

Market Approach Methods for Mass Appraisal

Colorado State Statutes [39-1-103 (5) (a) and (8) (a)] require all county assessors to value residential real property solely by the market approach. There are several methods used to determine values by the market: Paired Sales, Market-Adjusted Cost Approach and Multiple Regression.

★ Paired Sales Method

Paired Sales is the primary method of single-property appraisal. This methodology measures one property sale against a similar property sale to determine a specific adjustment for specific amenities. An example would be two ranch style home sales. Both have the same square footage and age, but one has a garage and the other does not. It is generally impractical in mass appraisal due to the quantity of sales to individually analyze each attribute adjustment.

★ Market-Adjusted Cost Approach Method

Market-Adjusted Cost Approach is the premise that a certain quality of property has a base value of X dollars per square foot, with added factors for every additional amenity. A final market adjustment is applied to each neighborhood, positive or negative, to bring the neighborhood to "market value". The fundamental weakness is that the Cost Approach does not reflect the supply and demand relationship in the market place because the market adjustment factor is applied to every amenity, whether or not the market reflects it.

★ Multiple Regression Analysis Method

Multiple Regression explores and quantifies the relationship between two or more components of known and available data (sale prices and property characteristics) to generate a market value. In essence this methodology uses aspects of both the paired sales and cost approach methodologies by determining which property characteristics are the primary contributors (Cost approach) and the amount they contribute (Paired sales).

Regression does not require strict similarity between property sales because it estimates the value contribution (coefficient) for each attribute using a "goodness of fit" or error-minimizing technique. This methodology produces statistics about the quality of the attribute contribution that the other methods cannot provide. These statistics help evaluate the predictive accuracy of the regression equation, or essentially, the ability to predict sales price.

Value Models

The value models used for Douglas County are the result of many MRA iterations. We review the data on a county-wide basis to review market trends. We also review the value models used in previous reappraisals for trends and consistency. This global model can then be used as a reference when specific neighborhoods don't have many sales. Each economic area and property type (Single Family, Townhome, Condo) have different value models. Before values are finalized, we review each neighborhood for any uniqueness that is not handled with the economic area value model. We test for statistical compliance and equitable valuation. Overall, the goal is to provide a value model that best reflects market value.