Rios-Rull**

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Phone: 612.625.0941

# KAMILA SOMMER

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## ABSTRACTS:

- **“The Equilibrium Effect of Fundamentals on House Prices and Rents.”**  
*(Joint with Paul Sullivan and Randal Verbrugge)*

This paper studies the joint dynamics of real house prices and rents over the past decade. We build a dynamic general equilibrium stochastic life cycle model of housing tenure choice with fully specified markets for homeownership and rental properties, and endogenous house prices and rents. Houses are modeled as discrete-size durable goods which provide shelter services, confer access to collateralized borrowing, provide sizeable tax advantages, and generate rental income for homeowners who choose to become landlords. Mortgages are available, but home-buyers must satisfy a minimum down payment requirement, and home sales and purchases are subject to lumpy adjustment costs. Lower interest rates, relaxed lending standards, and higher incomes are shown to account for over one-half of the increase in the U.S. house price-rent ratio between 1995 and 2005, and to generate the pattern of rapidly growing house prices, sluggish rents, increasing homeownership, and rising household indebtedness observed in the data.

- **“Fertility Choice in a Life Cycle Model with Idiosyncratic Uninsurable Earnings Risk.”**

The U.S. fertility rate has declined dramatically over the last three decades, at the same time as the mean age at first birth has increased. This paper studies the role of rising earnings uncertainty in explaining these patterns in an Aiyagari-Bewley-Huggett framework augmented to include fertility decisions. Building on Becker and Tomes (1976), I model fertility decisions as sequential, irreversible choices over the number of children, accompanied by parental choices of time and money invested toward improving children's quality. The model is calibrated to replicate cross-sectional patterns of fertility, income, consumption, and saving. I find that young households postpone childbearing when income uncertainty is high, preferring to work and to accumulate more precautionary savings before starting a family. This birth postponement, in turn, reduces the number of births per household. The model indicates that the actual increases in the U.S. idiosyncratic earnings uncertainty as estimated by Meghir and Pistaferri (2004) can explain about one-half of the decline in fertility and one-third of the increase in mean age at first birth in recent decades, while matching all of the increase in the mean age at second birth.

- **“Implications of the U.S. Tax Policy for House Prices and Rents”**  
*(Joint with Paul Sullivan)*

This paper estimates the impact of reducing housing tax preferences (including the mortgage interest deduction) on equilibrium house prices and rents using a dynamic general equilibrium stochastic life cycle model of housing choice. To analyze the effects of housing tax expenditures on the tenure choice and house prices, we build a model with a realistic tax system in which the owner-occupied housing services are tax-exempt and mortgage interest payments, property taxes, and landlord's business costs are tax deductible. We simulate the effect of various tax reform proposals on house prices, rents, and homeownership.

- **“Owner-Occupied Housing in the CPI: Quantitative Theoretical Investigation of Per-Period Cost”**  
*(Joint with Paul Sullivan and Timothy Erickson)*

Durable goods present a major conceptual and practical problem for inflation measurement. Owner-occupied housing is the most important durable good, as it accounts for approximately one-quarter of the U.S. CPI. As a result, choices about how to measure the per-period cost of housing can have a large impact on measures of aggregate inflation. The fundamental problem in incorporating durables into price indexes is that although the market price of a durable good is observed, durables provide services over multiple time periods, so determining the appropriate measure of the per-period cost of a durable for use in a price index is not straightforward. Examples of proposed measures include owner-equivalent rents, various user cost formulas, out-of-pocket expenditures, and the total price of a house. Yet, the relative strengths and weaknesses of measures that are currently being employed by statistical agencies across the world are not well understood. This paper examines the conceptual basis for different measures of the per-period cost of owner-occupied housing, and attempts to discriminate between them using a dynamic equilibrium model of the housing market with endogenously determined house prices and rents. We explore how different measures co-move over time, and how they correlate with a welfare-based measure of the per-period cost of owner-occupied housing.