

The Final Report for the Research Enhancement Grant (REP)

Project Title:

On Demand: Cross-Country Evidence From Commercial Real Estate Asset Markets

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Abstract

Using over 25 years of quarterly US and Japanese time series data, this study examines the determinants of demand for an important class of durable, income producing real assets: commercial real estate. We specify a structural model of market equilibrium that considers direct effects of real investment on built asset price. Our research is partly motivated by the real option pricing model which originates from the option pricing model by Black, Scholes, and later refined by Merton. Our theoretical purpose is to investigate whether the real option approach can explain real estate market better than conventional models. In addition, using our theoretical model, our empirical purpose is to see whether commercial real estate markets are consistent across countries between US and Japan.

Our empirical findings are consistent across countries and produce several new results. First, we find that real investment exerts a significant positive effect on asset price. Second, idiosyncratic risk is found to be strongly positively related to asset price, and to complement supply effects. Third, systematic risk is priced as expected, where the strength of the relation between asset price and systematic risk is found to be much higher than in previous studies of capital asset prices. Fourth, lagged values of price determinants are found to be important in real asset demand estimation. Alternative explanations for our findings are analyzed and discussed. Implications for asset pricing model specification and interpretation are also considered.

Pending and current supports resulting from the REP award

1. We have not published the project funded by the REP yet. However, some results generated from the project were used in the following paper published in one of leading real estate journals:

“Finance, Investment, and Investment Performance: Evidence from the REIT Sector,” Steven H. Ott, Timothy J. Riddiough, and **Ha-Chin Yi**, *Real Estate Economics*, 2005, Volume 33, Issue 1, pp. 203-235.

2. Currently, we are seeking additional data on vacancy data from US and Japanese real estate markets in order to support our main points.
3. We intend to continue our efforts in this project and to publish it at one of leading real estate journals. The potential outlet would be either *Real Estate Economics* or *Journal of Real Finance and Economics*.