

## **ABSTRACT**

My dissertation is about regional economic modeling for understanding local economy, economic impact analysis and forecasting. In the first essay, I developed a nonspatial version of community policy analysis model for Missouri counties. In my second essay, I introduced space into my model. I specified and estimated a model using generalized spatial three-stage least square procedures. In my third essay, using South Korean regional data, I compared forecasting accuracy of non-spatial, spatial lag, spatial error and spatial lag and error model using in-sample data. I also compared the impact estimates of nonspatial and spatial models. The spatial components appear to improve the accuracy of the intra-county impacts. It appears that the estimated parameters tend to be sensitive to the specification of weight matrices if the sizes of spatial units are heterogeneous and vice versa. Employment is the main driver of each of the model.