

Rent Deregulation, Tenure Choice, and Real Estate Price Expectations

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GDN Non-technical summary

The present paper examines the effects of regulated rent deregulation currently taking place in the Czech Republic on tenure choice of households and uses the actually observed tenure choice of households to deduce the distribution of real estate price expectations. Rent deregulation in the Czech Republic is a natural experiment under which regulated rent appreciation since 2007 has depended explicitly on real estate prices. This dependence induces predictability of regulated rent appreciation, which can be usefully exploited. The impact of deregulation is studied using unique household consumption survey data. The advantage of this dataset is the possibility of recording households' actual tenure choices over time due to the fact that only 25% of the sample is changed every year. For measuring the effect of rent deregulation the probit regression model of tenure choice is used and for deducing the distribution of property price expectations the present value model of owning versus renting is employed. The key findings indicate that:

- rent deregulation makes households in regulated apartments more likely to own real estate while the opposite is true for free market renters and owners;
- the net present value of buying property versus renting is an increasing function of the real estate price appreciation for renters in regulated apartments;
- households' expectations of housing price appreciation were fairly conservative over the analyzed period since expected appreciation rate is rather low compared with actually observed appreciation rates.

KEYWORDS: Czech Republic, expectations, rent regulation and deregulation, real estate prices, tenure choice.

The majority of rental markets in Central and Eastern European countries before 2000 were characterized by simple non-targeted rent regulation consisting of setting upward ceilings on the rent level. After 2000, some countries such as Bulgaria and Estonia abandoned the practice and others, such as Poland, significantly reformed this policy. The Czech Republic, however, introduced its plan for rent deregulation only in 2006. The plan aimed to reach a target rent given by 5% of the market real estate price by 2010; after 2010, rents would be completely deregulated. Prior to 2010, a law set the maximum annual appreciation for regulated rents, which explicitly depended on the market price of real estate. This feature makes it very convenient to investigate the impact of the deregulation process on the tenure choice of households and enables us to deduce real estate price expectations of households living in rent-regulated apartments based on their choice between renting and owning.

This paper primarily focuses on analyzing how rent deregulation affects the tenure choice of households, i.e. the decision to own vs. to rent. This aspect of deregulation has been neglected in the literature. The degree of deregulation is quantified in two ways, depending on the current status of a household. If the household rents a regulated apartment, the maximum annual rent appreciation serves

as a measure of deregulation. An increase in rental costs implies either the necessity to pay higher rent closer to free market rent or to switch to owning instead of renting. If the household currently pays market rent or owns its dwelling, our measure of deregulation is the ratio of the number of regulated apartments to the number of all rented apartments. This measure reflects the anticipation that previously regulated housing units would soon increase the supply of unrestricted rental housing, thus leading to a decrease in free market rents in the Czech Republic (see Lux and Sunega (2003)). Lower market rents should translate into a lower likelihood of being an owner in the next period. Furthermore, standard household characteristics such as income, age, education, and two additional variables of interest, namely interest rate on mortgages and real estate price prevailing in the household's location, are also controlled for.

The dataset employed in estimations is based on a series of Czech household budgetary surveys in a rotating sample where only some 25% of households are replaced each year. This feature allows following a particular household for two years in a row and seeing if its status remained the same or changed during this period: renters living in regulated apartments can become owners or renters for market rent; renters paying market rent can become owners; owners can become renters on the free rental market. The tenure choice between year t and $t+1$ is recorded and datasets for periods 2005-6, 2006-7, and 2007-8 respectively are constructed. The effect of rent deregulation on tenure choice is analyzed using standard models of limited dependent variables (logit and probit models). Obtained results demonstrate that appreciating regulated rents make households living in regulated apartments seek ownership of the housing more frequently. As expected, anticipated decrease in free market rents resulting from rent deregulation decreases the probability of owning for renters on the unregulated market. Rent deregulation makes current owners more likely to sell their apartment and to rent since the market rent is expected to decrease.

The next objective of this paper is to use the specific nature of the Czech deregulation law to characterize real estate price expectations for households living in apartments with regulated rents. For such households, the present value of renting depends on the growth rate of regulated rents, which in turn depends explicitly on property prices. The only source of uncertainty is the price process. A similar scenario holds for the present value of property purchase, which takes into account the fact that property can be sold in the future. Households in regulated apartments compare the present value of owning with the present value of renting a regulated apartment. Using the fact that regulated rents explicitly take into account real estate prices, and assuming that these follow an AR(1) process, the net present value (NPV) function is solved for the real estate price appreciation, which makes households indifferent between an apartment purchase and renting or makes NPV of renting vs owning equal to zero. The net present value increases if the price appreciation increases. Therefore, the appreciation making NPV equal to zero can be interpreted as the upper bound for expectations of the households which remained renters and the lower bound for households which did not. The implied upper bound for expected real estate price growth was on average 1.8% in 2006-7 and 2.3% in 2007-8. The implied lower bound was on average 2.2% in the same two sub-periods. This indicates that household expectations were fairly realistic at the time, showing no signs of irrationality. The rising prices were more likely to be due to underlying fundamentals, i.e. demand and supply factors other than expectations.