



Global trends in Income Inequality

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Background

- ▶ Explore global trends in Income Inequality using data from the World Bank from 1980 - 2010
- ▶ Indicators selected:
 - ▶ Income Share held by top 10% (II)
 - ▶ GDP
 - ▶ Population (Pop)
- ▶ Derived additional attributes
 - ▶ II / GDP
 - ▶ II / Pop
 - ▶ $II / (GDP + Pop)$

Motivating Questions

- ▶ What are the global trends in Income Inequality? How has this changed over time? Which countries are most affected?
- ▶ Can we derive any additional attributes that allows to segregate this data further?
- ▶ What is the impact of data transformation on the final results?
- ▶ How can clustering be used in this context?

Data Analysis

Extraction

- World Bank Indicators
- Income share top 10%
- GDP, Pop

Transform:

- Fill missing values
- Scale
- Aggregation by country & year

Visual Analysis Tasks

- Choropleths, Proportional Symbol Maps

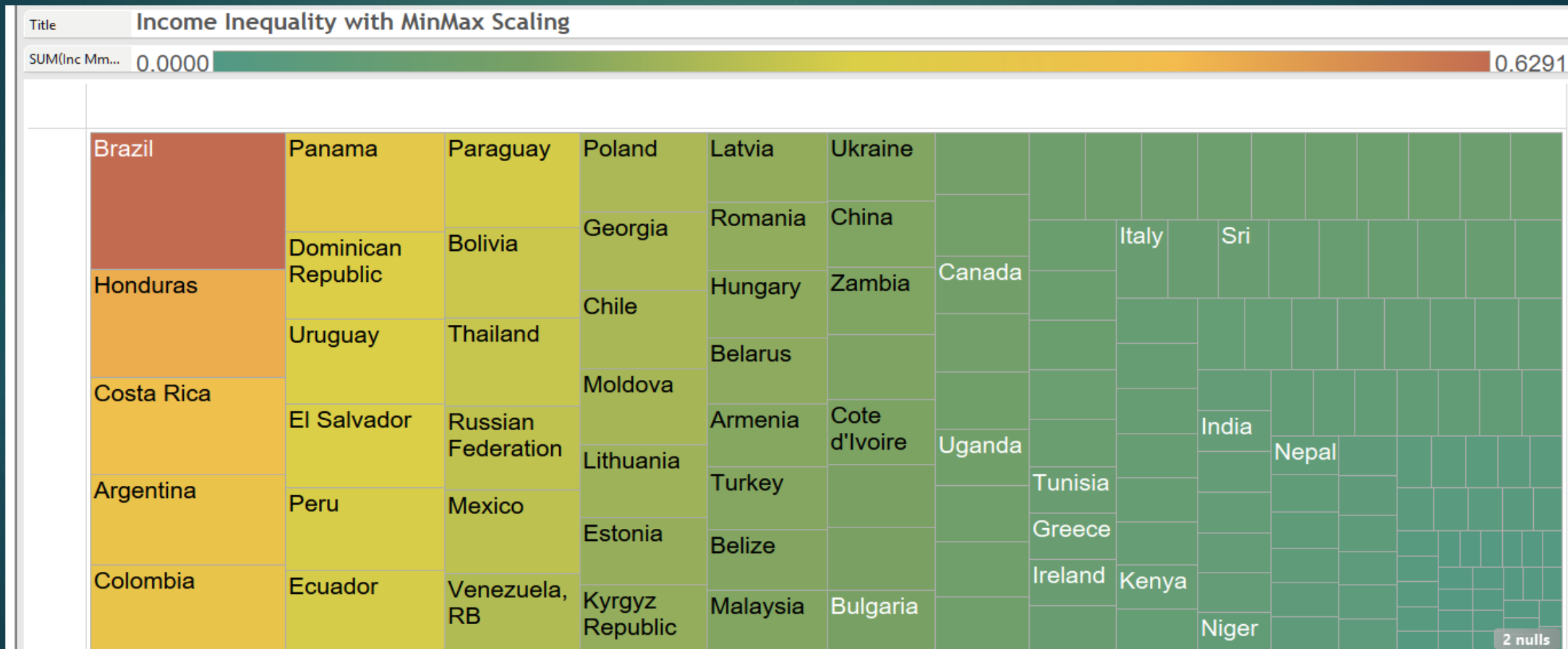
Cluster Analysis

- K-Means, SOM
- Cluster vis and stats



Highlights from the analysis

Top countries for high Income Inequality

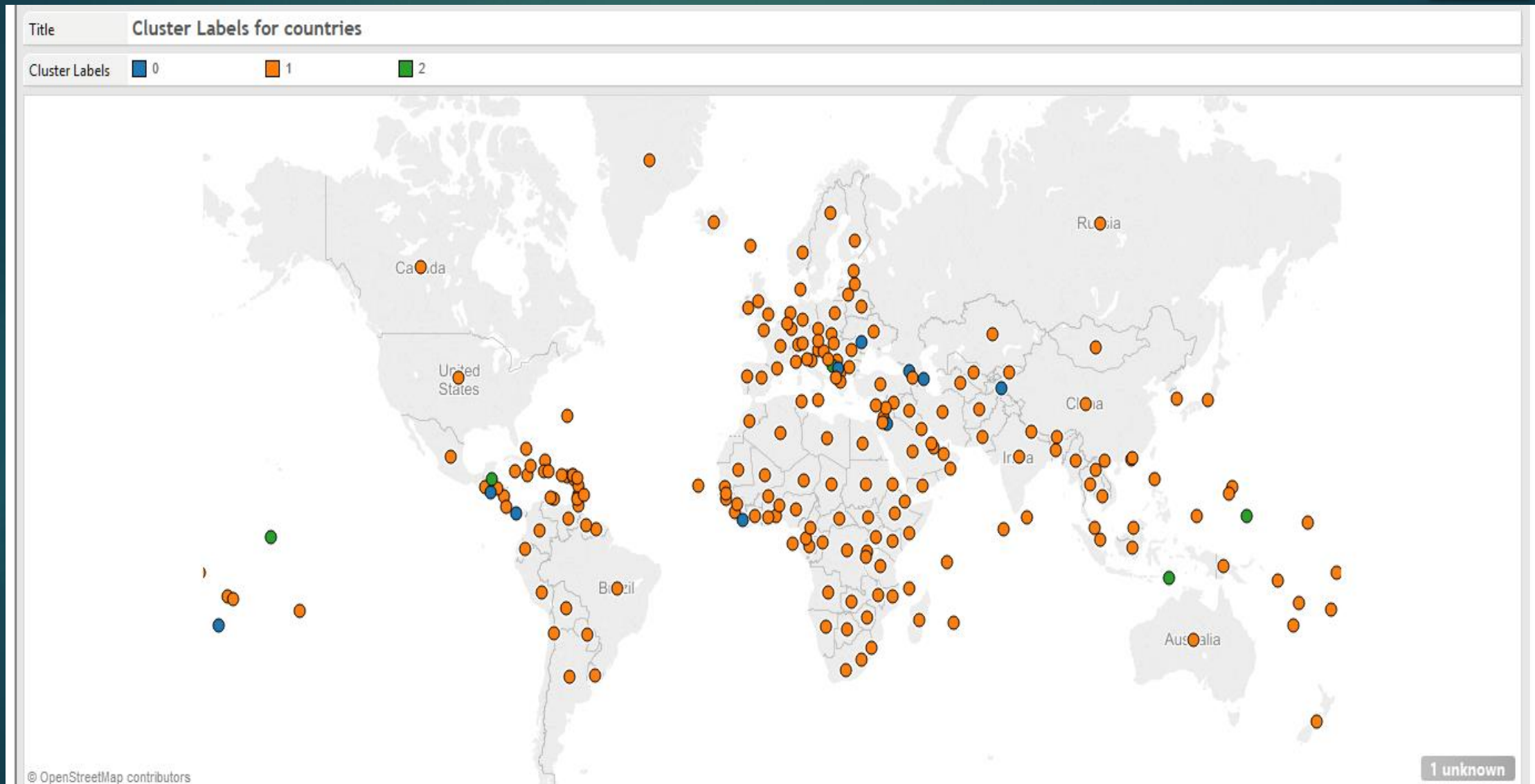


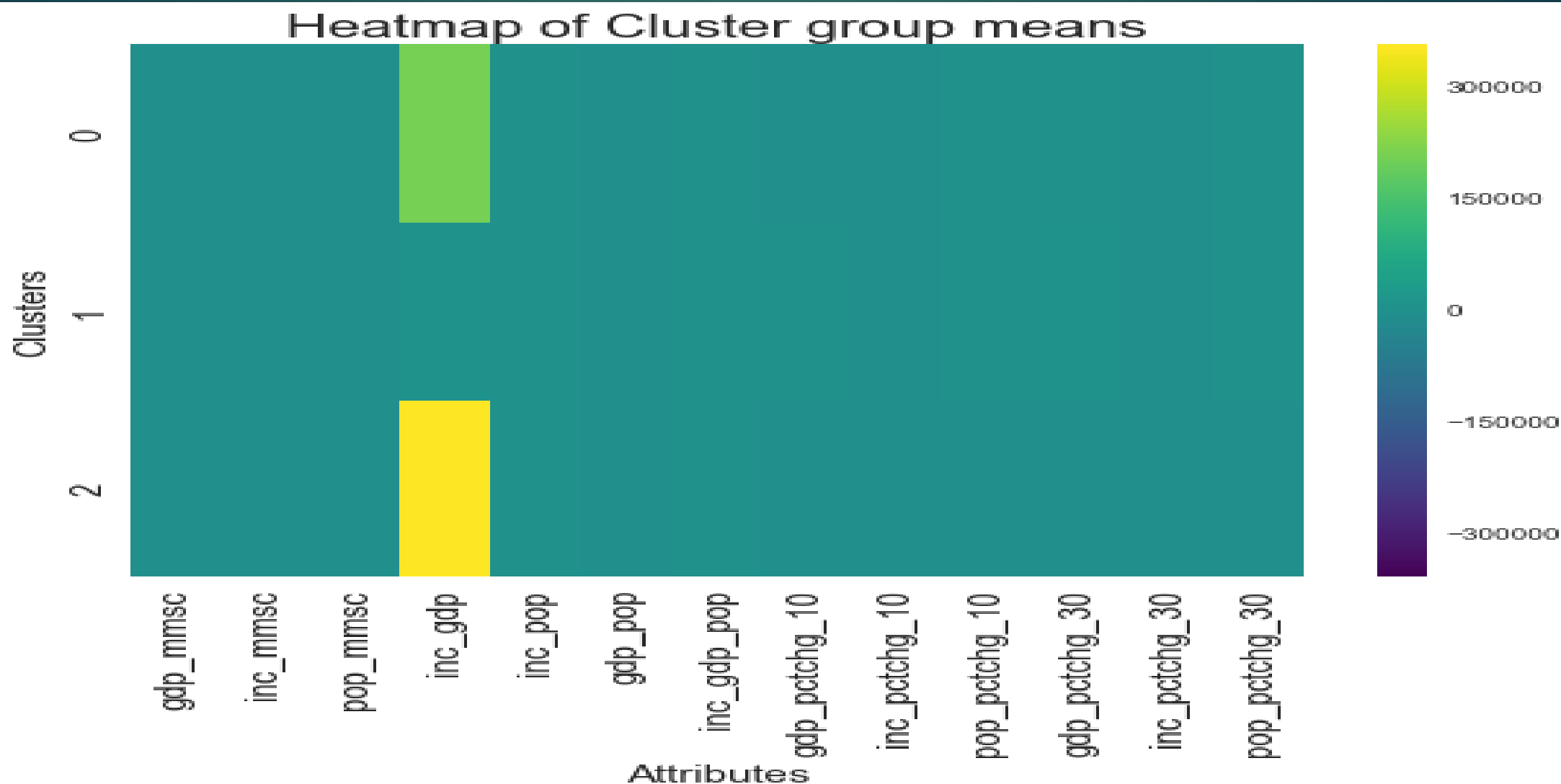
Highlights

▶ 3 distinct clusters (selection shown)

Cluster 0	Cluster 1	Cluster 2
Azerbaijan	Argentina	Belize
El Salvador	Australia	Kiribati
Georgia	Austria	Micronesia, Fed. Sts.
Jordan	Bahamas, The	Montenegro
Kosovo	Bahrain	Timor-Leste
Liberia	Bangladesh	
Moldova	Barbados	
Panama	Belarus	
Tajikistan	Belgium	
Tonga	Bolivia	
	Bosnia and Herzegovina	
	Botswana	
	Brazil	

Cluster Assignment





Cluster Stats (II/GDP excluded)

