



## Property taxes and elderly mobility

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### ABSTRACT

The 2000–2005 housing market boom in the U.S. has caused sharp increases in residential property taxes. Housing-rich but income-poor elderly homeowners often complain about rising tax burdens, and anecdotal evidence suggests that some move to reduce their tax burden. There has been little systematic analysis, however, of the link between property tax levels and the mobility rate of elderly homeowners. This paper investigates this link using household-level panel data from the Health and Retirement Study (HRS) and a newly collected data set on state-provided property tax relief programs. These relief programs generate variation in effective property tax burdens that is not due solely to arguably endogenous local community choices about taxes and expenditure programs. The findings provide evidence suggesting that higher property taxes raise mobility among elderly homeowners. The point estimates from instrumental variable estimation using relief programs to generate instruments suggest that a \$100 increase in annual property taxes is associated with a 0.73 percentage point increase in the 2-year mobility rate for homeowners over the age of 50. This is an 8 percent increase from the baseline 2-year mobility rate of 9 percent. These results are robust to alternative specifications.

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### 1. Introduction

During the late 1990s and early 2000s, the housing market in the United States experienced a remarkable boom. As housing prices increased, property taxes rose significantly in many parts of the country. Increases in property taxes have drawn attention from both the general public and policy makers. For example, in February 2006, the Wall Street Journal reported “Across U.S., Rising Property Taxes Spark Revolts,” and the New York Times wrote “As Property Values Rise, Homeowners Feel Pinch.” The New York state government considered a \$6 billion property tax cut over three years, and Texas issued a \$14.2 billion property tax cut for the biennium. The public and politicians were particularly concerned that elderly homeowners living on fixed incomes would be driven out of their homes because they could no longer afford increasing property taxes. One of the heatedly debated issues during the 2006 midterm election across the country was how to provide property tax relief to elderly homeowners.

Property taxes may affect elderly homeowners’ moving decisions through liquidity constraints. Elderly homeowners typically rely on fixed incomes such as Social Security benefits and pension benefits, and many of them do not have sufficient liquid assets. As a result, rising property taxes may cause elderly homeowners to be liquidity constrained. Anecdotal evidence suggests that many

elderly homeowner have great psychological attachment to their houses and would prefer not to move as long as they can afford it. Significant increases in property taxes, however, may cause elderly homeowners to liquidate their housing wealth, even if they value their homes more than the marginal buyer in the local housing market. In this case, providing property tax relief to these liquidity-constrained elderly homeowners and preventing unwanted moves may be welfare-enhancing. News articles and political debates often refer to liquidity constraints as the base for policy interventions that protect elderly homeowners from rising property taxes.

Alternatively, increasing property taxes may raise mobility rates among elderly homeowners through demand adjustments. Elderly homeowners usually do not have school-aged children living in the house and do not consume school services. Given that half of property tax revenues are used to finance public schools, elderly homeowners may find that the local public services that they receive are not worth the costs. In response, they may decide to adjust their housing consumption bundles and relocate to areas with both fewer public services and lower property taxes. This demand adjustment channel has important implications to state and local fiscal policies. Precisely because elderly homeowners consume fewer public services but expand state and local tax base, they are attractive to state and local governments except when they reach the end of their lives and demand expensive medical care services through Medicaid. For example, Longino and Crown (1989) call the elderly “pure gold,” and Mackey and Carter

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(1994) discuss wide varieties of tax preferences provided by state and local governments to entice elderly homeowners. Estimates of the elasticity of elderly mobility with respect to property taxes will help state and local government design fiscal policies that retain and attract elderly homeowners in their jurisdictions.

Apart from its policy significance, studying property taxes' effect on elderly mobility is also of great economic importance. First, it will provide insights to the incidence question of property taxation. As summarized by *Zodrow (2001)*, the traditional view suggests that property taxes are distortionary and the burden is borne entirely by homeowners. The benefit view, in contrast, argues that property taxes are non-distortionary because they simply pay for the local public services demanded by residents. If we find empirical evidence suggesting that rising property taxes have a large effect on elderly homeowners' moving decisions, then it is unlikely that increases in property taxes are driven by elderly homeowners' demand for more and better local public services.

Second, studying the property tax effect on elderly mobility will enhance our understanding of the life-cycle housing consumption model. The simplest version of the life-cycle model, which assumes away capital market imperfection, transaction costs, bequest motives, and uncertainty, predicts that utility-maximizing agents accumulate wealth while working and deplete wealth after retirement. If elderly homeowners view their housing wealth as a part of retirement savings to be used for general consumption, then we would expect elderly homeowners to trade down and consume their housing wealth after retirement. However, studies including *Feinstein and McFadden (1989)* and *Venti and Wise (1989, 1990, 2001)* find little evidence of downsizing behavior among elderly homeowners in the absence of precipitating shocks such as health decline and loss of spouse. Because residential mobility is directly linked to housing consumption adjustment and downsizing decisions, studying how factors such as property taxes affect elderly mobility may help us build richer models to describe household life-cycle saving and consumption patterns.

Although policy makers have assumed that rising property taxes cause elderly homeowners to move, researchers have provided little empirical evidence of such a link. The empirical question whether property taxes cause elderly homeowners to move is difficult to address for two reasons. First, reliable household-level measures of property tax payments and mobility outcomes are scarce. Hence, many earlier studies use aggregated measures such as property tax per capita and state to state or county to county migration flows. These studies include *Cebula (1974)*, *Clark and Hunter (1992)*, *Dresher (1994)*, *Conway and Houtenville (2001)*, and *Duncombe et al. (2000)*. Second, property taxes are likely to be endogenous to individuals' moving decisions. For example, many local public services are financed through property taxes. Hence, homeowners who pay high property taxes also tend to live in areas with good local public services (e.g. nice parks, low crime rates, and new senior centers). Because the quality and quantity of local public services may be correlated with mobility outcomes and because econometricians cannot measure all aspects of these local public services, studies that fail to instrument for property taxes often suffer from omitted variable bias.

In this paper, I use the 1992–2004 waves of the Health and Retirement Survey (HRS) panel data. This data set has household-level measures of property tax payments and mobility outcomes in addition to extensive information on demographics and socio-economic characteristics. To address the endogeneity problem associated with property taxes, I exploit the variation in state-provided property tax relief programs and use simulated relief benefits to instrument for property tax payments. By construction, these simulated relief benefits contain only the variation in program rules and depend exclusively on state of residence, year,

and age of homeowners. More generous relief programs reduce property tax payments of eligible homeowners, and these state-provided programs are arguably exogenous to individual homeowners' unobserved tendency to move. Therefore, property tax relief benefits can be used as a valid instrument for property taxes in studying elderly mobility.

I find that higher property taxes have a significant impact on elderly homeowners' moving decisions. My central instrumental variable estimates suggest that a \$100 increase in annual property taxes causes the 2-year mobility rate to increase by 0.73 percentage points, which represents an 8 percent increase from a baseline 2-year mobility rate of 9 percent. The results are robust to alternative model specifications. In addition, I find that elderly homeowners respond to rising property taxes by moving to houses with lower property taxes, less expensive houses, and houses with lower effective tax rates. Because of the specific instruments used in this paper, these estimates provide an upper bound of the property tax effect on elderly mobility. They may not be generalized to the average elderly homeowner. Nevertheless, this paper's findings offer indispensable evidence for normative welfare analysis of the impact of property taxes and property tax relief programs on elderly homeowners.

This paper proceeds as follows: the next section outlines the background and reviews previous research on property taxes and elderly mobility. Section 3 then describes the data used in this paper. In Section 4, I explain the empirical strategy that I use to identify the effect of property taxes on elderly mobility. I also show estimation results with robustness checks. The last section concludes and provides directions for future research.

## 2. Background and previous research

Property taxes vary considerably across geographic areas. Much of this variation is due to the variation in local public goods financed through property taxes. The Tiebout hypothesis argues that if moving is costless and if there are a large number of neighborhoods with different tax–service combinations, then every household would always live in their desired neighborhood. Elderly homeowners living in high property tax areas simply enjoy more and better local public services that they value. In reality, however, moving is costly and households do not constantly adjust their housing consumption bundles. Elderly homeowners who moved in a high property tax area twenty years ago no longer benefit from the good public schools as their children have grown up and moved out of the house. Therefore, they may relocate to low-tax and low-service areas in response to higher property taxes.

Economists have long recognized that after one controls for all local characteristics such as public services and local amenities, property taxes should be capitalized into house prices. Studies including *Palmon and Smith (1998)* and *de Bartolomé and Rosenthal (1999)* find compelling empirical evidence of substantial property tax capitalization. However, even full capitalization cannot ensure that property taxes have no impact on elderly homeowners' moving decisions. For example, if elderly homeowners facing higher property tax are more likely to become liquidity constrained, then they would have to move to smaller houses with lower property taxes.

In 2004, property tax collections in the U.S. exceeded \$300 billion. Property taxes are responsible for approximately 72% of all local tax revenues, representing the most important tax revenue source for local governments.<sup>1</sup> The housing market boom of the late 1990s and early 2000s led to significant increases in residential property taxes. *Fig. 1* shows that from 2000 to 2005, median house

<sup>1</sup> See *Bradley (2005)* and *NCSL (2005)*.

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