Research Statement

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My research comprises topics in public economics related to the importance of place and its potential to determine and mediate economic outcomes. My current research agenda and the research I aim to accomplish after graduation contain **two streams**. First, I study the effectiveness and social efficiency of place-specific investment, considering the responses of households and firms. Second, I study the role of place in economic outcomes of households. For both streams, I study related econometric and measurement issues and pursue separate methodological projects when appropriate.

Before graduate school, I worked as a pre-doctoral researcher with Professor James Heckman during which I co-authored three projects related to early childhood education. Each project enhanced my understanding of the process of economics research, revealed my specific interests and skills, and provided experience with the publication process. The non-experimental nature of the approach in Biroli et al. (2018) involved collecting qualitative information on the roll-out of a program, exposing me to the practice of consulting sources outside of economics to bolster an empirical framework. In García et al. (2018) and García et al. (2019), we use different statistical tools to adequately model the incidence of crime and the gender differences in treatment effect outcomes for subjects from randomized control trials. The experience of working with data collected from these disadvantaged subjects emphasized to me the importance of treating the subjects and their data with care and respect. In all of my projects, I take the data agreements seriously, often imposing additional security measures apart from what the IRB or data provider require, and strive to generate reproducible research that respects the purpose of the data, the data-collecting organization, and the subjects.

1 The Effectiveness and Efficiency of Place-Specific Investment

Within this stream, there are two sets of projects I am currently working on. The first set includes work contained in and related to my job market paper (Ziff, 2023).

It is common to study the direct effectiveness of place-based policies, which target geographic areas often to foster economic development. I propose an approach to study the indirect impacts due to responses of households and firms that propagate within similar markets (e.g., housing markets). To determine latent market structure, I apply a network theory

method to data on household movement. I illustrate the approach and discuss the economic framework using a widespread, place-based policy, Tax Increment Financing (TIF). With the data-driven characterization, I estimate the "market" spillover effects to non-targeted areas within the same housing market. My results indicate that TIF is locally effective at increasing property values within the targeted area. However, using my approach, the market spillover effects on non-targeted areas within the same housing markets are negative. This implies that the policy relocates investment that otherwise would have occurred elsewhere. I analyze outcomes related to household and firm characteristics and find support for the relocation mechanism.

I combine the direct and spillover effects to calculate a back-of-the-envelope estimate of an overall effect that is close to zero. With caveats, this result suggests that the policy has a low overall effectiveness from the perspective of a central regional government. I compare the characteristics targeted areas to those of the non-targeted areas in the same housing markets. The targeted areas are relatively disadvantaged suggesting some degree of redistribution within housing markets.

1. After integrating feedback from the job search process, I plan to submit the core of my job market paper, including a description of my approach to study market spillover effects and the empirical estimates.

There are two related methodological considerations that I plan to pursue as separate projects and publications.

2. *Measurement of Property Values.* While sale prices reflect the true market price, they are only observed for properties that sell, introducing transaction bias. On the other hand, assessed values are observed for all properties, but they may contain non-classical prediction error. In my job market paper, I rely on assessed values for the primary analysis with some supplementary work discussing the possible pitfalls using a measurement model. I plan to expand on this model using nation-wide data in a stand-alone paper that not only considers the tradeoff between prediction error and transaction bias, but also relates it to household-level outcomes and equity concerns such as unequal property tax burdens.

3. *Unifying Panel Data Models for Unobserved Heterogeneity.* I use an event study framework to identify the parameters of interest in my job market paper. I considered several approaches to account for unobserved, time-varying, unit-level heterogeneity. The presence of such heterogeneity challenges the parallel trends assumption. Different models of fixed effects, including grouped fixed effects and interactive fixed effects (Bai, 2009; Bonhomme and Manresa, 2015), and changes to the parallel trends assumption can account for the heterogeneity. In a co-authored project (Shea and Ziff, 2023), we use a bilinear programming approach to unify these models for the purpose of specifying alternative parallel trends assumptions. Bilinear programming allows for identification

in the presence of small T. This expands the applications for which researchers can use these fixed effects alongside difference-in-difference or event study frameworks.

My approach to consider an overall effect combines estimates of direct and spillover effects. I plan to explore another approach that applies Empirical Welfare Maximization (EWM) to consider if place-based policies are properly targeted.

4. *Empirical Welfare Maximization for Place-Based Policies.* EWM (Kitagawa and Tetenov, 2018) is a method well-suited for experiments targeted to certain populations. EWM allows one to consider if the program would have been more effective if the eligibility criteria had been different. There is potential to use this method to consider if place-based policies are targeted effectively. However, the challenges of considering spillovers and non-random policy implementation make the problem difficult. I aim to consider how to apply EWM to place-based policies.

The second set of projects relates to co-authored work that studies the response of households to infrastructure investment, and how that response changes the effectiveness of the investment (Vinnakota and Ziff, 2023). We study how the take-up of flood insurance changes after the construction of a levee. Both flood insurance and a levee are publicly funded and it is of interest how these two interventions detract from or reinforce each other, given households' behavioral responses. In addition to observing construction dates, we incorporate novel data on accreditation dates, after which properties protected by accredited levees experience a reduction in the price of flood insurance.

5. We plan to submit the core of this paper, including a description of the data collection of accreditation dates and the empirical estimates of how the construction and accreditation of levees affect insurance take-up.

In this initial study, we measure to what extent levee infrastructure crowds out households' insurance take-up. It is documented that regardless of infrastructure, the flood insurance program is undersubscribed, despite insurance premia that are largely below actuarially fair values. Behavioral biases and asymmetric information are possible causes of the low take-up of flood insurance. Given this, the extent to which insurance crowd-out after infrastructure provision is efficient depends on how households update their beliefs on flood risk, relative to the changes in true flood risk. This begets two natural next steps for a research agenda.

6. *Household Information on Levees and Flood Insurance.* Our empirical results highlight the counter-intuitive finding that households reduce flood insurance take-up after a levee's accreditation lowers the cost of flood insurance. It is possible that households underestimate the risk of flooding, which the levee does not completely eradicate. We

plan to pursue funding and partnership with government agencies to implement an experiment. We hope to randomly disseminate information about local levee infrastructure and local insurance requirements. Treatment effects on changes in the uptake of flood insurance would reveal to what degree incorrect information determines households' risky flood insurance choices.

7. *Enforcement of Flood Insurance Mandates.* Federal law requires that households in flood-prone areas purchase flood insurance. However, the take-up of flood insurance varies widely across the U.S. One challenge in studying this uneven take-up is measuring the enforcement of the mandate, which generally falls on mortgage lenders and the Federal Reserve. We plan to explore different variation determining flood insurance take-up including lender heterogeneity and variation in mandate regulation policies.

2 The Importance of Place for Household Outcomes

The first stream of my research agenda relates to economic framework and econometric approaches to consider the consequences of place-based interventions; place can also play a role in economic outcomes even without a specific intervention tied to it. The second stream of my research agenda relates to these circumstances.

8. *Rental Choice Sets in Low- and High-Opportunity Neighborhoods for Housing Choice Voucher Program Participants.* Participants in the Housing Choice Voucher Program (HCVP) face constraints in location choice both due to constrained resources and additional policy requirements of the program. A challenge to understand these constraints is the measurement of the choice sets. In Park and Ziff (2023), we combine restricted-access data from HUD with a novel data source on advertised rental prices to observe the weekly choice sets of HCVP participants, and describe them by geographic location and household demographics. Observing the choice sets expands modeling possibilities in a structural framework of residential sorting.

9. *Association between the Volatility of Income and Life Expectancy in the U.S.* In Ziff et al. (2023), we study the relationship between household income volatility and life expectancy using a household-level consumer dataset. We find that income is an important mediator of the correlation, with the bottom half of the income distribution experiencing negative correlation between income volatility and life expectancy, including if the income volatility is positive. The role of place is notable both in the geographic distribution of households in the bottom half of the income distribution and the possibility that place-specific factors, such as factory closings, contribute to this correlation. This paper is Revise and Resubmit at the *Journal of Labor Economics*.

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