

Correlations Between Political Factors and Economic Prosperity

MADISON TURANO
DATA SCIENCE MS STUDENTS

1: Data and Overview

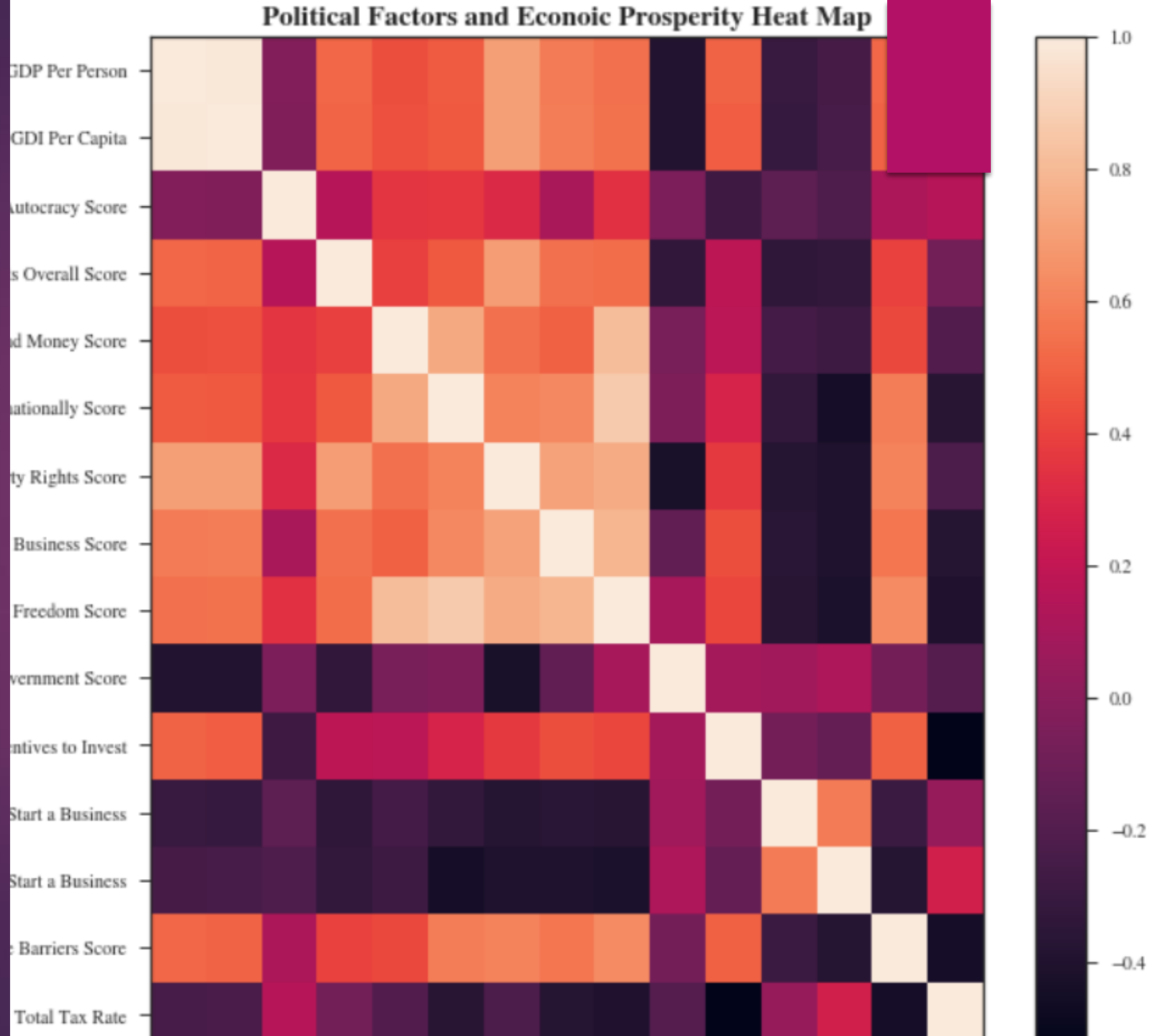
- ▶ Data from Human Progress and The World Bank
- ▶ Economic Prosperity:
 - ▶ Gross Domestic Product (GDP) per person
 - ▶ Gross Domestic Income (GDI) per person
- ▶ Political Factors
 - ▶ Taxation, Trade Barriers
 - ▶ Legal Structure and Enforcement

Questions:

What correlations are there between political factors and economic prosperity?

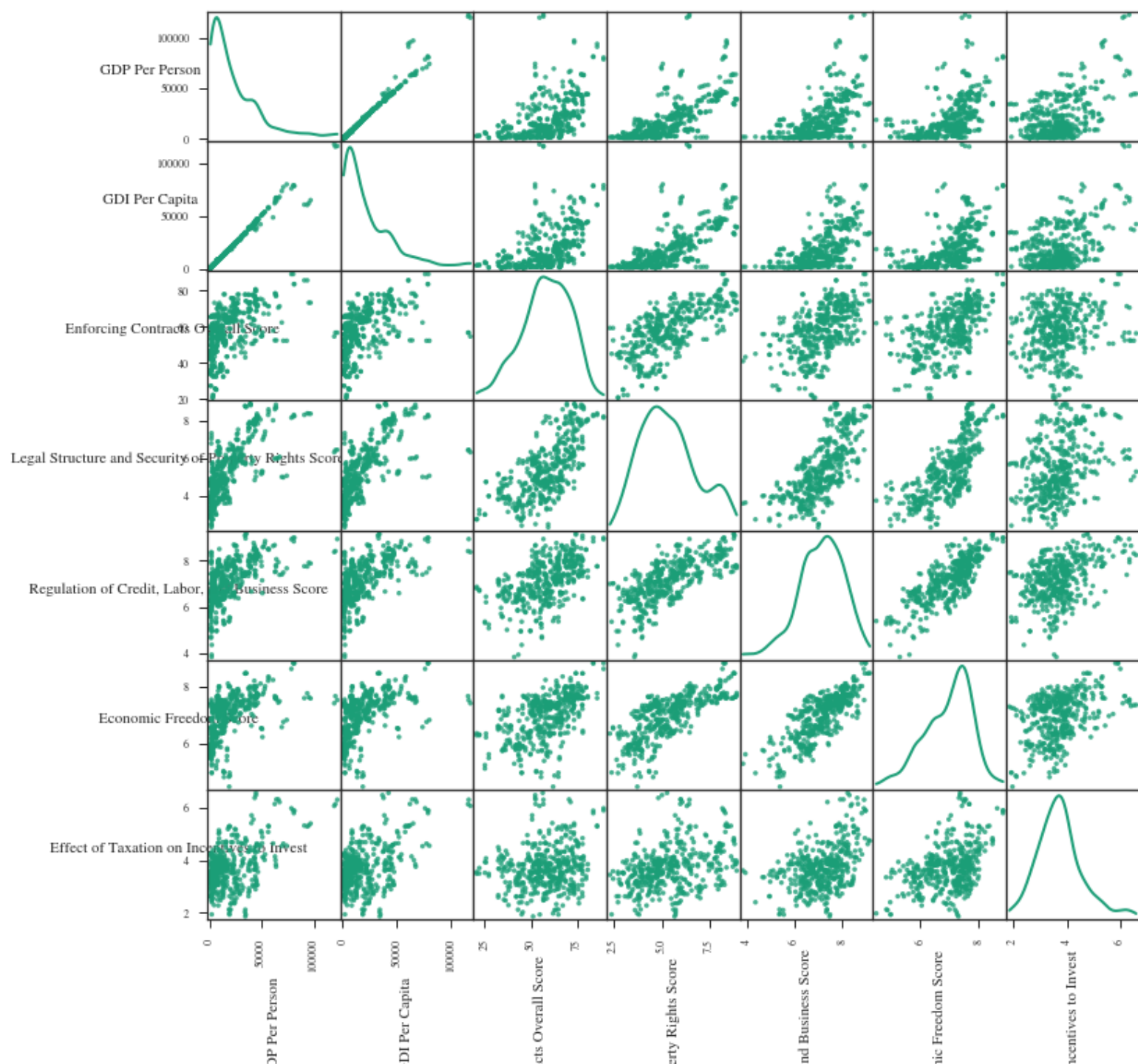
2: Heat Map

- ▶ High correlations with Enforcing Contracts, Access to Sound Money, Property Rights
- ▶ Low correlations with Dem. Vs Autocracy, Size of Government, Total Tax Rate



3: SPLOM Scatter Plot

- ▶ Strongest linearity for GDP is Property Rights
- ▶ Less with Economic Freedom and Tax Effect on Investment Incentive



3: Linear Regression

- ▶ Linear regression modeling using GDP Per Person and Security of Property Rights
- ▶ Figure 1: Reconstructions of data using linear regression model
- ▶ Figure 2: Prediction of Probabilities of GDP Per Person based on Property Rights

Figure 1

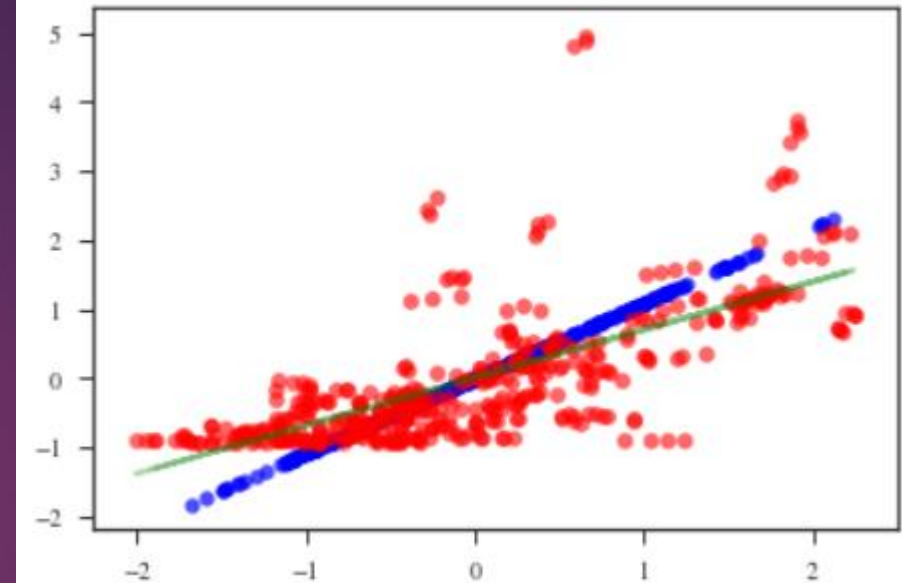
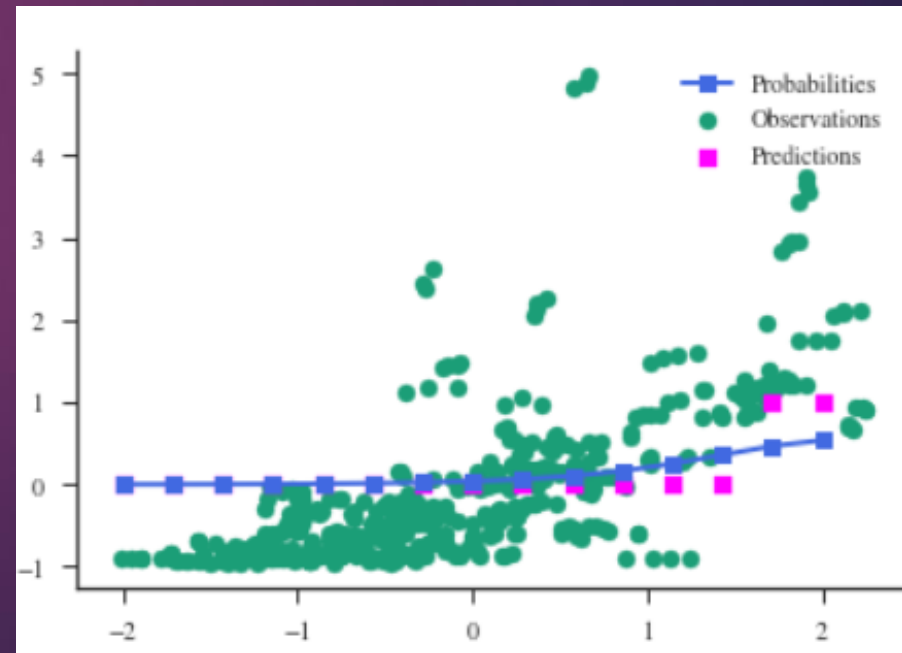


Figure 2



4: Clustering

► Clustering by Income Classification

