Determinants of the real estate market in the city of Lisbon

Summary

The real estate sector has always been an important pillar of economic growth, job creation or household well-being, and it is also a barometer of the state of health of the economy and investor confidence.

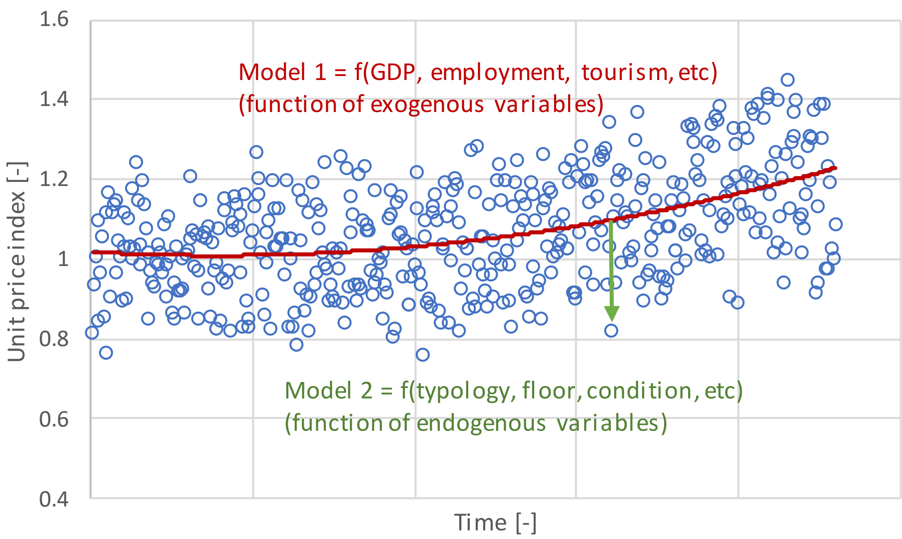
After the sub-prime crisis, the ensuing economic recession, which resulted in Portugal's financial assistance programme in 2011, followed a period of severe restrictions on household income and housing loans, with a strong impact on real estate market prices. On the other hand, after the end of the financial assistance period, from 2014 and mainly from 2015, the economic and price recovery was a reality, accompanied by the evolution of other important indicators such as GDP growth or the reduction of the unemployment rate. These developments, with very different responses at these different times, suggest the inter connection between property prices and major macroeconomic variables.

The objective of this work is to analyze the endogenous and exogenous mechanisms of price composition in the real estate market, developing price prediction models and investment decisions that help the definition of effective public policies in the real estate market. This research will analyze the possible correlations between the variation of real estate prices and the evolution of the main socioeconomic variables, with an impact on the real estate market of the city of Lisbon.

Recognizing the economic and social importance of the real estate sector, job creation, GDP growth, urban planning and management of cities and decisions on investment plans in large infrastructures, we intend to analyze the correlation between the evolution of the main economic variables and the variation of property prices. This study will first have an analysis of historical data and then a predictive slope, based on statistical inference (e.g., multiple linear regression, Bayesian networks), in which the behavior of one variable is predicted based on the prediction of the behavior of a set of other variables for which some methodologies or prediction bases are consolidated.

Keywords

Real Estate, hedonic models, macroeconomic factors, housing.



Prediction models.

PhD student

Pedro de Andrade Quirino Rosa

PhD program

Civil Engineering (IST, University of Lisbon)

Supervisor

Carlos Oliveira Cruz (CERIS, IST, University of Lisbon)

Co-supervisor

Vitor Faria e Sousa (CERIS, IST, University of Lisbon)

Period

2018-2024

Funding

-