Global Education Level Distribution and Prediction

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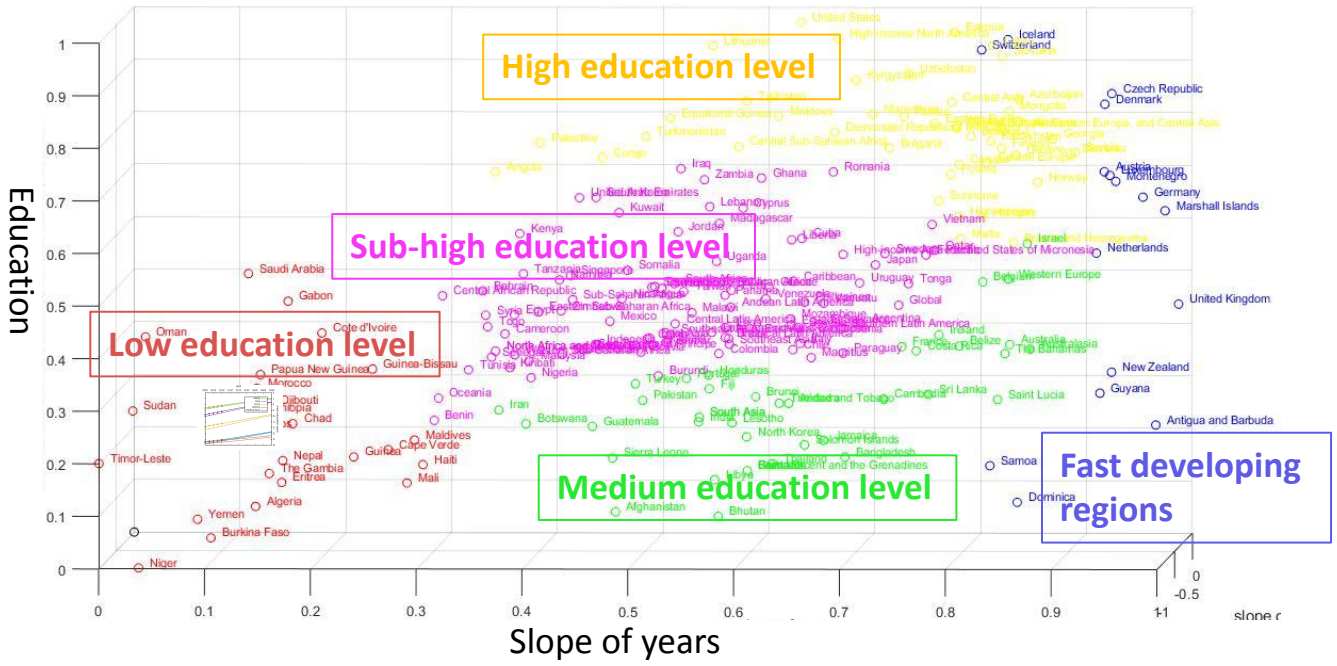
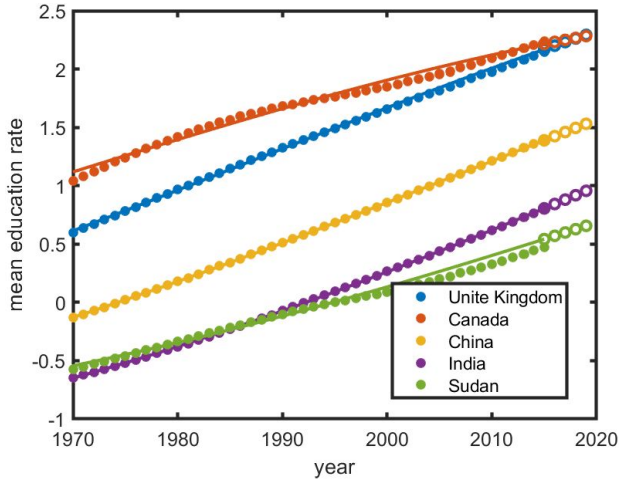
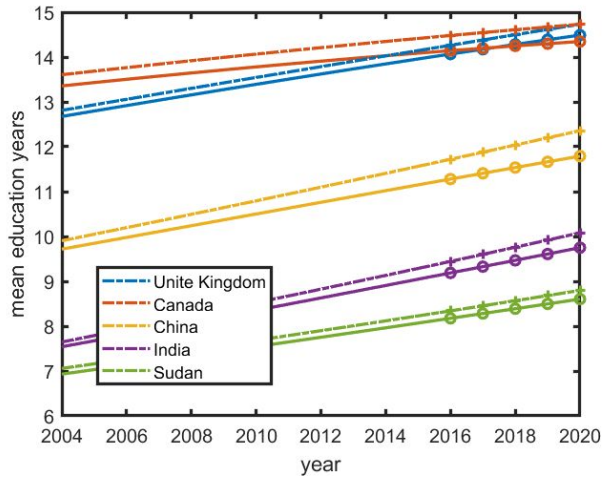
Clustering Quadratic regression → PCA → Hierarchical clustering



Prediction DMD vs Regression, 2016 - 2020





Global distribution:

- **Fast developing & High education level regions**: Regions from Europe, Central Asia, US and Canada
- Sub-**high & Medium education level regions**: Regions from Latin America, Oceania, the rest of Asia, and half of Africa
- **Low education level regions**: Regions mainly from Africa
- Stable society, compulsory education acts, and income contribute to high education level

Prediction methods:

- PCA for dimension reduction
- Hierarchical Clustering for classification
- Dynamic Mode Decomposition (DMD) for prediction

Conclusion

- Using hierarchical clustering techniques, the countries can be divided into 5 clusters.
- We used DMD and regression method to predict the education level from 2016 to 2020.
- Education difference between genders has a reverse trend with education level.