Using Hedonic Pricing Model to Analyze Parameters Affecting Residential Real Estate Value in Artvin City Center

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SUMMARY

Residential real estates have heterogeneous nature because of their various structural, positional, environmental and socio-economic characteristics, resulting in a different value and pricing of real estates. A realistic prediction of real estate value is of great interest for buyers/sellers and for those who want to invest in real estate. In this context, determining the parameters and their degree of importance affecting the value of residential real estate has recently been the subject of many studies. Herewith, the aim of this study is to determine house characteristics and their contribution degrees to sales prices in the city center of Artvin by using Hedonic Pricing Model (HPM) with semi-logarithmic functional form, one of the most commonly used methods. In this study, correlation and regression analyses were applied for 73 residential real estates (with the data of actual sales value) that were put up for sale in the city center of Artvin in 2015. Before applying regression analysis, it is important to test spatial dependency of data for the nature of the classic statistics relying on the fact that spatial data is independent from each other. For this reason, the sales prices of residential real estates with their known geographical locations were tested with Moran's Index and it was detected that there was no spatial dependency on sales prices. Thus, a hedonic housing valuation model based on non-spatial technique was developed. It was determined that parameters of floor area, age, development level, floor (at ground level and below ground level) and Carsi Neighborhood (proximity to public buildings) were statistically significant and affected the residential real estates sales prices by examining the analyzing results. The coefficients of the variables were also found consistent with the theoretical expectations. Five out of the supposedly effective 22 parameters were able to explain 80% of the variations on price. This figure indicated that the developed model can be used for houses subjected to sales in Artvin city center. In addition, the results revealed that the parameters affected the value of real estate vary according to local and geographical attributes of the city. This result emphasizes the importance and necessity of city-based works.

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