

# Arable land change for countries during 1961-2018

## Introduction:

- The study examines the arable land change of various nations from 1961 to 2018.
- Countries are clustered using k means clustering based on the percentage of arable land.
- Five clusters are created and their PCA plots are displayed. From one cluster, three countries are chosen.
- All country-specific curves are fitted with a distinct objective function. For the curve of Italy and Germany, a second-order polynomial function is applied. For the plot of Spain, a linear objective function is applied.

## Conclusion:

- From the plots, for Italy, there is a decrease in the arable land percentage.
- For Spain also there is a decrease, although it is not completely linear.
- For Germany, however, there is an increase in the arable land percentage

