Multivariate Spatial Association between Mortality, Unemployment, Divorce, and Crime in Jordan-2011

Faisal G. Khamis
Faculty of Economics and Administrative Sciences, AL-Zaytoonah University of Jordan,
P.O. Box130 / Amman 11733 / Jordan
E-mail: faisal_alshamari@yahoo.com

Abstract

Despite the wealth of research investigating the association between mortality, unemployment, illiteracy, and crime in the developed countries, limited studies have investigated this association in developing countries such as Jordan. The growth in socioeconomic indicators affects long-term health and could contribute to health inequalities that persist throughout life. This study was performed to investigate the multivariate spatial association between mortality, unemployment, divorce, and crime rates across Jordan’s governorates; to determine the spatial patterns of these indicators; and to examine whether governmental differences exist in 2011. The study design was a multivariate cross sectional spatial analysis. The data of 2011 were collected from the survey conducted in Jordan in 2012. Global and local Lee’s matrices for each governorate were investigated. The Monte Carlo simulation study was performed to find the p-values of global and local Lee’s matrix. Visual inspection of the spatial patterns of each indicator was shown by mapping.

The global and local results are presented for each governorate. No significant global spatial relationship has found but multiple significant local spatial relationships have found between the studied indicators in several eastern governorates. These conclusions illustrate the importance of identifying the governorates which have higher children mortality rates that have implications for social policy and public health interventions. Efforts should therefore be made at creating awareness on seeking early treatment for disadvantaged governorates. Further studies are required regarding these relationships.

Keywords: Spatial Association, Mortality, Unemployment, Divorce, Crime, Jordan, Lee’s matrix, Simulation study, Mapping