An econometric model MLRM + Analytic Hierarchy Process (AHP) to select the best alternative for a real estate investment. Case: Apartment in Panama City, Panama.

Miguel Camacaro Pérez[1], Ernesto Mock Díaz[2]

[1] *Appraisers Reading Club*, Venezuela -mundovalor@gmail.com.
[2] *Appraisers Reading Club*, Panamá - proavaluos@yahoo.com

ABSTRACT

A person interested in making a real estate investment, starts a search process through real estate websites, finding several alternatives: real estate products differentiated in a range of prices that fit his purchasing power. In order to assist the future buyer in the decision making process, the real estate consultant must evaluate the most important characteristics of each alternative in order to offer a balanced quality-price ratio, in the best case, using a selection procedure with empirical basis. This article presents a case study for the selection of an apartment located in a sector of Panama City (Panama), for which offers with a price range between [165,000 and 215,000]USD were analyzed, using one of the multiple attribute decision making method (MADM), the Analytic Hierarchy Process (AHP). The criteria or variables considered in the multi-criteria method were: area, parking space, age, quality, building floor and distance to the value pole, which, according to the econometric model of a sample of 97 offers, were statistically significant in explaining the total real estate prices. The entire procedure established for applying the AHP was followed, but the Saaty Table was not used to structure the pairwise comparison matrix of the criteria. For the determination of the eigenvector of the criteria, the importance of the intensity in the fundamental scale was replaced by the ratio between the standardized coefficients (t^*) of each independent variable of the econometric model. The ranking of the overall weighting vector suggested that the best option was PH Coral Tower, which coincided with the solution provided using the Saaty table, but with more robust results, thus mitigating the subjectivity of the heuristic solution provided by the original AHP procedure.

Key words: model, econometrics, multi-criteria, real estate, appraisal.