

Research Statement

I am an Economics PhD candidate at University of California, Irvine with an interest in public and urban economics. My research focuses on how topical events correlate with urban demographics, impact migration and transform the housing market in the U.S. In my work, I employ spatial hedonic modelling, reduced-form estimations and causal inference techniques to analyze urban outcomes, generating insights to inform theory as well as explore how the real world responds to public policies.

Policies spilling over from their primary objectives, making unexpected changes in individual decision-making and subsequently leading to widespread distortions in the economy, have always intrigued me. As such, the majority of my current research applies theory and data to investigate how cities are changing as a result of unintended consequences of the COVID-19 pandemic-related regulations and the introduction of work-from-home.

Job Market Paper:

The goal of my job-market paper, "Housing Sales and Construction Responses to COVID-19: Evidence from Shelter-in-place and Eviction Moratoria in the U.S." is to analyze the county-level impact of public policies related to COVID-19 on the housing market in U.S. Aimed at reducing the spread of the virus, different states throughout the U.S. enacted non-pharmaceutical interventions (NPIs) such as shelter-in-place and eviction moratoria, in different months and for varied stretches throughout 2020 and 2021. Shelter-in-place orders could potentially limit the ability of home-buyers and sellers to interact as well as they could pre-COVID, introducing frictions in the process of selling houses. Prolonged and over-lapping eviction moratoria could dampen the construction of multi-family units and encourage the landlords to sell rented-out apartments. This paper attempts to investigate if and how these interventions causally impacted county-level housing sales and building permits approval in the U.S. The paper estimates the average treatment effect of these orders using baseline two-way fixed effects estimation, event-study graphs and an estimator created by de Chaisemartin & D'Haultfoeuille (2020a) that is more suited to multiple treatment groups with staggered treatment introductions and withdrawals. The results show that shelter-in-place is associated with significantly smaller year-on-year changes in sales of single-family houses, condominiums and the collection of all residences. Selective moratoria on eviction hearings and judgments are also found to be associated with smaller year-on-year changes in multi-family building permit approvals.

Previous Research:

My previous research includes a theoretical paper based on the introduction of work-from-home and an empirical paper exploring demographic factors correlated with police-involved deaths.

My paper titled "The Intercity Impacts of Work-from-Home in a Spatial Hedonic Model with Remote and Non-Remote Workers" formulates a spatial hedonic equilibrium model that shows inter-city impacts of the introduction of work-from-home. Following Brueckner, Kahn and Lin (2021), the paper attempts to study how work-from-home, which allows workers to relocate across cities while keeping their original jobs, impacts housing prices, population and employment levels. Extending Brueckner et al. (2021), this analysis divides the workforce into two types of workers, remote and non-remote, to allow for a more realistic work-from-home model. Additionally, the model uses explicit functional forms for production and utility, resulting in closed-form equilibrium solutions conditional on the extent of productivity advantages, amenity advantages, and degree of complementarity between worker types. The current paper aims to examine whether the main results in Brueckner et al. (2021) still hold in the modified model.

Focusing on demographic constituents of cities, my paper titled "Socio-Demographic Factors Correlating with Police-Involved Deaths: City-level Evidence from the US" aims to answer if and how community characteristics at a city level correlate with fatal police encounters over the period 2000-2010. Panel and cumulative datasets on police-involved deaths from FatalEncounters.org, along with a relevant set of socio-demographic controls, are used in a negative binomial regression model to find factors that might affect the count of officer-involved

deaths that occurred in a city. It is found that, for the longitudinal panel data, the Black/African-American population and the Hispanic/Latino population in a city along with police employment, the level of crime and median income constitute significant determinants of officer-involved deaths. In the cumulative (cross-section data only) counterpart, the same factors are significant determinants of deaths.

Publication:

My co-authored paper with Jan K. Brueckner, titled “The Intercity Impacts of Work-from-Home with Both Remote and Non-Remote Workers”, theoretically explores how the introduction of work-from-home impacts the equilibrium city-level housing prices, employment, population, wages and welfare, and it has recently been accepted for publication at the *Journal of Housing Economics*, in their upcoming special issue on COVID-19 and the Housing Market. This co-authored paper, which is an extension of my sole-authored paper about work-from-home, adds an empirical survey to better explain the fit of our work in the growing work-from-home literature. With some industries now shifting to full-time remote work and some others adopting a hybrid structure, this paper contributes to the field by theorizing how the evolution of cities based on telecommuting would impact remote and non-remote workers differently.

Future Research:

In terms of future projects, I would like to continue to explore COVID-regulations and their longer term impacts on the economy, with special emphasis on the housing market. As an extension of my job-market paper, I would like to analyze the housing market response to the ending of multiple eviction moratoria and their subsequent spillover effects on employment, intra-city and inter-city migration. Seeing that such a prolonged moratorium has historically never been adopted, the revoking of the same could potentially have major and long-lasting impacts on the entire economy. Also, with the ending of pandemic-related mortgage bailouts, I am interested in analyzing if the upcoming spike in foreclosures would have longer term effects in the composition of the housing inventory and how the future foreclosure volumes would compare to their pre-pandemic levels.

Apart from studying moratoria and foreclosures, I would like to explore the effect of COVID regulations on pre-existing public policies. More specifically, I want to investigate if and how, *ceteris paribus*, the COVID-induced closure of non-essential businesses impacted the acquisition, rehabilitation and construction of rental housing for low-income households under the LIHTC program. This analysis would quantify the impact that COVID had on economically deprived sections of the population in the context of their housing stability.

In similar lines, I would also like to explore the effect of COVID related non-pharmaceutical interventions on the investment program Opportunity Zones (OZ), which incentives investment in distressed localities by offering tax credits. A vast majority of OZ equity is raised in funds that are, at least partly, invested in commercial and residential real estate. With social distancing having caused major disruptions in construction projects, exploring the potential impact of the reduced construction on the return to OZ investment could provide insight into the future of the program.

Wider impact:

The body of my work attempts to find longer term impacts of major policies or occurrences on economies of cities. Seemingly temporary changes in the housing market or in migration trends could have lagged responses and sustained impacts on the compositions of cities. Hence, my research involves continuing to track these outcomes to gain better understanding of how the economy responds to certain public policies. This knowledge will help inform policy-makers better and ensure that these factors are taken into account while enacting future policies.

References

Brueckner J., Kahn Matthew E. & Lin Gary C. “A New Spatial Hedonic Equilibrium in the Emerging Work-From-Home Economy?.” 2021; National Bureau of Economics Research Working Paper 28526.

de Chaisemartin, C and D'Haultfoeuille, X. “Two-Way Fixed Effects Estimators with Heterogeneous Treatment Effects. (2020a)”. *American Economic Review*, vol. 110, no. 9.