Food Insecurity among Older Adults in the U.S.: The Role of Mortgage Borrowing

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Acknowledgement:
This project was supported with a grant from the University of Kentucky Center for Poverty Research through funding by the U.S. Department of Agriculture, Food and Nutrition Service, Contract Number 12319818C0010 (Subcontract No. 3200002185-19-250). The opinions and conclusions expressed herein are solely those of the author(s) and should not be construed as representing the opinions or policies of the UKCPR or any agency of the Federal Government.

Abstract

Housing wealth is the primary source of wealth for many older adults, particularly those with lower incomes, who are more at risk of severe forms of economic hardship such as food insecurity. For housing wealth to directly affect food insecurity, it first must be liquefied. Understanding the role of housing wealth requires careful consideration of home equity and mortgage borrowing. We use panel data from the Health and Retirement Study and instrumental variable linear probability models with household fixed-effects to assess the impact of new mortgage borrowing on food insecurity (N=20,421 household-years). Trend analyses reveal that food insecurity increased from the 2008 recession until 2014, and that new mortgage borrowing peaked prior to the recession. The proportion of older homeowners facing credit constraints is highest for those age 65 to 69 in all years. Regression results show that mortgage borrowing has a substantial short-term effect on food insecurity. Each additional $10,000 borrowed is associated with reduction of food insecurity of 2.19 percentage points. The impact of new mortgage borrowing on food insecurity is distinct from changes in house prices or changes in home equity, neither of which are statistically significant. In simulations, if 2010 mortgage borrowers are granted a reverse mortgage, food insecurity is reduced to 2.3% from the observed rate of 3.6%. Food insecurity is reduced to 1.5% if non-borrowers with debt-to-income mortgage constraints are also granted a reverse mortgage. These results support the importance of access to mortgage borrowing to reduce material hardship late in life. (248 words)

Keywords:
Food insecurity, older adults, housing wealth, mortgage borrowing

Executive Summary

For older adults, food insecurity is particularly stressful. It has been associated with poor physical and mental health, higher health care utilization, and higher mortality, thus consituting an urgent policy issue. Lack of income and wealth are key hindrances to achieving food security. For older adults, heterogeneity in household wealth has been shown to be more important than income in predicting food insecurity. Housing wealth is the primary source of wealth for many older adults, particularly those with lower incomes. In 2018, about 80% of U.S. older adults owned their home and home equity comprised as much as three-quarters of the median net wealth for older households in the lowest income quartile. To access this important source of wealth, borrowing through a mortgage is the predominate mode by which older adults liquefy housing wealth. Newly borrowed funds may be used for consumption or competing expenses, such as medical bills, thereby reducing food insecurity income. However, high levels of existing mortgage debt reduce the ability to be approved for additional borrowing in the future; for example, if older adults encounter a costly health shock. Understanding the relationship between housing wealth, mortgage debt, and food insecurity thus requires careful consideration of home equity as well as mortgage borrowing. This report presents new evidence on the impact of housing wealth on food insecurity for older adults. While prior studies find that owning a home is associated with reduced food insecurity, the mechanisms underlying this relationship are poorly understood.

The objectives of the current study are:

1. Document trends in age-adjusted food insecurity, mortgage debt, and borrowing constraints among older adults from 2000 to 2018.

2. Identify the mechanisms through which financial and housing wealth influences food insecurity, and estimate heterogeneity by race and location of residence.

3. Simulate how policy innovations in access to housing wealth affect food insecurity.

We exploit the panel nature of the Health and Retirement Study (HRS) by using ten biennial survey waves from 2002 to 2018. We limit our sample to homeowners age 65 and older, whose household structure remains intact and who do not move during the study period. Our sample size includes 6,319 households and 20,421 household-years across all waves.

Trends in food insecurity, housing and financial wealth

- Food insecurity rates in our sample were similar among older adult homeowners across age groups from 2000 to 2008, ranging from 2.64 to 4.61%. Food insecurity increased since the 2008 recession, particularly for homeowners age 65 to 69 in our sample, of whom over 6.5% were food insecure in 2018.
- Rates of severe food insecurity in our sample also increased since 2008 for homeowners age 65 to 69, reaching 4.1% in 2018. The rates were between 1% and 2% for the two older age groups during this time period.
- Home equity peaked prior to the 2008 recession and declined until 2012 as house values declined. House values have been recovering in recent years. The frequency of new mortgage borrowing reflected the trend in home equity, while the average amount of mortgage borrowing among borrowers remained relatively flat among older homeowners from 2000 to 2016.
- The proportion of homeowners facing credit constraints through binding loan-to-value ratios was highest for the youngest age group from 2000 to 2016, and increased for all age groups during the 2008 recession until 2012, when the constraints started to relax again.

Mechanisms through which financial and housing wealth influences food insecurity

- An average of 3.3% of older homeowners in our sample experience food insecurity and an average of 1.4% of older homeowners experience severe food insecurity.
- Regression results show that mortgage borrowing has a substantial short-term effect on food insecurity. Each additional $10,000 borrowed is associated with reduction of food insecurity of 2.19 percentage points.
- The impact of new mortgage borrowing on food insecurity is distinct from changes in house prices or changes in home equity, neither of which are statistically significantly associated with food insecurity in the analysis.
- We do not find evidence of a significant relationship between mortgage borrowing and severe food insecurity in our analysis; however, the rate of severe insecurity is lower resulting in less statistical power to detect an effect.

Heterogeneity by race and location of residence

- About 31.5% of food insecure homeowners age 65 and older in our sample are black and 24.2% live in non-metropolitan counties. In comparison, only 10.6% of food secure older homeowners in our sample are black; 21.5% live in non-metropolitan counties.
- Stratified sample regression results indicate that for black older homeowners and older homeowners living in non-metropolitan counties, new mortgage borrowing is not a significant predictor that is associated with food insecurity. However, lack of significant results may be driven by insufficient statistical power, as the black and non-metropolitan subsamples are relatively small. Other reasons for lack of significant effects may include differences in the cost of borrowing or in the types of mortgages that lead to differences in payment terms for these groups.

Simulation of policy innovations in access to housing wealth

- We assign a borrowing amount equal to 50% of 2010 home equity to all 2012 borrowers and to homeowners who are constrained by high debt-to-income ratios and therefore did not borrow in 2012 (borrowed amount was previously $0). Simulations show that borrowing in 2012 for the full sample increases by $9,549 and reduces food insecurity in 2014 by 2.10 percentage points to 1.47%, compared to the predicted baseline.
- Black older homeowners and homeowners in non-metropolitan areas have substantially lower levels of home equity at baseline than white and metropolitan homeowners, reducing their predicted borrowing amount through the simulations and thus the effects of relaxing borrowing constraints on food insecurity.
- The borrowing simulation reduces the predicted rate of food insecurity by 1.84 percentage points for black homeowners (21.40% change in the base rate), compared to 2.14 percentage points for white homeowners (81.06% change in the base rate).
- The simulation reduces the predicted rate of food insecurity by 0.98 percentage points for non-metropolitan homeowners (25.93% change in the base rate), compared to 2.29 percentage points for metropolitan homeowners (65.24% change in the base rate).

In conclusion, our analysis identifies new mortgage borrowing as a mechanism that contributes to the relationship of food insecurity and housing wealth. General house price changes or changes in home equity are not significant predictors of food insecurity in our sample. This result underscores the need to liquefy and consume home equity in order to affect food insecurity. Results indicate that the relationship between mortgage borrowing and food insecurity are not statistically significant for black older homeowners and homeowners who live in non-metropolitan counties. This result could be related to the costs and terms of borrowing being different for these groups, as well as the smaller sample sizes available for these groups of older adults.