Variable Death is chosen as a dependent, it shows number of deaths in each Germany region in 2017 year.

A close up of a map

Description automatically generated

After merging this data with variables Fertility rate and Population, creating plot showing the number of deaths per 1000 people

A close up of a logo

Description automatically generated

A close up of a map

Description automatically generated

**SAR models**

* maximum likelihood gives following results

A close up of text on a black background

Description automatically generated

Both coefficients are statistically significant according to their p-value. AIC = 8144.3

A picture containing object

Description automatically generated

There is no spatial autocorrelation between variables considering p-value from Moran’s test

* least squares

A close up of a sign

Description automatically generated

In this case p-value is very small and it tells about existence of spatial autocorrelation

**SEM**

* maximum likelihood

A close up of a sign

Description automatically generated

Again, variables are statistically significant but AIC criteria better than in SAR model

A close up of a sign

Description automatically generated

There is no autocorrelation here because p-value is 0.5383

* least squares

A close up of a sign

Description automatically generated

Least squares shows another result, there exists spatial autocorrelation

**SLX**

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Variables are statistically significant. Adjusted R-squared = 0.1467 (not that great).

Output of Moran’s test:

A close up of a sign

Description automatically generated

p-value tells that there is a spatial autocorrelation