## Energy Performance Certificates and the Capitalization of Utility Costs in Rents: The Potential Role of Asymmetric Information and Uncertainty

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In the Norwegian rental market, tenants normally pay utility costs directly to the provider, but some contracts have utility costs included as a fixed component in the rent. In an efficient market, the premium of utility cost inclusion should equal the expected consumption cost, which is likely to vary with the energy efficiency of dwellings. This paper is the first to study the relationship between utility cost inclusion, energy efficiency—measured by a dwelling's Energy Performance Certificate (EPC)—and rental prices, using data from the Norwegian market ( $N \approx 670,000$ )

First, we investigate potential drivers behind the decision to include utility costs in rents. We find that landlords of labeled dwellings are more likely to include utility costs, which may be explained by higher uncertainty regarding energy efficiency and consumption among unlabeled dwellings. Moreover, the likelihood of utility cost inclusion is higher among energy-efficient dwellings than among energy-inefficient dwellings. This may be related to the calculation of expected energy consumption, because varying tenant preferences for energy consumption have smaller financial impacts on dwellings with higher energy performance.

Next, we investigate the impact of utility cost inclusion on rents. We find that including either electricity or heating costs yields rental premiums, and that the premium is of a reasonable magnitude compared to the expected energy cost. Finally, after considering the energy efficiency of dwellings, we find that the utility cost premiums are generally lowest for non-green dwellings, while no significant difference is found between the green and unlabeled utility cost premiums.

Although the utility cost premium is expected to be higher for energy-inefficient dwellings due to increased energy consumption, we find that this is not the case. Because the empirical results are not in line with the expectations of an efficient market, we discuss other factors related to asymmetric information and uncertainty as explanation for this market inefficiency. Although we are unable to directly test competing mechanisms which may explain these results, reduced adverse selection and energy efficiency uncertainty may be contributing factors. If indeed they are the main drivers of our results and labelling does not entail substantial compliance and/or administrative costs, market efficiency may be enhanced by the added information provided by label adoption.

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