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Dynamic Competition of Real Estate Developers: Lesson on Counter-cycle Policy (Job Market Paper)

In the face of transient shocks in an economy, cyclical or counter-cyclical policy tends to be prescribed, as opposed to universal/acyclical policy, due to the smaller implementation scale of the former. However, once competition over time is taken into consideration, whether the former policy implies smaller impacts than the latter becomes unclear. Utilizing a unique transaction-level dataset converted from sales documents, I study the impact of counter-cycle policy by structurally estimating the dynamic competition of the Hong Kong real estate primary market, in comparison with the acyclical policy. Peripheral data, including satellite images, are used to support the assumptions required for the structural model. By approximating with an Extended Oblivious Equilibrium (EOE) that accommodates market shocks, this competition with many firms is feasibly estimated after drastically reducing the state space from the order of 55. The counterfactual analysis shows that counter-cycle policy indeed introduces an impact more extensive than acyclical policy in this market. Unlike acyclical policy that delays the listing universally, counter-cycle policy delays only in some periods, which creates congestion of apartments in other periods. The congestion leads to slower sales, and hence more apartments left unsold overall. This finding calls for caution against a common perception that a counter-cycle measure necessarily causes less distortion than a full-scale acyclical measure.