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Value impacts of energy efficiency retrofits on commercial office buildings in Toronto, Canada

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Highlights

- Previous comparable studies are discussed.
- Case study building pre- and post-retrofit rental and occupancy data are analyzed.
- It was determined that occupancy data are critical in the analysis of value impacts.
- It was concluded that higher rent does not necessarily indicate a higher value.
- A method for incorporating rent data into building value calculations is discussed.

Abstract

This study strengthens the business case for building energy efficiency retrofits in Canada by studying the relationship between building energy efficiency and value. This is accomplished through a detailed examination of four large Toronto commercial office building retrofit case studies using pre- and post-retrofit energy and financial data. To assess the change in asset value with retrofit improvements, the income capitalization approach to building appraisal is adopted. This model provides a link between energy efficiency and value through net operating income. Due to the challenges of obtaining energy-use and financial data, the sample size is small. However, even though the data is limited, the analysis reveals that energy retrofitting buildings can decrease operating costs, increase occupancy rates, and increase effective rent (rental revenue), thereby increasing net

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