

# Research Statement

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I am an applied microeconomist whose research focuses on issues in urban economics and household finance. Most of my research investigates different aspects of housing market dynamics and their influence on different markets. In my job market paper, I study the relation between house prices and household consumption. I estimate the house price elasticity of consumption at the *household level* and emphasize the importance of considering heterogeneities including temporal and regional variations in this elasticity for policy making and macro modeling. I am also interested in applied econometrics and economic applications of causal machine learning models. The following describes three of my working papers.

## **Heterogeneities in House Price Elasticity of Consumption (Job Market Paper)**

In my job market paper, I estimate the house price elasticity of non-durable consumption expenditures as a non-parametric function of household characteristics and unravel crucial household level and regional variations in this estimate. A typical American holds most of their wealth in a highly volatile asset, housing. It is important to know how this affects household consumption and welfare. Previous research has confirmed the existence of the causal relationship between house prices and consumption, providing average estimates of the house price elasticity of consumption. This elasticity has implications for macro modeling and policy making. In turn these applications make it crucial to know the heterogeneities in this elasticity. Any policy that affects house prices or access to home equity can affect consumption, but it will have different effects by household and region. Ignoring these heterogeneities in policy making can result in unintended consequences.

My paper is the first to study how a wide set of heterogeneities in household characteristics and geographic locations affect house price elasticities of consumption at different points in time, i.e., in both boom and bust years. I estimate the house price elasticity as a non-parametric function of household characteristics, location, and time using a newly developed causal machine learning model called Generalized Random Forest. Using the estimated function, I derive elasticities at the household and county level. I find that county elasticities range from 0.04 to 0.16 with neighboring counties being up to eight standard deviations apart. This finding alone can clarify the importance of considering regional heterogeneities in policy making.

There exists considerable heterogeneities between households. On the household level, elasticity ranges from 0.01 to 0.21 in which household structure plays an important role in defining the heterogeneity. Among all characteristics, having a child, size of the household, and age of the heads of the household create substantial disparities. Therefore, basing policies on an average estimate and avoiding local and household level heterogeneities

may result in unintended policy consequences. I find that locations with volatile housing markets are less elastic; thus, not accounting for local heterogeneities overestimates total consumption responses in booms and underestimates them in busts. Moreover, looking at more responsive households within a county reveals a boom-bust asymmetry. Younger households with more children are more elastic in busts than in booms and this asymmetry is magnified by the size of the house price changes.

## **Local and Global Effects of Home Sharing on House Prices: Evidence from Airbnb, with Peter Christensen**

In this paper, we study the local and global effects of home sharing on house prices. We quantify the relationship between housing markets and peer-to-peer home sharing using bookings and listings data from more than a million Airbnb listings across the United States and individual house sales. We use a new shift share approach for identification, and find that a one percent increase in Airbnb leads to 0.04% increase in house prices and 0.028% increase in rents in each neighborhood.

Next, we estimate a decay function of the overall effect as a function of distance for the city of Los Angeles. Controlling for a rich set of location and time fixed effects we show that number of existing Airbnb listings within 500 meters of a property at the time of sales has a negative effect on its price. In sharp contrast, this effect becomes positive as we move further away (e.g., 2km from the house excluding the Airbnbs within 1km of the property). This finding underscores the positive “global” effect of Airbnb on house prices, but the negative “local” effect, which could be explained as negative externality associated with Airbnb neighbors, can provide insights for policymakers.

## **A Comparison of For-profit and Non-profit Firms Response to Investment Opportunities: Evidence from Hospitals**

I investigate how non-profit (NP) and for-profit(FP) firms respond to an investment opportunity. NP organizations in the US account for 5.3% of its GDP in 2013 and paid 9.2% of all wages and salaries in 2010. Despite their considerable size in the economy, we know far less about their corporate and economic behavior than we do about the FP sector.

I use the health care industry to study the investment patterns of FP and NP firms for three main reasons: first, balance sheets of both private and public FP and NP medicare-certified hospitals are publicly available. Second, the Affordable Care Act (ACA) provides a suitable environment to study the effect of a change in investment opportunities. Third, FP and NP hospitals compete with each other and are not separate entities with completely different objectives which makes the comparisons more meaningful. I use the introduction of the ACA as a natural experiment and use a difference in difference methodology to test how FP and NP status affects the level of response to the created investment opportunity. I find that FP hospitals invested 1.6% more than NPs in the aftermath of the ACA, and uncover consistent evidence that NPs’ restricted financing options underlie their different investment responses.