



## **Urban Transformation Measures: Interpolation of Land and House Prices in Istanbul**

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Although one of the most important factors that affect housing market is land price, its affect has not been widely investigated in the literature. However, land values have remarkable affect on construction costs which has great importance for the supply responses to increasing housing demand. Therefore, this paper raises two main questions to search. The case area for the investigation is Istanbul. The former question is: do land prices contribute the variance in house prices? This question is tested by interpolation technique in Geographic Information Systems (GIS) in order to reflect whether the highest house prices are recorded for the high land price regions of the Istanbul or vice versa. Interpolation technique provides to estimate spatially correlated variables and to visualize this spatial correlation in a continuous surface. Of all interpolation techniques, kriging method is utilized in this paper to generate estimations with the data of both land and housing prices at sampled locations.

The latter question is: how do land prices affect the emergence of a local market? Researches show that an increase in land prices may cause the potential decrease in housing supply while the decrease in land prices may have positive influence on its supply. By applying geographic weighted regression, it is examined whether land and house prices are in consistency. It is assumed that in regions where land prices help to explain house prices moderately, the other properties are in poor condition. On the contrary, at areas where land prices explain house prices inefficiently, other properties are relatively in good conditions. By following the first assumption above, the areas corresponding to the assumed situation are recommended as residential transformation areas in Istanbul. Property values are low in these kinds of areas, so their exchange values attract developers to invest these areas.

**KEY WORDS:** Housing markets, land prices, house prices, geographic weighted regression, Istanbul.