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I recently read with interest the comments provided by Mr. Johnson that referred my hedonic analysis of the change in the value of lakeshore real estate on Lake Koshkonong. While I found the comments to be provocative, I determined that there were several concepts that needed to be clarified.

The first issue I would like to address is the role of comparable house analysis, repeat sales analysis and hedonic analysis. Each of these tools has a place in real estate analysis. However, the dismissal of any ignores the value each has to the process. As noted in my report on hedonic analysis, the use of comparable analysis is an excellent tool to determine the value of homogeneous properties that are regionally proximate and sell within a relatively comparable time frame. The challenge in using this methodology in assessing the value of real estate on a lake is the heterogeneous nature of a lake neighborhood.

Repeat sales are an excellent measure of aggregate property values. However, this method requires large numbers of sales and lacks the tools to identify the environmental externalities included in the sales price. As a result, institutions such as the Appraisal Institute often publish research using hedonic analysis to identify the positive and negative externalities embedded in real estate. Mr. Johnson notes that there is a \$20,000 difference in housing price appreciation between Lake Sinissippi and Lake Koshkonong. This cannot be attributed to the lake given it does not account for the heterogeneous nature of real estate. These issues are outlined in my report on hedonic analysis which identifies the aggregation and identification issues.

A second question raised in Mr. Johnson's commentary was the difference in the size of the data set used in the 2006 study and the recent study. This difference arose from changes in data collection methods. It is critical to recognize that this type of research is based on a sample not a population. As a result, the research identifies the methodology used to acquire the data so that it can be replicated. Our data came from the register of deeds databases, combined with assessor hedonic data, and sales data regarding the variables of interest. I have published a number of articles using these methodologies in peer reviewed journals.

While, in our current research, Dr. Winden and I have employed different approaches to collect the data, the results did not change. This is not surprising since, as both literature reviews stress, over 40 years of research on this topic have produced consistent results. These results find that lower lake levels, smaller lakes and less clear lakes result in property values declines. This is the result of shallower, smaller and less clear lakes. In addition, in response to Mr. Johnson, this change is consistent whether the changes are measured objectively or subjectively.

One final comment regarding hedonic analysis is the idea that it is not used in FHA lending. This has merit—however; it is used in assessing the environmental externalities that need to be included in determining value. There are hundreds of peer reviewed, published articles using this technique. In addition, State and Federal environmental agencies use hedonic analysis in calculating cost/benefit analysis. One of the challenges in assessing value to real estate is the application of the correct tools to the appropriate problem. While a hammer is a wonderful tool for many applications, it is not the best tool in attempting to loosen a screw. In the same vein, a screwdriver may not be the best tool when attempting to drive a nail. In an attempt to determine the value of a singular house, matched sets are a valuable tool. However, in regards to aggregation, hedonic analysis is the more appropriate tool.

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