

Distance Dependent Approach for the Determination of Standard Land Values by Multiple Regression

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SUMMARY

The topic of this paper is the question to what extent may be achieved an objectification of determination of standard land values by a multivariate polynomial which describes price changes by parameters depending on distance. The distance is modeled by travel time. Especially the registration of travel time by public transport demands big effort.

There must be an almost radial structure of decreasing standard land values with increasing distance to the city center for the applicability of the algorithm.

First results of the multiple regression demonstrate the big influence of the distance to the city center, so that further distances to schools or basic services do not lead to a qualitative improvement of the algorithm. In the considered example, the travel time by public transport was even so dominant that all other particular parameters had no significant influence. The influence of infrastructure has to be considered by the committee of valuation experts by means of professional discretion.

The algorithm provides convincing results taking into account the precision of stand land value estimation. The level of standard land values is very good modeled by the multivariate polynomial, if there are high quality standard land values.

Generally, it will not be always possible to adopt the exact result of the calculation, but the algorithm provides very important arguments for the justified raise or reduction of standard land values or to its definition, respectively, if the dispersion of existing buying prices is too big or if there are no buying prices.