

Dissertation Abstract: Home Prices and the Macroeconomy

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“Examining the Wealth Effect from Home Price Appreciation” (Job Market Paper, Dissertation Chapters 1 and 2)

Chapter 1: “Predicting the Effects of Age and Mobility on the Marginal Propensity to Consume out of Housing Gains” (*Job Market Paper, Chapter 1*)

Recent home price volatility has fueled speculation about the relationship between windfall changes in home equity and consumption. Many assessments treat housing capital gains as equivalent increases in wealth; however, such treatments ignore the importance of economic housing costs. In this paper, I demonstrate that consideration of housing costs causes the marginal propensity to consume out of housing gains (MPC_H) to differ from the marginal propensity to consume out of wealth (MPC_W), and determine how MPC_H varies with age and expected mobility.

I formulate a life-cycle model in which households treat housing wealth as an illiquid asset. Households face an exogenous hazard of selling their home, realizing capital gains or losses, and purchasing a new quantity of housing. Household age and tenure in the current home are allowed to vary, as are the relative initial price and price appreciation of the future home.

I calibrate the model and derive analytical solutions for MPC_H and MPC_W . The model predicts that MPC_H is generally smaller than MPC_W , and that MPC_H increases with age. MPC_H decreases with the initial price and the relative price appreciation of the future home, and the effect of mobility decreases with expected tenure in the current home. Surprisingly, the magnitude of the predicted effect of age is comparable to the marginal effect of expected mobility for a large fraction of homeowners.

Chapter 2: "Estimating the Effects of Age and Mobility on the Marginal Propensity to Consume out of Housing Gains" (*Job Market Paper, Chapter 2*)

Estimation of the wealth effect from changes in home prices has been the focus of a rapidly growing literature. Despite this attention, there is no consensus as to the magnitude of the housing wealth effect. In this paper, I use an unbalanced panel of data from the Panel Study of Income Dynamics (PSID) to examine the extent to which age and expected mobility affect the marginal propensity to consume out of housing gains. Unlike the aggregate data used by a majority of other papers on the topic, the PSID includes detailed information on wealth stocks and flows, income, and demographic data that allows examination of household-level responses to changes in housing gains.

I represent household consumption and saving behavior with a measure of non-housing “active savings”. Consisting of purchases of assets, net of capital gains, active savings is the portion of current income that is saved, rather than spent. Active saving is calculated using data from the 1984, 1989, 1994, 1999, 2001, and 2003 waves of the PSID. I use a Heckman selection probit procedure on data from 1975 to 2003 to predict the expected value of a future home purchase for each household, and then use the fixed effects estimator to evaluate how age and predicted mobility affect the response of household saving to housing capital gains. Results suggest that age affects household savings behavior in a manner consistent with the model presented

in Chapter 1, with the oldest group of households consuming more out of housing capital gains than young households. I also find that expected mobility can have large effects on the marginal propensity to consume out of housing gains for homeowners of all ages.

Chapter 3: “Transmission of Macro Shocks to Housing Inventories” (joint with Robert Barsky)

This paper examines how macroeconomic shocks, specifically interest rate shocks, are transmitted to the housing market. We develop a model of home buyers and sellers in which sellers use data on comparable sales to set the asking price of their home, and price resetting is a function of both time on market and the last purchase price of the home. Buyers quickly incorporate new information into their bids. The predictions of this model support the empirical observation of asymmetric home price changes: boom markets are marked by rising prices, while declining markets are better characterized by rising inventories than falling prices. We evaluate this model using regional data on housing inventories, prices, and employment in a vector autoregression framework.