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Government intervention in the housing market: Who wins, who loses?

Max Floetotto [a], Michael Kirker [b], Johannes Stroebel [c,d,e,*]

[a] McKinsey, Germany
[b] University of Chicago, United States
[c] New York University, United States
[d] CEPR, United Kingdom
[e] NBER, United States

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ABSTRACT

Many U.S. government policies aim to encourage homeownership. We use a general equilibrium model with heterogeneous agents to consider the effects of temporary homebuyer tax credits and the asymmetric tax treatment of owner-occupied and rental housing on prices, quantities, allocations, and welfare. The model suggests that homebuyer tax credits temporarily raise house prices and transaction volumes, but have negative effects on welfare. Removing the asymmetric tax treatment of owner-occupied and rental housing can generate welfare gains for a majority of agents across steady states, but welfare impacts are substantially more varied along the transitions between steady states.

1. Introduction

Increasing homeownership has been a U.S. policy goal for decades, and a number of policies, tax rules, and regulatory efforts are directed at raising the affordability and attractiveness of owner-occupied housing. Mortgage interest rates are subsidized through Fannie Mae, Freddie Mac, and Ginnie Mae. The tax code favors owner-occupied over rental housing by exempting imputed rents on owner-occupied housing from income taxation. Capital gains on real estate are not fully taxed. Moreover, property owners can deduct mortgage interest payments from their taxable income. This is true both for owner-occupiers and for landlords. In addition, the U.S. government recently introduced short-term incentives such as the First-Time Homebuyer Tax Credit to boost house prices and encourage homeownership.

This paper studies the effects of such policy interventions in the housing market on prices, quantities, allocations, and welfare using a general equilibrium model with heterogeneous agents. By considering agents who differ along characteristics such as age and productivity, this model is able to address the question of who wins and who loses from these policies. Our analysis first considers the effects of *temporary* homebuyer tax credits in response to a boom-bust cycle in house prices generated by a shock to downpayment requirements. The model suggests that homebuyer tax credits can support house prices when they are in place. Since such tax credits also have the effect of increasing the housing stock, house prices remain below the levels that would have prevailed without the policy intervention for many years after the removal of the tax credits. The tax credits also have a negative welfare impact for the majority of households, whose tax revenue is used to pay for the credit, but who do not benefit from the temporary increase in house prices.

* Corresponding author at: New York University, Leonard N. Stern School of Business, 44 West 4th Street, New York, NY 10012, United States. Tel.: +1 650 888 3441

E-mail addresses: max.floetotto@alumni.stanford.edu (M. Floetotto), mkirker@uchicago.edu (M. Kirker), johannes.stroebel@nyu.edu (J. Stroebel).

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We also consider the effects of two possible *permanent* changes to current government policies. These changes involve (i) introducing taxes on imputed rents and (ii) removing tax deductions for mortgage interest payments. Such policy changes would end the unequal tax treatment of owner-occupied and rental housing, and are regularly proposed to reform the U.S. housing market and to reduce the fiscal deficit. The effects of these permanent policy changes are first analyzed by comparing stationary equilibria under the alternative policy regimes. Then the analysis is extended to consider changes in welfare during the transition between these stationary equilibria. This allows us to determine which of the current population groups would win, and which would lose, if the U.S. decided to change the policy regime.

When comparing stationary equilibria, removing mortgage interest deductions is welfare-improving for the majority of agents, while taxing imputed rents improves the welfare of slightly less than half of all agents. During the transition to the new steady state, the welfare effects are more varied, and feature fewer winners than in the final steady state. For example, 82% of agents would be better off in a steady state without deductions of mortgage interest payments, due to general equilibrium effects on house prices and an increase in transfers facilitated by higher government revenues. However, only around 66% of agents are better off immediately following the removal of mortgage interest deductibility. This difference is driven by a (negative) overshoot of house prices, which decline by over 3% in the period after the policy change, before recovering to a final level around 1% below the baseline steady state. Similarly, while taxing imputed rents appears to generate aggregate welfare gains when comparing steady states, the significant initial price overshoot suggests that lump-sum taxing all winners and compensating all losers to make all agents indifferent to the policy change would cost significant net resources.

When comparing the two changes to the tax code, these results suggest that a removal of the mortgage interest deduction would be the preferred way of correcting the asymmetry in the tax treatment of the housing market from an aggregate welfare perspective. Fewer agents lose, since house prices fall by less following the policy change, and the aggregate welfare gain is larger. However, the distribution of gains and losses between the two policy changes is also different. While the introduction of a tax on imputed rents primarily hurts the richest agents, who consume the most housing, the removal of mortgage interest deductibility largely harms middle-income agents, who generally have large mortgages.

The implications of government interventions in the housing market have been studied previously (e.g., Gervais, 2002; Chambers et al., 2009; Cho and Francis, 2011; Sommer and Sullivan, 2013). These papers focus on comparing steady states across different policy regimes. We expand on this literature by considering the welfare implications along the transition paths between steady states, which have not previously been analyzed. In comparisons across steady states, the removal of taxes and frictions is generally welfare-improving in most models. However, this is not necessarily the case during the transition to the new steady state. Indeed, our results show that taxing imputed rents appears attractive when comparing steady states, but not when taking into account the transition path, where agents who have optimized their asset holdings at the previous steady state are regularly worse off. For governments optimizing the welfare of agents alive today, these short-run welfare considerations are particularly relevant. Therefore, analyzing the welfare implications along the transition path between steady states can provide important insights into the incentives of governments to adopt changes to tax policies.

Another advantage of analyzing the immediate welfare implications along a transition path is that it allows us to consider the effects of important temporary policy interventions in the housing market, which have not been studied in the prior literature. This would not be possible with a comparison of steady state economies.

The one paper in this literature that considers an explicit transition path between stationary equilibria in a general equilibrium framework is by Kiyotaki et al. (2011). They study the distributional consequences of aggregate shocks through their effect on house prices, but do not model changes to the tax treatment of real estate. Poterba (1984) considers a model of an owner-occupied housing market and analyzes how changes in the expected inflation rate impact equilibrium outcomes. While his model considers dynamics, the absence of heterogeneous agents and a rental market makes it hard to compare the impact on allocations and welfare across different agents.

The remainder of the paper is organized as follows. Section 2 describes the government interventions that are considered in this paper. Sections 3 and 4 discuss the model and the welfare criterion used for the subsequent analyses. Section 5 describes the calibration of the baseline economy. Section 6 discusses the effects of temporary tax credits for first-time and repeat homebuyers. Sections 7.1 and 7.2 analyze (i) the introduction of taxes on imputed rents, and (ii) the removal of mortgage interest deductibility, both across steady states and along the transition paths between steady states. Section 8 concludes.

2. Government interventions in the housing market

Housing is the largest asset on most households' balance sheets, while mortgages make up most of household liabilities. As a result, house price changes have large effects on financial markets and real economic activity (e.g., Ivashina and Scharfstein, 2010; Mian et al., 2013; Stroebel and Vavra, 2014). In addition, there is a wide-spread belief that homeownership has important personal and societal benefits: homeownership is associated with life satisfaction (Rossi and Weber, 1996), and there are perceived positive externalities from homeowners' incentives to take care of their property and neighborhood (Rohe and Stewart, 1996).[1] As a result of these beliefs, government interventions in the housing market are

[1] The National Homeownership Strategy (1995) states that "[h]omeownership is a commitment to strengthening families and good citizenship. Homeownership enables people to have greater control and exercise more responsibility over their living environment."