### Explore the GLOBE

Introducing the Data

Analysis

Conclusion:

### GLOBE Leadership and Societal Perspectives

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STATS 140XP · Fall 2021

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Introducing the Data

Analysis

Conclusions

# Introducing the Data

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Conclusion:

- 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 not necessarily coded the same as leadership
    - Did not end up affecting our analysis
    - Only cared about relationships between variables
    - Societal coded the same way for a given characteristic
- Outside source: ISO Codes from Wikipedia
  - Uniform identifiers for countries for visualization purposes

GLOBE Leadership and Societal

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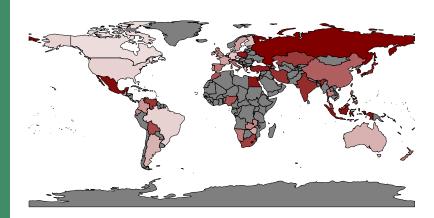
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# Exploratory Data Analysis

#### **Autocratic Levels by Country**



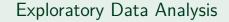
1.89

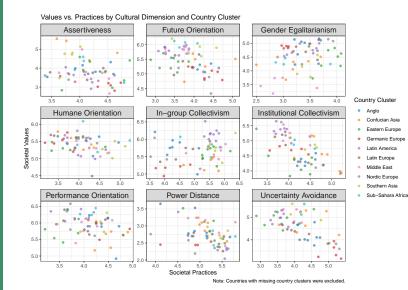
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- Which characteristics or traits do countries tend to group together when determining "good" leadership values?
  - Which countries have similar perceptions of these leadership values?
- 2 Do societal practices and societal values align?
  - If they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

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Introducing

Analysis

Conclusions

# Analysis

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Analysis

Conclusion

# Leadership Clusters: Methodology

- 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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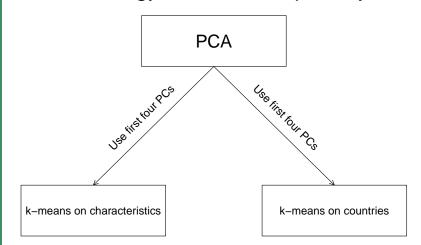
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# Leadership Clusters: Methodology

# Methodology for Leadership Analysis



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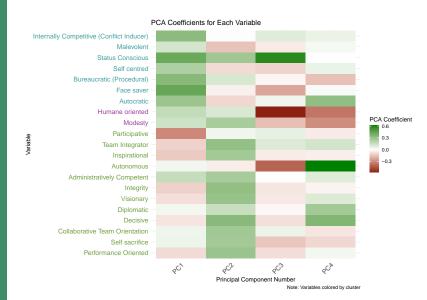
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Analysis

Conclusion

### Leadership Clusters: Characteristics



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Conclusion

Leadership Clusters: Characteristics

- 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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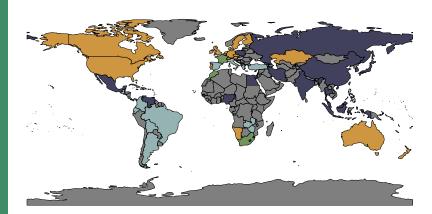
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# Leadership Clusters: Countries

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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Analysis

Conclusion:

# 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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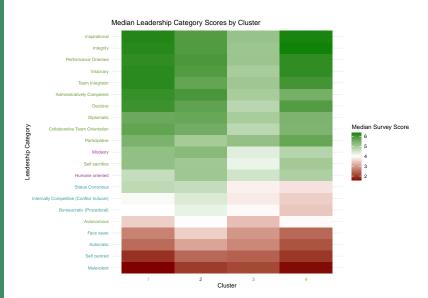
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Conclusion

# Leadership Clusters



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Analysis

Conclusion

# 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

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Analysis

Conclusions

## Conclusions

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- 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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## Societal Values vs. Practices

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

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- 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