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A Time-Series Analysis of Unemployment for the Rockford Metropolitan Area Since 1990

Kent Larson
Illinois Wesleyan University

Diego Mendez-Carbajo, Faculty Advisor
Illinois Wesleyan University

Oral Presentation O4.3

A TIME-SERIES ANALYSIS OF UNEMPLOYMENT FOR THE ROCKFORD METROPOLITAN AREA SINCE 1990

Kent Larson and Diego Mendez-Carbajo
Economics Department, Illinois Wesleyan University

In recent years unemployment rates in the Rockford, Illinois, metropolitan area have changed in long term trend. We will explore the time series properties of the unemployment rate for the Rockford area using monthly data from January 1990 through November of 2011. The data was retrieved from the Bureau of Labor Statistics totaling 263 observation points. After seasonally adjusting the series and estimating its linear trend we determine its order of integration through the ADF and KPSS tests. Next, we induce stationarity by computing the first-order differences of their logarithmic values and proceed to identify the best-fitting ARMA(p,q) structure using the Box-Jenkins methodology. Finally, we conduct short-term dynamic and static forecasting.