Research Statement

Kaveh Nafari
University of Illinois at Urbana Champaign

As an economist, my professional philosophy is to utilize both economic theories and empirical approaches to explain observed phenomenon and model human behaviors. Therefore, I consider myself as an applied economist with research interests focusing on public, urban, and environmental economics. In this research statement, I first discuss my work on behavioral responses to taxes, in particular, in the housing market. Second, I describe my research on urban and environmental economics, specifically analyzing how air pollution is capitalized into housing values. Finally, I explain my agenda for future research.

My current research examines responses to taxes and transfers using quasi-experimental methods. Behavioral responses to taxation can cause large welfare losses, yet are not straightforward to measure. My job market paper, entitled *"Behavioral Responses to Tax Kinks in the rental market: Evidence from Iran,"* uses a unique administrative dataset on housing transactions in Tehran to provide evidence on the incidence and distortionary effects of taxes on rental properties. I exploit a special feature of the tax code in Tehran's rental market where the tax-exemption threshold is based on the property's size (square meters). There is large bunching below the tax cutoff, suggesting strong behavioral responses to the kink. I also find higher after-tax rents above the kink. Based on these variations, I relax the assumption of completely elastic supply and develop a structural framework with property taxes and costs of filing to estimate the price elasticities of housing supply and demand simultaneously. I also examine the question of who bears the property tax burden. To consider the effect of frictions in attenuating behavioral responses, I estimate the elasticities of demand and supply for the sample of newly built properties for which owners have already taken into account the taxation policy before choosing the size of their properties. The estimates of elasticities for the representative of "frictionless market" are at least 5 times larger compared to estimates using the entire sample. I find high but incomplete pass through of the rental tax, implying that most filing costs are borne by renters.

This paper reaches additional conclusions on estimation of structural elasticities because the setting accounts for the effects of incomplete pass-through in attenuating demand responses. This may be of broader interest in other fields that generally assume completely elastic supply and full pass-through. The results from the representation of the "frictionless" market highlight the effects of frictions on attenuating behavioral responses. My estimation of incidence ratio above one implies that renters who normally are at the bottom tail of the income distribution are the ones who bear most of the costs of the policy. That is, size-based taxes on rental properties might be highly regressive. Finally, the results also provide evidence of tax spillovers, suggesting rental taxation policy not only distorts the owners' and renters' decisions in the rental market, but also induces large distortionary responses in the owner-occupant market.

My research on urban and environmental economics explores the economic values of nonmarket amenities/burden using the housing market. In a co-authored paper, entitled *"Air Pollution, Housing Prices, and Costs of Sanctions: A Natural Experiment,"* we take advantage of the dramatic increase in air pollution in Tehran, which was induced by unprecedented sanctions in response to Iran's nuclear program in 2010, to analyze to what extent air pollution is capitalized into housing values. Following some of the sanctions that targeted Iran's import of gasoline, Iran rapidly began to increase its fuel production capacity by converting petrochemical plants to gasoline production refineries. The policy caused substantial increase in the level of air pollution as a result of the supply of domestically produced low-quality gasoline. Using this natural experiment and unique administrative data on Tehran's housing market, we estimate individuals' willingness to pay for clean air. The results show that 10 parts per billion(ppb) increase of outdoor concentration leads to approximately 2% decrease in housing prices. Our welfare analysis suggests that air quality deteriorations induced by the 2010 gasoline sanctions are associated with $11 to $16 billion aggregate reduction in housing values in 2011.

My previous research also includes analyses on gasoline taxes and consumer behaviors. Related to this research, working with Prof. Don Fullerton and Prof. Julian Reif, we recently published a policy paper, entitled *"Gas Taxes in Illinois: Efficiency and Distributional Effects,"* in *Tax Notes.* This paper focuses on transportation infrastructure financing in Illinois in the aftermath of the fiscal crisis. We discuss the efficiency and distributional effects of increasing the state's gas tax as part of the solution for collecting more highway-related revenue.

Developing from my previous research, my future research agenda includes examining housing supply and demand responses to property taxes along other margins, specifically, extensive margins and evasion. I also aim to develop a framework based on discrete changes in the proportional and the marginal tax rates to estimate optimal property taxes using a hedonic approach. Moreover, related to my previous research on gasoline taxes, I aim to analyze whether tax evasion is driving variation in gasoline purchases, exploiting special monthly state-level dataset on gasoline demand.

Related to my work on urban and environmental economics, I will investigate the health impact of the sanction-induced increase in air pollution levels, specifically considering child birth weight, and mortality of children and the elderly. Moreover, in separate research, I intend to use a regression discontinuity design to explore the impacts of driving restrictions on housing values. In order to do this, I take advantage of the structure of the Tehran Traffic Congestion Zone program, which restricts driving in the downtown area to three days per week based on the last digit of vehicle's license plate. Therefore, drivers who live in the driving restricted zone cannot use their cars three days per week. I employ the discontinuity created by this policy in the housing values on the two sides of the zone's borders to examine the willingness to pay for flexible driving options and finally the extent to which driving is substitutable with other type of transportation.

Kaveh Nafari

Department of Economics
University of Illinois
1407 W. Gregory Dr.
Urbana, IL 61801

Email: nafari2@illinois.edu
Web: kavehnafari.com

EDUCATION

Ph.D., Economics, University of Illinois at Urbana-Champaign, 2017 (Expected)
Advisor: David Albouy
M.Sc., Economics, Sharif University of Technology, 2012
B.Sc., Information Technology Engineering, Sharif University of Technology, 2009

RESEARCH INTERESTS

Public Economics, Urban Economics, Environmental Economics

WORKING PAPERS

Behavioral Responses to Tax Kinks in the Rental Housing Market: Evidence from Iran

Abstract: This paper uses a unique administrative dataset on housing transactions in Tehran to provide evidence on the incidence and distortionary effects of taxes on rental properties. I exploit a special feature of the tax code in Tehran rental market where the tax-exemption threshold is based on the property's size (square meters). There is large bunching below the tax cutoff, suggesting strong behavioral responses to the kink. I also find higher after-tax rents above the kink. Based on these variations, I develop a structural framework with property taxes and costs of filing to estimate the price elasticities of housing supply and demand simultaneously. I also examine, "who bears the property tax burden?" I estimate a mid-run (10 years) price elasticity of housing supply of 0.72, and a price elasticity of housing demand of -0.10. I find high, but incomplete pass through of the rental tax, implying that most filing costs are borne by renters. Welfare analysis suggests that the marginal deadweight loss per dollar of tax revenue is 9 percent.

Air Pollution, Housing Prices, and Costs of Sanctions: A Natural Experiment (With Amirhosein Amini)

Abstract: We utilize the dramatic increase in the level of air pollution in Tehran, induced by unprecedented sanction regimes implemented regarding Iran's nuclear program in 2010, to analyze to what extent air pollution is capitalized into housing values. Following some of the sanctions that targeted Iran's import of gasoline, Iran began to rapidly increase its fuel production capacity by converting petrochemical plants to gasoline production refineries. The policy caused substantial increase in the level of air pollution as a result of the supply of domestically produced low-quality gasoline. Using this natural experiment and unique administrative data on Tehran's housing market, we estimate individuals' willingness to pay for clean air. The results show that 10 parts per billion (ppb) increase of outdoor concentration of Nitrogen Dioxide leads to approximately 2% decrease in housing prices. Our welfare analysis suggests that air quality deteriorations induced by 2010 gasoline sanctions are associated with $11 to $16 billion aggregate reduction in housing values in 2011.

WORKS IN PROGRESS

- The Impacts of driving restrictions on housing values: Evidence from a Regression Discontinuity Design
- Responses to Gasoline Tax Changes: Evidence on Evasion

OTHER PUBLICATIONS

- "Gas Taxes in Illinois: Efficiency and Distributional Effects" (with Don Fullerton and Julian Reif), State Tax Notes, 20 June 2016.

CONFERENCES AND SEMINAR PRESENTATIONS

- Invited to National Tax Association Conference to present the paper"Behavioral Responses to Tax Kinks in the Rental Housing Markets: Evidence from Iran." Baltimore, USA. (Nov 2016)
- Invited to American Real Estate and Urban Association International Conference to present the poster "Behavioral Responses to Tax Kinks in the Rental Housing Markets" Alicante, Spain. (July 2016)
- Invited to National Tax Association Conference to present the poster "Behavioral Responses to Tax Kinks in the Rental Housing Markets: Evidence from Iran." Boston, USA. (Nov 2015)
- Invited to attend the conference on Frontiers in Urban Economics. Columbia University, New York, USA (Nov 2015)
- Invited to attend the International Iranian Economic Association (IIEA) workshop on Advances in Economics. Bilgi University, Istanbul, Turkey. (Aug 2015)

HONORS AND AWARDS

- Robert Willis Harbeson Memorial Dissertation Fellowship, University of Illinois. (May 2016)
- Summer Research Fellowship, University of Illinois. (May 2015)
- Department Fellowship, University of Illinois. (Aug. 2012)

ACADEMIC EXPERIENCE

University of Illinois at Urbana-Champaign

- Institute of Government & Public Affairs, Research Assistant to Professor to Elizabeth Powers, Fall 2016 - present
- Institute of Government & Public Affairs, Research Assistant to Professor Don Fullerton and Julian Reif, Fall 2014- Spring 2016
- Department of Economics, Teaching Assistant, Microeconomics Principles, Fall 2013-Spring 2014

PROFESSIONAL EXPERIENCE

Illinois Business Consulting
Consultant, Jan – May 2014

Henkel AG & Company
Business Controller, Nov 2011 – Aug 2012

COMPUTER SKILLS

- **Statistical/Numerical Software**
  Stata, R, Matlab, SPSS, SAS
- **Programming Languages**
  Python, C, C++, Java, Visual C#, SQL, HTML, CSS

OTHER INFORMATION

Languages: English, Persian

REFERENCES

David Albouy (Chair)
Associate Professor of Economics
Department of Economics
University of Illinois at Urbana Champaign
albouy@illinois.edu
(217) 300-2654

Don Fullerton
Gutgsell Professor of Finance
University of Illinois at Urbana Champaign
Department of Finance
dfullert@illinois.edu
(217) 244-3621

Ben Marx
Assistant Professor of Economics
University of Illinois at Urbana Champaign
Department of Economics
benmarx@illinois.edu
(217) 300-1435

Julian Reif
Assistant Professor of Finance
University of Illinois at Urbana Champaign
Department of Economics
jreif@illinois.edu
(217) 300-0169

UNIVERSITY OF ILLINOIS
DEPARTMENT OF ECONOMICS
1407 W. GREGORY DRIVE
URBANA, IL 61801

Friday, November 8, 2016
Dear Sir/Madam:

Letter of Recommendation for Kaveh Nafari

Dear Sir/Madam:

It is with pleasure that I recommend Kaveh Nafari, for both academic and non-academic positions. I have enjoyed working with Kaveh since he first came to me with his ideas a little less than two years ago. Since then, Kaveh has come to discuss research with me about once every other week. He also attended a Ph.D. course on "Housing, Amenities, and Public Infrastructure," helped me as a grader in public economics, and attended several conferences with me. Kaveh has stuck out as having one of the strongest research agendas in public economics in several years.

From what I understand, Kaveh's research agenda is entirely his own, and was developed independently of his advisers. His research involving a special tax kink in property taxes in Tehran intrigued me as it allowed for a novel empirical analysis of property taxes that is rather powerful. He has since followed up with a project on sanction-induced air pollution in Tehran that has important implications beyond being a simple hedonic difference-in-difference estimate. One nice aspect of Kaveh's research agenda is that touches on core topics of public finance and environmental economics, and should be of general interest. Moreover, his access to unique datasets, opens up a variety of research areas that are both core and cutting edge.

"Behavioral Responses to Tax Kinds in the Rental Market: Evidence from Iran" documents and analyzes an odd feature of the tax code in Iran. Rental properties over 150 square meters in size are subject to property taxes, while those below are not. The tax applies to floor areas above this threshold. Interestingly, this results in a substantial amount of bunching, even though it is clearly a "kink" in the code, and not a "notch." Furthermore, it appears to be a real response, and not just one on paper, because of how it is measured independently of tax authorities. Housing producers are willing to build smaller units than they otherwise would to avoid paying any taxes altogether, and landlords are buying them. The results are very strong for new units, and there is some evidence that older units were had area shaved off to avoid this tax – which lends an intriguing sense of how durable housing supply responds dynamically to property taxes.

An important facet of Kaveh's bunching-kink design that separates it from the existing literature, is that it allows us to look at tax incidence rather closely (not just associated distortion) as the tax is levied based on a key housing characteristic, and not just the overall value. Looking at how prices change for high-value units relative to low-value units, Kaveh finds that the premium rents that landlords put on apartments above the threshold are independent of the underlying value. This suggests two things. One, the fixity of the costs suggests that the rental jump is indeed related to actual filing costs, implicit hassle costs included. Two, the change in rent we observe is likely uncorrelated with most unobserved housing characteristics. This rather large effect is actually not surprising given the brand new work by Youssef Benzarti on the large costs of filing, through his evidence on non-itemization in U.S. income tax forms.

The other key incidence finding is that if landlords pay, they largely pass those costs onwards to their renters. All in all, this says something quite relevant to how rental markets work in a large, highly urbanized city like Tehran. If we apply a classical incidence setting with competitive markets, then the framework allows us to identify supply and demand elasticities for a particular form of housing characteristic, based on an adjustment of standard formulae, suggesting that housing supply is much more elastic than housing demand. Alternatively, landlords appear to have considerable market power over their customers, possibly due to the latter's high search costs. This would be an angle that I hope Kaveh will open up more. In either case, this shows how a clever research design can open up a number new avenues of research in housing markets that have yet to be fully explored.

While I have seen a number of papers on tax kinks or notches and bunching, I have never seen a paper applying this methodology to an actual property tax, especially not one with such interesting features on incidence. In fact, estimates of the incidence and distortionary effects of property taxes using quasi-experimental evidence are in woefully short supply. Kaveh's work helps fill in this gap, and promises to bring a powerful set of techniques to an important area, which should be due for more pathbreaking research.

Furthermore, it is refreshing to see research on a middle-income city such as Tehran. I think the results of this work likely have external validity for countries with higher, and possibly lower incomes, although there is likely much more to be explored. Overall, though, Kaveh brings insight into taxation systems in developing countries, bridging much of the area missing between the least and most developed countries.

Kaveh's second major paper "Air Pollution, Housing Prices, and Costs of Sanctions: A Natural Experiment," while somewhat more conventional, may prove to be even more interesting for different reasons. One consequence of the sanctions imposed on Iran in 2010, is that the country began refining its own gasoline. The result was a massive uptick in nitrous dioxide and other air pollutants, from a level below regulated levels in developed countries, to one well above, in a matter of months. This happened in a city already known to have problems with traffic and air quality.

In the end, this provides the set-up for a "natural experiment" design for the impact of air pollution. While Kaveh is currently focusing on property values – a natural thing for him to do – a number of other outcomes could easily be studied. As he points out, the considerable heterogeneity across neighborhoods both in the pollution "treatment" and their underlying characteristics helps to enrichen the hedonic analysis on property values. While the results will certainly develop over time, so far they have estimated a reduction in housing values of over $10 billion. Kaveh has in fact discovered an environmental cost of sanctions, and manage to price them using capitalization effects in the housing market.

Overall, I have been very pleased with Kaveh's research agenda, and have been happy to see him develop a a scholar and make solid progress. While I was not here for his first two years, I would say he has the best research agenda among the students who have graduated under my advisorship at Illinois so far. If he continues to produce great research ideas like these two, I could see him earning tenure at a solid research university rather easily. His work is compelling and well designed, simple enough to understand quickly, but rich enough to contain some unexpected surprises that help provoke further thought.

Kaveh's greatest weakness is that he may be graduating just a hair too early. Originally, Kaveh was set on finishing as soon as possible and returning to Iran. Since his research has developed so well, and he has lived

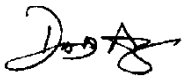
in the United States, he has come more and more to enjoy Western lifestyles, and has been improving his English rapidly, although he still has a ways to go (he does take this seriously, and apparently has not spoken a word of Fars over the last month-and-a-half).

Our graduate program in applied micro-conomics has greatly transformed over the last three years, and I see Kaveh as one of the first indications of it. Kaveh should be up to the challenge of a faculty position in a top 30 or so department, so long as he has someone to work with or mentor him --- Kaveh has great ideas, and good energy to work with. He would also do extremely well in Post-Doc position Now that I see Kaveh going out into the world and getting to know him, I think he might do pretty well on his own at a smaller research school or a liberal arts college.

I can say with confidence that Kaveh is a pleasure to be around and has a good temperament. I can see him being rather popular with students. He would also naturally do quite well in the private sector or in government. Kaveh actually has had some political ambitions, which I believe have almost disappeared, but I could see it actually working for him given his wide variety of talents and ability to work affably and gregariously with others. I recommend him strongly for a wide variety of academic and non-academic positions, and am sure you will greatly enjoy interviewing him and flying him out.

Please let me know if you have any further questions, needs, or concerns. You may contact me at albouy@illinois.edu.

Yours sincerely,



David Albouy
Associate Professor of Economics

UNIVERSITY OF ILLINOIS
AT URBANA-CHAMPAIGN

Prof. Don Fullerton
Gutgsell Professor of Finance
College of Business and IGPA
4030 BIF, Box #30, MC-520
515 East Gregory Drive
Champaign IL 61820

Office: (217) 244-3621
Cell: (512) 750-6012
Fax: (217) 244-3102
dfullert@illinois.edu
http://works.bepress.com/don_fullerton

November 27, 2016

Dear Colleague:

This letter will recommend Kaveh Nafari for a position as Assistant Professor of Economics, or as a researcher in a research institute, think tank, or consulting firm. Kaveh is now in his fifth year of the PhD program in the Economics Department here at the University of Illinois at Urbana-Champaign. Prof. Julian Reif and I hired Kaveh as a research assistant for two years (2014-15 and 2015-16). As further background, both Julian Reif and I are primarily in the Finance Department, with partial appointments in Economics, and both of us are on Kaveh's dissertation committee (chaired by Prof. David Albouy).

As a PhD student in the Economics Department, Kaveh Nafari has finished all the necessary micro theory, macro, statistics, and econometrics, plus additional courses in theory, industrial economics, macro, finance, and public economics. He is now working on his own research, including chapters for his doctoral dissertation. Two of those chapters are finished, and he is underway on the third and final essay of a dissertation to be finished by summer 2017.

In 2014, Prof. Julian Reif and I hired him to measure "anticipation effects in gasoline demand". Kaveh collected all the data, and he ran all the econometric procedures, not only to measure the usual gasoline demand elasticities, but to make several improvements on that literature. First, instead of just cross-section or time-series data, he collected a full panel of fifty states in the U.S. over 25 years. Second, instead of just annual panel data, Kaveh collected monthly data, for twelve times as many observations. Third, he corrects for endogeneity of price by using exogenous changes in state tax rates. Fourth, he can replicate prior results using current price or tax data to measure gasoline quantity demand. But then, fifth, he looks at anticipation effects by looking at the effect of enacted and announced future price or tax changes on current demand.

If consumers have perfect foresight, they might know the price will rise and change their current gasoline consumption. Kaveh does find a significant positive effect of the "lead" (future) tax increase on present consumption, so consumers increase consumption now if the price is going to rise. But he finds an even more significant positive effect of the "announced" future tax increase. In other words, the interesting result here is that consumers do *not* have perfect foresight, as if they could perfectly predict the future price. Instead, however, they rely on announced tax changes in making these decisions. The results have implications for gasoline supply, for tax revenue, and for budget planning by states. Kaveh is also working on the question of whether this anticipation of future tax change takes the form of legal tax avoidance, or illegal tax evasion.

The second essay for Kaveh's dissertation is called "Air Pollution, Housing prices, and Costs of Sanctions". The purpose of this research is to measure the costs of air pollution in Tehran by looking at the ways in which house prices respond to changes in local air pollution. The general idea is to regress house prices on as many house characteristics as are available and on a measure of air quality. Controlling for house characteristics, the coefficient on air quality indicates the extra amount that buyers are willing to pay to live in neighborhoods with cleaner air. The well-known problem with such estimation, of course, is that air pollution is endogenous, because economic conditions help determine both the level of air pollution and the level of house prices,

so the simple regression described above would yield biased estimates of the key coefficients. Kaveh finds a unique and powerful way around this problem, using an exogenous shock to air quality caused by the sanctions imposed by the U.S. and European countries in reaction to Iran's nuclear program. The sanctions prohibited export of gasoline to Iran, a shock that led Iran suddenly to start to refine more of its own oil into gasoline by the use of converted petrochemical plants that produced significantly dirtier gasoline, which led to significantly dirtier air in some parts of the city of Tehran.

Thus, Kaveh builds a "difference-in-differences" model to estimate the effect of the change in pollution on house prices in polluted areas (effect on the "treatment" group), compared to the change in house price in otherwise similar locations not subject to the change in pollution (effect on the "control" group). He finds that the increase in pollution attributable to these sanctions resulted in a significant 3.6% to 5.4% decrease in housing values. It also has more effect on housing prices than on rental values. The cost of Iranian sanctions just within Tehran is estimated to be in the range of $11-16 billion (in 2011 USD). The use of this event to estimate the effect of pollution is both novel and important – that is, both innovative and meaningful. It is good work.

Kaveh's additional paper is called "Behavioral Responses to Tax Kinks in the Rental Housing Market", in which he estimates the elasticity of supply of rental housing in Tehran, the elasticity of demand for that rental housing, and the incidence of the property tax on landlords and renters. Estimating all three of those effects is a tall order for one model. To accomplish this feat, he uses a special feature of the tax code in Tehran where property tax liability becomes positive only when the total size of a rental property exceeds 150 square meters (150 m^2 is about 1615 ft^2). He has achieved access to a unique administrative dataset that includes over 600,000 rental and purchasing transactions from 2012 to 2014. First, he builds a theoretical model to predict that this "size kink" creates an incentive for both owners and renters to move their joint plans away from any apartment just above the size kink (150m^2), and to locate instead just below the kink. That is, they are predicted to exhibit "bunching behaviors." Using the model, he also shows how to use the amount of bunching and the filing costs – together with the policy-induced changes in the rent – to estimate the price elasticities of housing supply and demand.

This quasi-experimental design allows Kaveh to use the average rent of properties below 150m^2 as a valid counterfactual for those above that threshold. Results are significant and indicate 6.6% higher rent per square meter above the kink point. The elasticity of supply is also significant, (ranging from 0.139 to 0.209), and the elasticity of demand is also significant, but small (ranging from -0.012 to -0.021). Finally, he finds that most of the economic incidence of taxation is passed on to renters in the form of higher rents.

By combining theory with this structural empirical model in imaginative ways, Kaveh is able to estimate not just a demand elasticity, or a supply elasticity, but both simultaneously. Moreover, he estimates behavioral reactions to this kink point, the bunching behavior to avoid taxes, and the fraction of tax passed from landlords to renters. This research is both creative and important. I would expect it to be published in a major refereed journal in public economics.

Kaveh Nafari works very hard, and very independently. He has a very smart mind and good intuition for economic analysis. His written and spoken English are excellent, so his communication and effectiveness with students is superb. All of these traits will help him to be very successful as a professional economist teaching and researching in a college or university, or working with others in a think tank or consulting firm. I recommend him highly.

Yours,

Don Fullerton

Don Fullerton

UNIVERSITY OF ILLINOIS
AT URBANA-CHAMPAIGN

Department of Finance

College of Business
340 Wohlers Hall
1206 South Sixth Street
Champaign, IL 61820-6980

Dear Hiring Committee:

I am writing to recommend Kaveh Nafari for a position in your department. I have interacted with Kaveh since 2015, when he was my research assistant. He is a diligent worker and I believe he will be a good researcher and an excellent teacher.

Kaveh's job market paper employs an administrative dataset on housing transactions in Tehran, Iran to estimate the incidence of property taxes, an important topic in public economics. He accomplishes this by exploiting the fact that Tehran properties are exempt from property taxes if their square footage is less than 150 square meters (approximately 1,615 square feet). Because property owners do not have to file taxes if they own less than 150 square meters of property, they face both a tax kink (i.e., their marginal rate changes from 0 to a positive value) and a jump in their costs of filing at that threshold. Kaveh exploits the quasi-random variation created by this tax threshold to estimate behavioral responses to the property tax. He also develops a structural framework that allows him to use his empirical findings to estimate the price elasticities of housing supply and demand.

Kaveh first examines the distribution of apartment sizes in Tehran and finds evidence of bunching just below the threshold of 150 square meters, which suggests that property owners altered the size of their properties in order to avoid paying the tax. The effect is more pronounced for newer properties than for older ones, which is sensible: many of the newer buildings were constructed after the implementation of the property tax, and it is cheaper to alter the size of a property before it is built than to remodel it after it has been built.

Kaveh also finds that rental rates jump at the tax kink threshold, demonstrating that at least some of tax is passed through directly to renters. Importantly, this does not appear to be driven by secular trends or by differences across neighborhoods. Kaveh does not attribute this jump directly to the tax kink, which is just a discontinuous change in the marginal rate of taxation; rather, he attributes it to the cost of filing taxes, which is 0 before the kink, but exhibits a jump immediately after the threshold.

Finally, Kaveh incorporates his estimates of excess bunching in apartment sizes, rental rate jumps, and filing costs into a structural model. He estimates that the 10-year price elasticity of housing supply is 0.7, and that the price elasticity of housing demand is -0.1. He also estimates that the majority of the property tax is passed through to renters, which implies that the property tax is regressive because the income of renters is generally lower than that of property owners. Finally, Kaveh estimates that the marginal deadweight loss caused by the property tax is equal to nearly 10 percent of the revenue it raises.

Besides these important policy implications, Kaveh's results also contribute to the public economics literature by demonstrating the importance of modeling both the supply and demand side

UNIVERSITY OF ILLINOIS
AT URBANA-CHAMPAIGN

Department of Finance

College of Business
340 Wohlers Hall
1206 South Sixth Street
Champaign, IL 61820-6980

of the housing market. Prior studies generally assume that one side of the housing market is perfectly elastic, which implies a pass through of one hundred percent. Kaveh's paper demonstrates that this assumption is not correct, and that this matters when estimating the pass through of the property tax.

I recommend Kaveh to any research university outside of the top 20, and to all teaching universities.

Sincerely,

Julian Reif

Assistant Professor of Finance and Economics
University of Illinois at Urbana-Champaign
jreif@illinois.edu