

# **ECOLOGICAL INFERENCE: A NEW APPROACH BASED ON SPATIAL ECONOMETRICS**

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## **Abstract**

In this note we compare the results obtained by the application of two alternative methods of ecological inference. The data is on per capita household disposable income in the 50 provinces and 78 municipalities of Asturias, Spain. The first method is based on Ordinary Least Squares regression model, which assumes coefficient constancy or homogeneity across space. The second method is based on spatial econometrics techniques, which deal with spatial autocorrelation and spatial heterogeneity, assuming spatial externalities and some kind of coefficient heterogeneity over geographic space. These second approach implies estimation by Maximum Likelihood or Two-Stage Least Squares to ensure good properties in the estimators.

**Key words:** Ecological inference, Spatial prediction, Spatial autocorrelation, Spatial heterogeneity, Disposable income.