

Public Abstract  
Dustin Sweet  
M.A.  
Economics  
Forecasting Unemployment with Spatial Correlation  
Advisor: Dr. Mike McCracken  
Graduation Term Winter 2005

Accurately forecasting unemployment can be an advantageous procedure. It can help with budgeting, planning, and predictions of economic conditions. One factor to consider is the possibility that an area's unemployment can affect another that is geographically close. If a forecasting model can be built that accounts for this relationship between neighbors, it can lead to more accurate predictions of the unemployment rate. This research has attempted to exploit this relationship between regions in Missouri and used it to make predictions of unemployment.

Using sixteen areas which were scattered throughout Missouri, I have constructed a model to account for this regional dependence and compared it to a commonly used baseline forecasting model. Both models were used to make forecasts and their accuracy was compared. The results imply that the model accounting for the regional relationships outperforms the benchmark on numerous occasions. This outcome gives evidence that accounting for dependence between regions is important when attempting to forecast unemployment.