

# SOPHIA (SONIA) GILBUKH

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## EDUCATION

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*PhD, Economics*  
NYU Stern School of Business, New York, NY May 2018

*Bachelor of Science, Mathematics with Honors*  
Haverford College, Haverford, PA May 2009

## ACADEMIC EMPLOYMENT

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*Assistant Professor, Department of Real Estate* August 2018 – present  
Baruch College, City University of New York  
Zicklin School of Business, New York NY

## TEACHING EXPERIENCE

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**Baruch College, Zicklin School of Business**  
*RES 3400 Real Estate Capital Markets* Fall 2018, Spring 2019, Fall 2019

**New York University, Stern School of Business**  
*PhD Math Camp, Instructor* Summer 2016  
*PhD Topics in IO (Theory), Teaching Assistant for Jidong Zhou* Fall 2014  
*Undergraduate Microeconomics, Teaching Assistant for Simon Bowmaker* Fall 2015  
*Undergraduate Advanced Topics in Modern Macro, Teaching Assistant for Laura Veldkamp* Spring 2014

**Haverford College**  
*Statistics, Teaching Assistant for Weiwen Miao* Spring 2008  
*Linear Algebra, Teaching Assistant for Lynne Butler* Fall 2007

## RESEARCH

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Research Interests: Real Estate, Industrial Organization

## PUBLICATIONS

*“Deficits, Public Debt Dynamics and Tax and Spending Multipliers,”* with Gauti Eggertsson and Matthew Denes, *Economic Journal*, 123 (566), 133-163, 2013.

## WORKING PAPERS

*“Heterogeneous Real Estate Agents and the Housing Cycle,”* with Paul Goldsmith-Pinkham (JMP)

*Abstract:* The real estate market is highly intermediated, with 90% of buyers and sellers hiring an agent to help them transact a house. However, formal training to become an agent is short, and agents primarily learn on the job. Low entry barriers and fixed commission rates result in a market where inexperienced intermediaries have a large market share, especially during and after boom periods. Using rich micro-level data on listings and deeds, we first show that agents' experience affects clients' outcomes and is particularly important in the busts. We then study the aggregate implications of the experience distribution on the efficiency of the real estate market by building a theoretical entry and exit model of real estate agents with aggregate shocks and considering several policies that raise the cost of entry and thus favorably alter the equilibrium distribution of experience. We find that low entry barriers amplify the cycles in the housing market.

*“Rational Buyers Search When Prices Increase,”* with Luis Cabral (*R&R Journal of Economic Theory*)

*Abstract:* We develop a dynamic pricing model motivated by observed patterns in business-to-business (and some business-to-customer) transactions. Seller costs are perfectly correlated and evolve according to a Markov process. In every period, each buyer observes (for free) the price set by their current supplier, but not the other sellers' prices or the sellers' (common) cost level. By paying a cost  $s$  the buyer becomes "active" and benefits from (Bertrand) competition among sellers. We show that there exists a semi-separating equilibrium whereby sellers increase price immediately when costs increase and otherwise decrease price gradually. Moreover, buyers become active when prices increase but not otherwise. In sum, we deliver a theory whereby buyers become active ("search") if and only if their supplier increases price.

*“Firm Dynamics and Pricing under Customer Capital Accumulation,”* with Pau Roldan (*R&R Journal of Monetary Economics*)

*Abstract:* This paper analyzes the macroeconomic implications of customer capital accumulation at the firm level. We build an analytically tractable search model of firm dynamics in which firms of different sizes and productivities compete for customers by posting pricing contracts in the product market. Cross-sectional price dispersion emerges in equilibrium because firms of different sizes and productivities use different pricing strategies to strike a balance between attracting new customers and exploiting incumbent ones. Using micro-pricing data from the U.S retail sector, we show that our mechanism can rationalize empirical correlations between store sales and relative prices, and the growth dynamics of stores across sizes. We then calibrate our model to match long-run moments from the cross-sectional distribution of sales and prices, and use our estimated model to explain sluggish aggregate dynamics and cross-sectional heterogeneity in the markup response to aggregate shocks. Finally, we show that our estimated model offers an explanation for the secular decline in business dynamism and the rise in the average markup experienced in the U.S. since the early 1980s.

*“The Price to Rent Ratio: A Macroprudential Application”* with Andrew Haughwout and Joe Tracy

*Abstract:* We examine the potential for the price-to-rent ratio to be used as a macroprudential tool. Standardized appraisal methods, such as the comparable sales and replacement cost appraisal are not designed to identify speculative housing markets. In addition, appraisers could estimate the current market rent for a property. The resulting price-to-rent ratio would provide a useful signal for speculative pressures. We illustrate this by estimating price-to-rent ratios for home purchases using the

American Housing Survey. We show that the distribution of price-to-rent ratios shifted up dramatically during the housing boom. We illustrate how the price-to-rent ratio could be incorporated into a lending policy so as to generate countercyclical loan-to-value ratios.

## RESEARCH IN PROGRESS

*“Competing When No-one Wants to Work With You: The Entry of RedFin in the Real Estate Market ”*  
with Paul Goldsmith-Pinkham

*Abstract:* The commission for real estate agents is remarkably high and stable, despite the low cost of entry into the labor market for agents. Explanations for this high rate have centered around the bilateral nature of the transaction in real estate markets, with agents representing the buyers and the sellers. A key feature of this arrangement is that buying and listing agents can exercise some discretion in what agents they choose to work with. This ability to “exclude” other agents from the market lends a natural setting for tacit collusion on commission, where agents might be reluctant to deviate from the standard rate in order to maintain good standing with other agents. This paper presents the first empirical test of whether agents attempt to tacitly collude to exclude competing agents who offer lower commissions. We exploit the entry of RedFin, a large discount real estate brokerage, whose transparent strategy was to charge their customers lower commission fees. Combined with a dataset covering 150 different regional listing datasets from 2008-2018, we document the entry of RedFin into a number of markets, and attempt to identify whether RedFin agents were shut out of transactions by non-RedFin agents.

*“Urgency to Buy: Amplification of House Price Fluctuations”*

*Abstract:* In the bust, home buyers take their time in choosing a house, unafraid that the property they liked will be snatched by another buyer while they search for other potential options. In the boom, the rivalry grows as the number of buyers increases relative to the inventory of available houses. This urgency-to-buy shifts the bargaining power from sellers to buyers across aggregate states and amplifies the magnitude of the house price cycle. To quantify this channel, I build a dynamic search model where buyers are able to recall their past searches, unless the previously viewed houses are purchased by another rival buyer. I examine two counterfactuals to assess the contribution of this channel to the magnitude of the business cycle. First, I consider a model of naive buyers who make search and purchase decisions as if they can always recall previously viewed properties. Second, I estimate the model with no recall.

*“Estimating search cost from price distributions of heterogeneous goods”*

*Abstract:* I extend the Hong and Shum (2006) framework for estimating search costs using only the price distribution. Instead of a single search good, I allow for multiple substitute goods of varying quality. While an additional step of demand estimation is needed to tease out quality, this allows for richer settings where firms are competing within all substitutable goods, rather than identical products only.

## INVITED SEMINARS AND PRESENTATIONS

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SED (2019), AREUEA International Conference (2019), WFA (2019), 10th Consumer Search and Switching Costs Workshop (2019, Discussant), Hong Kong University (2019), AREUEA (Discussant, 2018), DC RE Valuation Symposium (2018), Greater Boston Real Estate and Urban Economics Seminar (GBRUES, 2018), Haverford College (2018), Canadian Economics Association (2018), SFS Cavalcade (2018, Discussant), 16th Annual International Industrial Organization Conference (2018), Bank of Canada (2018), Baruch College

(2018), Federal Reserve Board (2018), London School of Economics (2018), Harvard (2018), Colorado Finance Summit JMP Session (2017), Luxembourg School of Finance (2017), Center for Real Estate Finance Research at NYU Stern (2017), Federal Reserve Bank of New York (2017), Fall 2016 NET Institute Conference (2016, Discussant), ASSA (2016), Fall 2015 NET Institute Conference (2015, Discussant), 6th Workshop on Consumer Search and Switching Costs (2015, Discussant), 13th Annual International Industrial Organization Conference (2015)

## HONORS AND AWARDS

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<i>AREUEA Homer Hoyt Doctoral Dissertation Award (Third Prize)</i>	2019
<i>C.S.W.E.P. Summer Dissertation Fellow at the Federal Reserve Bank of New York</i>	Summer 2017
<i>CGEB PhD grant (\$1000), NYU Stern</i>	Fall 2017

## MEDIA

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<i>Did Tax Reform Raise the Cost of Owning a Home?(NY Fed, Libery Street Economics Blog)</i>	2019
<i>Quantities and Prices during the Housing Bust (NY Fed, Libery Street Economics Blog)</i>	2018
<i>Can blockchain and electronic closings make home buying faster and more secure? (Boston Globe)</i>	2018

## REFEREED JOURNALS

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*JET, Real Estate Economics, RESTAT, Review of Economic Dynamics*

## OTHER

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**Languages :** Russian (native), Latvian (native), English (fluent), French (fluent), Spanish (basic)

**Work Authorization :** US Citizen

*Last updated August 13, 2019*