GIS-Based Method for Delineating Urban Hinterlands in Northeast China

Fahui Wang[1], Fengjun Jin[2], Chaolin Gu[3]

[1]Department of Geography Northern Illinois University DeKalb, IL 60115
E-mail: fwang@niu.edu
[2]Institute of Geographical Sciences and Natural Resources Research, Chinese Academy of Sciences, Beijing 100101, China
E-mail: jinfj@igsnrr.ac.cn
[3]Department of Urban and Resources Sciences, Nanjing University, Nanjing, China
E-mail: Gucl2002@nju.edu.cn

Abstract
This paper describes a gravity-based method for delineating urban hinterlands, and applies the method to define hinterlands of major cities in Northeast China. Two major tasks are involved: calibrating network travel distances by railway and implementing the gravity model in a GIS environment. ArcGIS is chosen as the platform to illustrate the method. The paper's emphasis is on the methodology, i.e., how the method is implemented step by step in GIS. The study can be improved by using more accurate data and conducting more fieldwork.