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論文題名　　　　　企業の不動産保有と企業価値、短期流動性、
　　　　　　　　　事業投資

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１．論文の内容の要旨

This paper analyzes the impact of corporate real estate holdings on corporate value and derives a theoretical model that reveals the potential long-term investment capacity level based on the firm's short-term liquidity level.

The aim of this paper is to investigate the impact of corporate real estate holdings on the firm value, short term liquidity and capital-intensive long-term investment that is necessary to maintain competitive advantage.

Chapter 1 illustrates the motivation of this paper, which is to investigate the impact of using underutilized corporate real estate to fund long-term capital-intensive projects and to maintain short term liquidity to avoid financial distress in the form of credit risk. The paper takes the point of view that a careful analysis is necessary to reveal the true value of corporate real estate holdings because the holding of real estate can take various forms.

Chapter 2 conducts a thorough survey on the relevant literature that properly positions the contributions of the research. The literature review leads to the result that there seems to be no clear consensus on how corporate real estate affects firm value in the form of return on assets, return on equity and corporate beta (systematic risk). This issue is investigated in chapter 3 by collecting data and adding additional explanatory variables to a linear regression model. A careful literature review is done on real options, starting from seminal papers on real estate option valuation such as Titman (1985) and Williams (1991). The real option related literature serves a base case for the model proposed by Moreno-Bromberg and Rochet (2018), which is further extended in chapter 5.

In chapter 3, the issue raised in chapter 2 is addressed by collecting corporate real estate data by carefully reading through security reports and financial statements. This original database allows the addition of explanatory variables related to the contribution level of real estate income to firm value related indicators. In addition to such explanatory variables, the paper extends the existing linear regression model by adding such variables as the market/book ratio of real estate etc. The proposed model analyzes the impact of corporate real estate holdings, leverage and total assets on the firm's return on assets and free cash flow. This part builds on the model proposed by Liow (2004) and Fukushima et al.(2010), in the sense that we can better observe the investments necessary to maintain the firm's core business. This is further investigated with additional measures to reveal the impact of cash flow generated by

corporate real estate holdings on the firm's return on assets and free cash flow. The empirical results not only suggest that corporate real estate holdings related cash flow have a positive impact on ROA that provides an opportunity to increase future operating cash flow, but also on the free cash flow itself. This implies that real estate holdings can potentially enable sustainable corporate investment to maintain the firm's core business.

Chapter 4 introduces a theoretical framework that models the cash flow behavior of risky long-term, capital-intensive projects and underutilized internal resources such as corporate real estate that can potentially fund long-term capital needs. The model builds on Moreno-Bromberg and Rochet (2018) in a way that initial liquidity levels, long-term capital needs and cash flow generated from the underutilized assets are explicitly modelled. This allows us not only to model the growth opportunities (acquired as the long-term investments), but also helps avoid liquidity problems incurred by capital-intensive projects. The potential benefit of implementing such a model is demonstrated by observing the simulated liquidity level using parameters estimated from well-established Japanese firms whose business relies on long-term, capital-intensive projects.

The extended real option model not only considers the optimal cash holding level necessary to avoid financial distress, but also incorporates the impact of having a steady cash flow generated from corporate real estate holdings. The discrepancy between the optimal cash holding level and real cash holding level is analyzed for the top 100 firms sorted by their market to book ratio of real estate value. This serves as a proxy of the quality of real estate in terms of location and versatility in potential usage. The 100 firms are classified into four quadrants depending their return on real estate revenue and operating profitability. A regression analysis with dummy variables representing each quadrant measures the impact of real estate / operating profitability on the return on assets / return on equity. The impacts are statistically meaningful, which indicates that the utilization of corporate real estate may enhance firm value. Finally, a detailed case study of firms chosen from each quadrant is conducted, which shows that a corporate financial strategy such as real estate utilization might help improve firm value.

２．論文審査の結果の要旨

The dissertation conducts a thorough survey of the relevant literature that

properly positions the research's contributions. The paper contributes to the literature in twofold ways. The first contribution is the construction of an original database that enabled the analysis of corporate real estate based on its corporate usage. This is different from most of the past literature because it requires a careful read of each security report and financial statement. The second contribution lies in building upon previously proposed linear regression models that were not able to capture the characteristics found in the originally constructed database.

The dissertation not only conducts a thorough survey of the relevant literature, but it also builds on the past literature by proposing a linear regression with additional explanatory variables in chapter 3. The additional variables revealed the impact of corporate real estate on firm value. It should be noted that such an analysis could be done only after constructing the original database that is used to perform the empirical investigation.

The real option model of Moreno-Bromberg and Rochet (2018) requires a good understanding of stochastic calculus and is complex. However, the extensions made in chapter 4 are very straight-forward so that the interpretation of the empirical analysis remains intuitive. Finally, the paper provides insights on how to utilize corporate real estate, which gives hints on future corporate decisions. An investigation of its relation to corporate policy may be considered in future research.

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