

School Access and City Structure*

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Abstract

This paper quantifies the impacts of schools on the internal structure of cities. While their direct effect on the residential choices of households with kids is well-established, I explore the indirect consequences they bare for childless households and for the geography of labor supply. Using data from Madrid, I first unveil extensive spatial sorting based on parenthood, arising out of the need of parents to access both schools and workplaces, suggesting that these mechanism are at play. Then, to quantify their relevance, I develop a residential choice model with households differentiated by parenthood and skills. This incorporates the school choice problem faced by parents, and allows for interactions with labor and housing markets through their residential choices. The empirical estimation relies on a unique dataset covering the universe of preschool applications to publicly funded schools, which allows to estimate parents' preferences and quantify school access. I address the challenge of the feedback loop between neighborhood composition and school quality - due to the relevance of peer effects - through instruments leveraging the historical expansion of the city. Counterfactual simulations reveal that schools strongly constrain the residential choices of parents, and as a consequence generate an inverse response by childless households. Moreover, the model exhibits substantial interactions between labor and school markets, which are asymmetric due to the reaction of non-parents, depend heavily on the transport infrastructure and significantly impact the city structure.

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