Collateral Constraints and Land Price Dynamics: Evidence from the Kiyotaki–Moore Model

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January 29, 2026

Abstract

This paper empirically examines collateral constraints in the Kiyotaki and Moore [1997. *Credit cycles. Journal of Political Economy* 105(2), 211–248] model using land price data from three major prefectures in Japan: Tokyo, Osaka, and Hyogo. After confirming the stationarity of land prices, we estimate their dynamic equations and show that they follow a second-order autoregressive (AR(2)) process, consistent with the presence of binding collateral constraints. We further apply the supremum Wald test and identify structural breaks at the onset of the early 1990s asset price bubble collapse. Taken together, the results indicate that financial frictions played a critical role in shaping land price dynamics across Japan's regional economies. Overall, our findings demonstrate that the Kiyotaki–Moore framework provides a useful tool for capturing the dynamic behavior of financially constrained economies. These findings offer new insights into regional asset-price dynamics and the role of collateral constraints in shaping urban land markets.

Keywords: Collateral Constraints, Financial Frictions, Land Price Dynamics, Kiyotaki-Moore Model, Credit Cycles, Regional Economies.

JEL Classification: G12, E32; E44; R30

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