This paper analyzes the degree to which unemployment in the state of Missouri is correlated between counties. We sought to determine if an event that impacts the unemployment rate in one county had any measurable impact on its neighbors based on physical distance between counties, as well as other factors such as the similarities between the general makeup of counties. To measure this impact, traditional measures of spatial correlation were implemented as well as forecasting accuracy calculated in order to determine if an unemployment shock "spreads" to others. We find that it does move from county to county. This can be used at the county level, for example, to better plan when events occur that impact the local labor market and those in surrounding areas.