Doctoral Dissertations

Editor

Ken H. Johnson
Auburn University-Montgomery
School of Business
Department of Accounting and Finance
Montgomery, AL 36124-4023

334-244-3471 (Phone)
334-244-3792 (Fax)
ken.johnson@mail.aum.edu

This section of the *Journal* publishes summaries/abstracts of dissertations related to a broad cross-section of real estate issues. Areas of interest include, but are not limited to, government policy and planning, real estate business and industry issues, property, contract and transaction types, real estate decision-making processes, market analysis, and related methodological and theoretical issues. If you are aware of any real estate-related dissertation(s) that may not appear in standard sources and that you think would be of interest to our readers, please contact the editor.

Averyt, June Mann. University of Pennsylvania, 2003. Determinants of Adverse Departures from Supported Housing.

The purpose of this dissertation is to investigate the causes of adverse departure from support housing. In this study, supported housing includes occupants with a diagnosis of a serious mental illness, substance abuse, having HIV-positive status or being at risk of becoming homeless. Adverse departures are defined as evictions or abandonments of property. The findings indicate that being African-American, having a history of prior homelessness and reporting doing very well at being independent/self reliant prior to entry into the program increased the likelihood of an adverse departure. Conversely, being over 40 decreased the likelihood of such a departure.

Barot, Bharat. Uppsala Universitet, 2003. Empirical Studies in Consumption, House Prices and the Accuracy of European Growth and Inflation Forecasts.*

The second essay in this dissertation is devoted to the private housing stock in Sweden. In this essay, a demand-supply econometric model for residential housing is developed. A stock-flow model serves as the theoretical basis for the fundamental determinants of real estate construction and prices. The econometric specifications reveal that both ex post and ex ante forecasts produce results consistent with prior works. The implications of these results for Swedish policymakers are discussed in detail.

Carter, Les W. Nova Southeastern University, 2003. The Credit Supply Effect on Commercial Real Estate Loans in Commercial Banks.

Two general theories (interest rate and credit supply) are generally employed to explain loan default. This dissertation seeks to determine if the credit supply effect is present in commercial real estate lending. The work focuses on the relationship between nonperforming commercial loans and explanatory proxies such as: outstanding loan volume, credit spread, average vacancy rate and unemployment. The results indicate that a statistically significant relationship exists between many of these regressors and loan default, leading to the conclusion that the credit supply effect exists in commercial real estate lending. These results have implications for the commercial lending industry.

Chen, Jian. University of Maryland College Park, 2003. Three Essays on Mortgage-Backed Securities: Hedging Interest Rate and Credit Risks.

This dissertation consists of three essays concentrating on hedging interest rate and credit risks of mortgage-backed securities (MBS). The first essay concentrates on the problem of how to efficiently estimate the interest rate sensitivity parameters of MBS. Monte Carlo simulation is used to derive perturbation analysis (PA) gradient estimators in a general setting. The Hull-White interest rate model and a common prepayment model are then employed to derive the corresponding specific PA estimators. Using these estimators, the impact of term structure shifts on various mortgage products is analyzed. The second essay addresses the problem of how to measure shifts in the yield curve more realistically and how to use these risk measures to better hedge the interest rate risk associated with MBS. Finally, the third essay tackles an empirical question. Specifically, the application of a new regression technique on credit spread data. The model produces estimates that are consistent with prediction from Merton's structural model.

Edelberg, Wendy Marianna. The University of Chicago, 2003. Using Observable and Unobservable Default Risk to Explain Changes in Heterogeneous Consumer Loan Terms.

This dissertation shows that lenders increasingly used risk-based pricing of interest rates in consumer loan markets (including mortgages) during the mid-1990s and investigates three resulting predictions. First, the premium paid per unit of risk should increase. Second, debt levels should rise. Third, fewer high-risk households should be denied credit. Investigation reveals that for those obtaining loans: (1) the premium paid per unit of risk did rise as predicted; (2) borrowing levels and debt access increased during this time period; and (3) credit access increased for very high-risk households as expected. However, increases in accompanying risk premiums make the aggregate level of borrowing in this group indeterminate. In addition, this work tests for adverse selection and moral hazard in consumer loan markets. The findings suggest borrowers self-select into contracts with varying interest rates and collateral requirements. Therefore, loan terms may have a feedback effect on consumer behavior.

Goncharov, Yevgeny. University of Illinois Chicago, 2003. Mathematical Theory of Mortgage Modeling.

Option-based and empirical mortgage rate-based models are the two main methods employed in valuing mortgage contracts containing embedded call options. This dissertation develops a framework that generalizes both approaches. The analysis of prepayment intensity functions and borrower's refinancing incentives advances our understanding of mortgage securities and makes a significant contribution to our ability to predict prepayment. This work, in particular, shows why modern option-based models imply large transaction costs and are very slow to prepay borrowers.

Handforth, Francis Roy. The University of Mississippi, 2003. A Real-Time Index of Single-Family Residential Real Estate.

This work examines the efficacy of developing an active and liquid derivatives market, where the underlying asset is residential housing. Currently there are two real estate indices available by ticker symbol; however, neither presently supports a derivative instrument. Advances in telecommunications, computing and the use of semi-automated standardized appraisal methodologies make the development of such an index feasible. Using house price data for Alameda County, California, a plan is outlined for the development of a regional house price index. The large size of the asset class highlights the importance of securitization for the single-family residential real estate market.

Laingen, Christopher Ryan. South Dakota State University, 2003. Golf Courses and Driving Forces: Ecoregion Land Use and Land Cover Changes.**

Golf course development has strongly influenced land use and land cover. Since 1950, the number of golf courses in the United States increased from roughly 4,000 to over 15,000. Each course covers hundreds of acres of land, which does not include adjoining real estate developments or supporting urban infrastructure. The fundamental objective of this thesis is to use EPA Level 3 Ecoregions as a spatial framework to describe how golf-related land use and land cover have varied both temporally and spatially. Socioeconomic factors such as population change, migration, economic prosperity, amenity areas and affluence are all found to significantly influence land use and cover in the presence of golf course development.

Lam, Yat Ming Eddie. Chinese University of Hong Kong, 2003. Option Theory for Mortgages and Mortgage-Backed Securities.

This dissertation concentrates primarily on developing an option-based model for residential mortgages and mortgage-backed securities. This work's primary contribution is its alteration of traditional mortgage valuation models. In particular, this study combines prepayment, delinquency, default and recovery of delinquency into a single model and develops a simulation program to generate different cash flow scenarios. Several findings are elaborated in this dissertation concerning mortgage prepayment. For example, the model for this study identifies contributing factors to mortgage prepayment, and develops a logistic regression model to describe prepayment behavior.

Li, Xiaowei. Stanford University, 2003. Money, Finance, and Economic Development.*

This dissertation contains three essays on related but different topics concerning money, finance and economic development. The second essay examines the relationship between finance and economic development. Specifically, current consensus holds that tightening borrowing constraints in the mortgage market promotes savings. This study, however, employs a six-period overlapping generations model with endogenous growth and a method of simulation to demonstrate that this might not be the case. In particular, the current consensus is tenable if and only if consumers do not alter their tenure choices. Unfortunately, consumers do tend to postpone the purchase of housing under severely restrictive borrowing constraints, causing savings and growth rates to fall. Thus, for developing countries with scarce mortgage availability, expanding the mortgage markets to some extent is conducive to savings and growth.

Mathur, Shishir. University of Washington, 2003. Effect of Impact Fees on Housing Prices: Analysis of Quality Differentiated Single-Family Housing Market of King County and Snohomish County, Washington.

This work supplies evidence on the effects of impact fees on housing prices. Employing both hedonic and instrumental variable analysis with residential sold data from King County and Snohomish County, Washington, this dissertation finds that the effect of impact fees in King County is quite significant. Specifically, impact fees raise prices for new as well as existing homes by 135% and 147% of the amount of the fee, respectively. Conversely, impact fees did not have an affect on property located in Snohomish County. It is locally accepted that King

Country is preferred to Snohomish County. The study provides robust evidence that impact fees have an inflationary effect on property price in strong real estate markets.

McGuire, Patrick Michael. University of Michigan, 2003. The Changing Nature of Japanese Firm–Bank Relationships.*

It is well accepted in the banking literature that close bank ties between banks and their clients can lessen the asymmetric information and moral hazard problems that afflict public capital markets. However, there exists some recent evidence that banks operating in regulated capital markets may extract rents from clients. This study empirically investigates Japanese firm–bank relationships and challenges this traditional view on monitoring. In particular, this work's third chapter documents the positive relationship between land intensity and firm-specific beta coefficients synthesized from an APT–CAPM asset pricing model. This same relationship does not exist for other asset types. The chapter provides evidence that the Japanese real estate market acknowledged the riskiness of real estate investments prior to the market's collapse. Furthermore, there is evidence to suggest that Japanese bank's excessive land exposure may have resulted from corporate governance problems.

Mora, Nada. Massachusetts Institute of Technology, 2003. Essays in International Finance.*

This dissertation is a collection of three empirical essays concerning international finance. The second chapter has implications for real estate markets. In particular, the chapter investigates whether excessive bank credit influences asset prices. Employing data from the Japanese real estate market during the 1980s, the decline in bank lending to keiretsu firms represents a shock to real estate credit. Evidence exists that financial deregulation allows large firms to replace bank funding with financing from public markets. A key conclusion of this work is that those prefectures that experienced a larger loss in their banks' proportion of keiretsu loans experienced a positive increase in real estate lending, which appears to have fuelled real estate inflation in Japan.

Thebpanya, Sansanee. The University of Connecticut, 2003. Essays on Commercial Mortgage-Backed Securities.

This study contains two essays on commercial mortgage-backed securities (CMBS). The primary contribution of the first essay is its extension of previous empirical valuation models of CMBS. The model results are consistent with theory. In particular, variables describing quality of loans and pool diversification are significant in the pricing of new CMBS. The second essay studies the default and prepayment of individual loans underlying CMBS within a competing risk framework. The findings in this second essay indicate that the effects of some variables influencing default and prepayment decisions vary significantly across property types.

Wu, Yi-Hwa. University of Utah, 2003. Space-Time Accessibility Measures Within Dynamic Transportation Networks.

Most transportation models are focused on maximizing traffic volume. However, activity participation is more important than travel itself. Space-time accessibility measures are alternative approaches to evaluate an individual's freedom for activity participation. The objective of this study is to expand space–time accessibility measures within time-dependent transportation networks. Two space-time accessibility measures are proposed: Dynamic Network Time Prism (DNTP) and Dynamic space-time Accessibility Benefit Measures (DABM). DNTP defines a maximum accessible travel planar area under a limited time budget and can delimit the activity choice set for accessibility benefit measures. DABM incorporates three complementary views of accessibility measures: space–time prism, attraction-accessibility and benefit measure approaches. The study concludes that DNTP has potential to aid in wireless locations decisions and DABM can provide an efficient tool in real estate analysis and serve as an effective urban development tool.

Zhao, Jing. Ohio State University, 2003. Household Debt Service Burden Outlook: An Exploration on the Effect of Credit Constraints.

This study analyzes household debt levels in the United States by using a debt service burden measure, which represents the relative portion of debt repayments to household income. The 1998 Survey of Consumer Finances, a nationwide survey sponsored by the Federal Reserve Board, provides the data for this study. Ordinal logit analysis is employed to model the probability of a household falling into a higher versus lower burden tiers. The findings of this study suggest that: (1) credit-constrained families are more likely to be in a higher burden tier; (2) college attendees, married couples, working individuals, those with mortgage payments, lower income households, those with a low liquidity ratio and numerous credit cards have a higher probability to be greatly burdened; and (3) credit-constrained families may have to pay higher interest rates, which leads to a larger repayment burden.

 Copies of most of the complete dissertations may be obtained by addressing your request to:

UMI
300 North Zeeb Rd.
Ann Arbor, MI 48106-1346
1-800-521-0600

* Indicates dissertations in which only a chapter or a significant part of the work is devoted to government policy and planning, real estate business and industry issues, property, contract and transaction types, real estate decision-making processes, market analysis, methodological and theoretical issues, or other real estate related issues.
** Indicates a master's thesis. This particular thesis is included due to its relevant and timely topic.