

Dynamic Spatial Competition in Early Education: an Equilibrium Analysis of the Preschool Market in Pennsylvania*

Preliminary Draft

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October 27, 2022

Abstract

Evidence of the benefits of high-quality preschool programs for disadvantaged children has fueled recent proposals for massive investments in Early Childhood Education (ECE). A successful scale-up of these programs requires creating incentives for providers to operate in low-income neighborhoods and to invest in high-quality without pricing disadvantaged parents out of the formal market. This paper develops a dynamic model of the preschool market to evaluate the effectiveness of ECE policies at creating these incentives. On the demand side, heterogeneous families trade-off price, quality, and distance in choosing whether and to which center to send their child. On the supply side, providers decide whether to enter, remain open and which quality to offer, and compete on price to attract parents. I estimate this model using data on the universe of child-care centers in Pennsylvania. I use the estimated model to simulate the short and long-run effect of 3 types of ECE expansion: start-up grants, expansion of demand subsidies, and quality add-on rates raising revenue for high-quality providers serving low-income children. Start-up grants lead to excessive entry of low-quality providers and decrease incentives for centers to upgrade. Expanded subsidies increase the quality supplied by raising demand from high-income, quality-sensitive parents, but leads to higher prices due to providers' market power. The most effective policy tools are the add-on rates, increasing the quality attended by children across the income distribution.

*I am grateful for the guidance and support I have received from Chris Conlon, Guillaume R. Fréchette and Daniel Waldinger. This project greatly benefited from numerous conversations with Claudia Allende, Milena Almagro, Tslil Aloni, Mike Dickstein, Chris Flinn, Mike Gilraine, Elena Manresa, Marguerite Obolensky, and Paul Scott, and from audiences at NYU and Stern. I am especially indebted to Jonathan Elliott for his invaluable help with gathering the data used in this paper.

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