Regulating Institutionalized Players in Peer-to-peer Markets: Evidence from Dynamic Host Exits on Airbnb

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Peer-to-peer (P2P) platforms such as Airbnb, Uber, and Lending Club offer important channels for individuals to share under-utilized resources (e.g., living space, rides, or money). With such P2P platforms proliferate, institutionalized players—large companies or powerful individuals—have risen over the past few years. The very institutions that P2P platforms aimed to disrupt seem now their dominating figures.

What are the impacts of institutionalized players in a P2P market? Should platforms regulate the participation of institutionalized players? These are largely unanswered questions in the literature, yet centric to the value proposition of P2P platforms. We add to the literature by investigating the role of institutionalized hosts—those who operate multiple properties on Airbnb—and their impacts on the home-sharing marketplace. Our research questions are (1) How do institutionalized hosts impact the market structure and competitive environment? (2) How do they affect market equilibrium outcomes such as price and transaction volume? (3) What is their impact on the entry and exit of smaller hosts in the market? (4) Do they increase or decrease the overall service quality of the market? (5) Should Airbnb regulate the participation of institutionalized hosts, and if so, how?

We seek answers to these questions by utilizing a dynamic and staggered rollout of a platform policy that caps the participation of institutionalized hosts across major U.S. cities. We obtain data from Airbnb and deploy a plethora of quasi-experimental strategies using this policy shock to identify the impact of institutionalized hosts. Our estimation reveals how market concentration (Herfindahl-Hirschman Index (HHI)), equilibrium outcomes (price, transaction volume, and host revenue), and service quality (guest review ratings) changed in zip codes of the impacted cities compared with those in the control cities after the exit of institutionalized hosts. We verify the parallel trend assumption between the treated and control zip codes using a relative time model as in Angrist and Pischke (2008).

Our analysis gleans a number of insights (see Appendix 1). *First*, we find the policy drove out institutionalized hosts. As a result, the market concentration mitigated. The supply and competition, however, was intensified due to an influx of individual hosts following the removal of institutionalized hosts. Consumers benefited from decreased price and increased service quality, but the revenue of hosts dwindled. *Second*, we find asymmetric policy impacts across markets. In zip codes with high-penetration of Airbnb, regulating institutionalized hosts led to an increase in supply, host revenue, as well as service quality; whereas the policy hit the price and host revenue in low-penetration zip codes.

The role of dynamics manifests in the time-series nature of the exit of institutionalized hosts and the use of a staggered policy rollout for causal inference**.** This research provides timely and managerially relevant recommendations on supplier management that is centric to any P2P platforms. Business and policy recommendations are generated for heterogeneous markets. Our research relates and contributes to the literature on the P2P economy, multisided markets, and platform-based markets.

Keywords: Institutionalized players, market concentration, peer-to-peer markets

Appendix 1. Impact of the Policy Announcement and Implementation

DV:	(1) HHI	(2) Bookable Days	(3) Weighted ADR	(4) Reserved Days	(5) Revenue	(6) Rating
Panel (a) – Full Sample						
1(Announcement)	-0.0270***	0.0348**	-0.0500	0.0092	0.0046	0.0009
	(0.0088)	(0.0140)	(0.0345)	(0.0249)	(0.0575)	(0.0074)
1(Implementation)	-0.0194***	0.0734***	-0.0639**	-0.0268	-0.1025**	0.0166***
	(0.0067)	(0.0120)	(0.0249)	(0.0211)	(0.0437)	(0.0064)
Observations	15,758	15,758	15,758	15,758	15,758	15,288
R-squared	0.6495	0.9745	0.5478	0.9522	0.8706	0.1943
Panel (b) – High-Penetration Subsample						
1(Announcement)	0.0002	0.0639***	0.0239	0.0859***	0.1112***	0.0042**
	(0.0042)	(0.0145)	(0.0166)	(0.0232)	(0.0329)	(0.0017)
1(Implementation)	-0.0158***	0.1426***	-0.0056	0.0174	0.0144	0.0011
	(0.0038)	(0.0118)	(0.0144)	(0.0196)	(0.0278)	(0.0011)
Observations	8,048	8,048	8,048	8,048	8,048	7,811
R-squared	0.7224	0.9756	0.7376	0.9578	0.9323	0.1623
Panel (c) – Low-Penetration Subsample						
1(Announcement)	-0.0543***	0.0090	-0.1160*	0.0193	-0.0899	-0.0023
	(0.0172)	(0.0229)	(0.0677)	(0.0580)	(0.1103)	(0.0150)
1(Implementation)	-0.0270**	0.0188	-0.1120**	-0.0779*	-0.1870**	0.0339**
	(0.0125)	(0.0185)	(0.0477)	(0.0452)	(0.0810)	(0.0134)
Observations	7,710	7,710	7,710	7,710	7,710	7,477
R-squared	0.5631	0.9535	0.4574	0.8721	0.7769	0.1964

*** $p<0.01$, ** $p<0.05$, * $p<0.1$.

Note. Robust standard errors clustered at the zip code level are shown in parentheses. All specifications include ACS controls, zip code fixed effects, year-month fixed effects, and a city-specific time trend.