ABSTRACT

Spatial research has been plagued by the modifiable areal unit problem, or MAUP (Openshaw, 1979), for decades. The MAUP can be broken down into two categories, the scale or aggregation effect and the zoning or grouping effect. Recent advances in spatial science and technology have exacerbated the effects of the MAUP prevalent in many forms of research. In this paper, data was obtained depicting instances of foreclosures in Los Angeles County (also the study extent) in 2006-2008. This data was spatially joined to three sets of grids, or fishnets, covering Los Angeles County. The data was also spatially joined to three additional datasets: the individual parcels of Los Angeles County and two aggregations of these parcels. Five cluster analysis tools were used to analyze each of these seven total datasets. Each permutation involved the five tools, seven datasets, and multiple pre-selected distance thresholds to test for scale and zoning effects of the MAUP. There were a total of 137 successful iterations illustrating the aforementioned permutations. It was determined the MAUP is prevalent in this case study. Suggestions are made in determining future actions to combat the effects of the MAUP.