

Heterogenous Treatment Effects on Prices of a Voluntary Inclusionary Zoning Program

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Abstract

Housing affordability remains a significant social and economic issue in New Zealand and the developed world. Affordability policies such as Inclusionary Zoning (IZ) have been promoted as alternatives to streamline the delivery of land as an intermediate stage to boost the supply of affordable housing. IZ has been applied with relative success in several countries. Nonetheless, research on price effects is relatively scarce and applications of causality approaches remain limited. This paper takes the Special Housing Areas programme implemented in Auckland, New Zealand, as a case of a voluntary IZ, and explores the effects on the distribution of housing prices within the designated areas. We rely on quantile difference-in-difference models to identify any distributional effects, and on changes-in-changes methods to relax functional form assumptions and to incorporate heterogeneity. We use about 175 thousand sales transactions between September 2011 and September 2016 in the Auckland Region. The results show that the SHAs program increased housing prices for all distribution segments, except at the lower end of the distribution, ranging from 3% to 7%. That is, the SHAs may have affected market segmentation within the designated areas, and it cannot be concluded that there was a cross-subsidy from more expensive houses towards affordable ones. As an example of a voluntary IZ program, the SHAs may have stimulated supply but numerous implications arise as improvements on affordability are negligible or questionable.

Keywords: Housing Affordability, Land Use Regulation, Counterfactual Distribution, Quantile Difference-in-Difference, Changes-in-Changes

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