GLOBE Leadership and Societal Perspectives
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Explore the GLOBE

STATS 140XP · Fall 2021

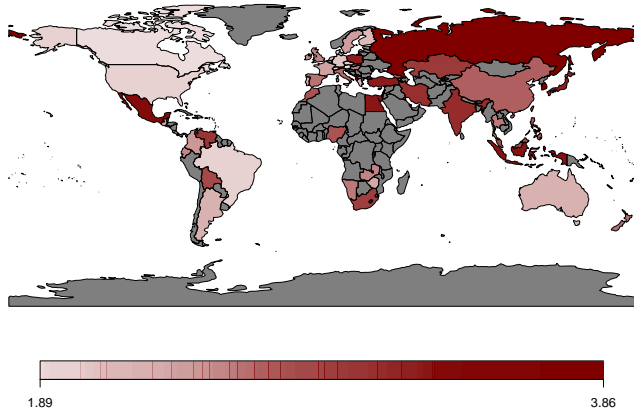## Introducing the Data

- GLOBE (Global Leadership & Organizational Behavior Effectiveness)
  - Goal: Identify the relationships between various leadership and societal characteristics
  - Over 17,000 middle managers, 62 cultures
  - Leadership survey from 1 (negative) to 7 (positive)
  - Societal survey varied depending on the question
    - Did not end up affecting our analysis
- Outside source: ISO Codes from Wikipedia
  - Uniform identifiers for countries for visualization purposes

GLOBE
Leadership
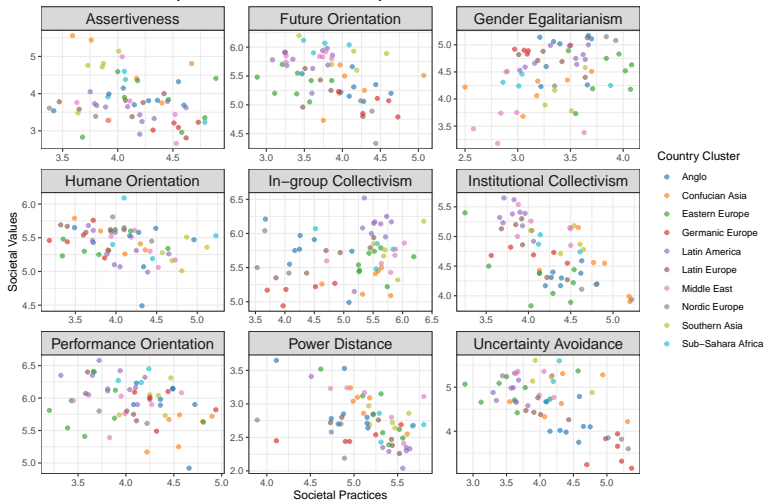and Societal
Perspectives

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Analysis

Conclusions

Exploratory Data Analysis

Autocratic Levels by Country

1.89   3.86

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Exploratory Data Analysis

Values vs. Practices by Cultural Dimension and Country Cluster

Note: Countries with missing country clusters were excluded.

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Problem Statements

1. Which characteristics or traits do countries tend to group together when determining "good" leadership values?
   - Which countries have similar perceptions of these leadership values?
2. Do societal practices and societal values align?
   - If they do not, which practices and values deviate most significantly?

Analysis

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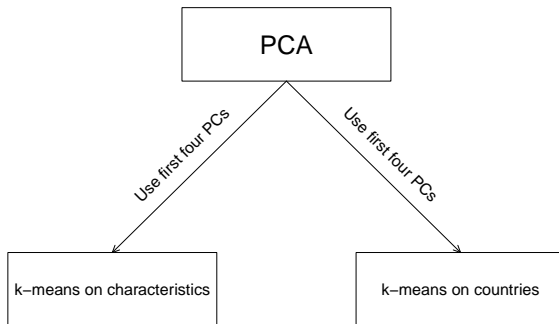
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Leadership Clusters: Methodology

1. Remove second-order factor analysis variables (difficult for interpretation)
2. Perform PCA on the remaining numeric variables
3. Perform *k*-means clustering on the first four principal components for both characteristics and countries
   - Choose first four PCs because they explain around 80% of the variation

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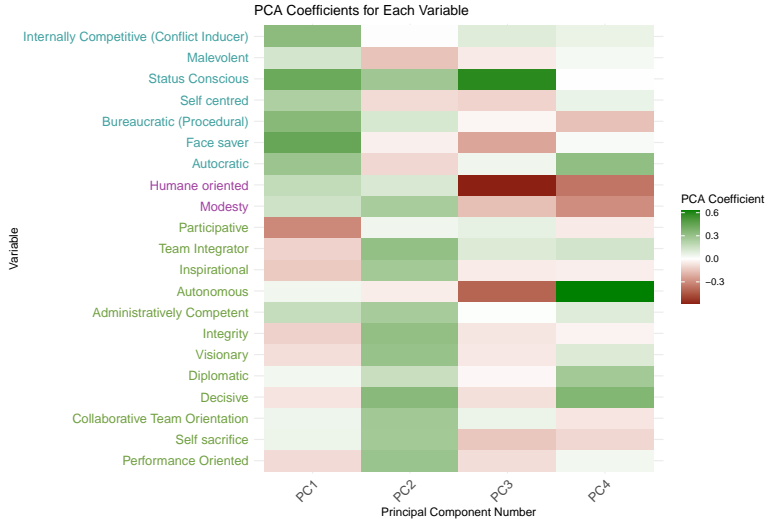
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Leadership Clusters: Methodology

Methodology for Leadership Analysis

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Leadership Clusters: Characteristics

PCA Coefficients for Each Variable

Note: Variables colored by cluster

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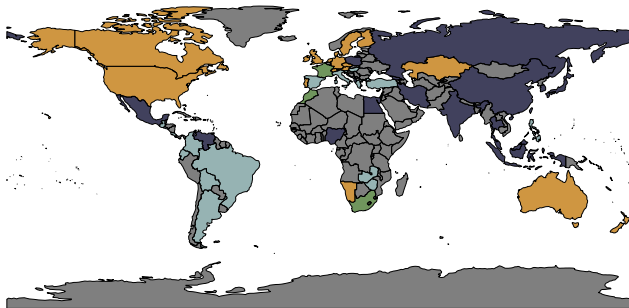
Leadership Clusters: Characteristics

1. Internally competitive, malevolent, status conscious, self-centred, bureaucratic, face saver, autocratic
   - Negative characteristics

2. Humane-oriented, modesty
   - Distinctly different group of two

3. Participative, team integrator, inspirational, autonomous, administratively competent, integrity, visionary, diplomatic, decisive, collaborative team orientation, self-sacrifice, performance-oriented
   - Positive characteristics

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Leadership Clusters: Countries

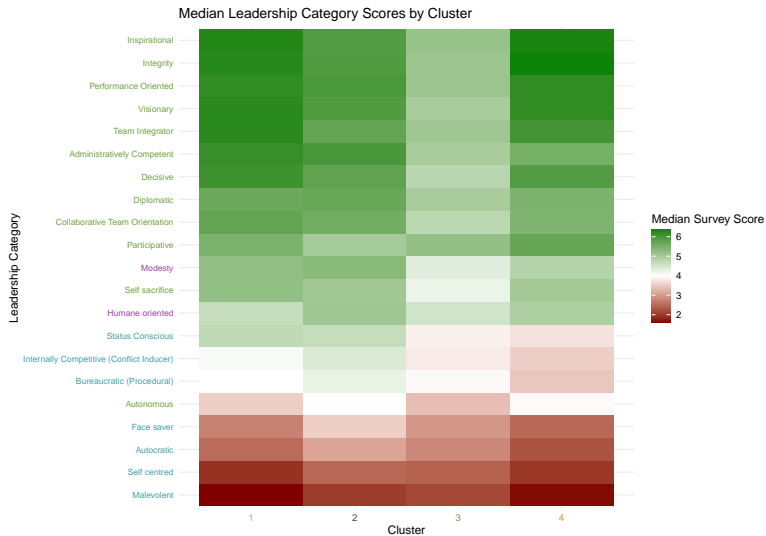**K–Means Clustering (k = 4) on the First Four Principal Components**

*Note: East, West Germany in the same cluster. South Africa
colored by Black sample (rather than the White sample)*

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Leadership Clusters: Countries

- Light Blue: Latin America, Mediterranean
- Dark Blue: Asia
- Green: No specific regionality
- Gold: Western and Northern Europe, Anglo

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Leadership Clusters

Median Leadership Category Scores by Cluster

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Societal Values vs. Practices: Methodology

For each cultural dimension:

- Simple linear regression model: $y = \beta_0 + \beta_1 x$
- t-test: $H_0 : \beta_1 = 0$ versus $H_1 : \beta_1 \neq 0$
- Bonferroni Correction
  - Change significance threshold from $\alpha = 0.05$ to $\alpha = \frac{0.05}{9} \approx 0.0056$

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Societal Values vs. Practices: Findings

Table 1: Results of Simple Linear Regression by Cultural Dimension

Cultural Dimension	Coefficient Value	p-value
Uncertainty Avoidance	-0.6199	0.0000
Institutional Collectivism	-0.5251	0.0000
Power Distance	-0.4991	0.0006
Future Orientation	-0.4725	0.0009
Humane Orientation	-0.5944	0.0116
Gender Egalitarianism	0.2437	0.0124
Performance Orientation	-0.3459	0.0268
Assertiveness	-0.1507	0.0414
In-group Collectivism	0.4393	0.0991

Conclusions

- Characteristics clustered largely on negative or positive connotations
  - Exceptions: Humane oriented, modesty
- Countries clustered heavily on geographic region
  - Exceptions: Green cluster

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- Practices do not align
  - Correlations often negative
- Consider how this might affect policy implementation

- Investigate how other indices (e.g., freedom index, happiness index, government approval ratings) explain groupings for leadership values
- Potential causes behind inverse relationship between societal values and practices
  - Are people valuing certain things *because* they aren't present in the society?
- Expand the survey to more countries to see if regional trends/clusters remain

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Limitations

- Only 62 cultures observed
- Some countries split
    - Germany: East vs. West (possibly related to Berlin Wall)
    - South Africa: White vs. Black (possibly related to Apartheid)
- Data appears to be from 15+ years ago
    - Potentially outdated information
    - May consider a resurvey
- Unsure of how second-order factor analysis performed
- No "official" codebook—just found the survey questions