



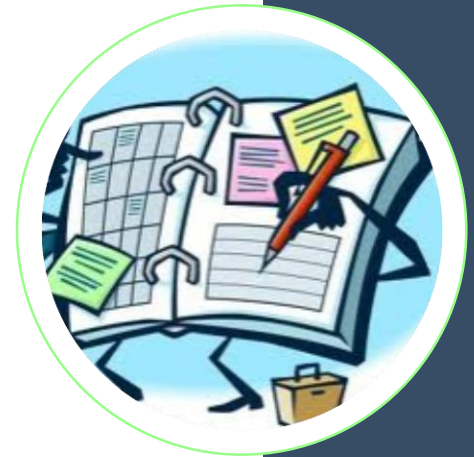
# Pan African Survey Analysis

(The Data Incubator Project)

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# Agenda

- Objective
- Data Overview
- Analysis Results
  - Exploratory Analysis
  - Clustering
- Key Takeaways
- Fun Facts



# Objective

- Analyze the difference in access to communication and media channels among Pan African countries.
- Identify the groups of Pan African nationals
  - Similar perceptions on country's economy and their living conditions
  - Similar access to communication and media devices such as TV, Mobile and Radio
- Utilize the learnings and insights to inform decisions for profit and non-profit businesses

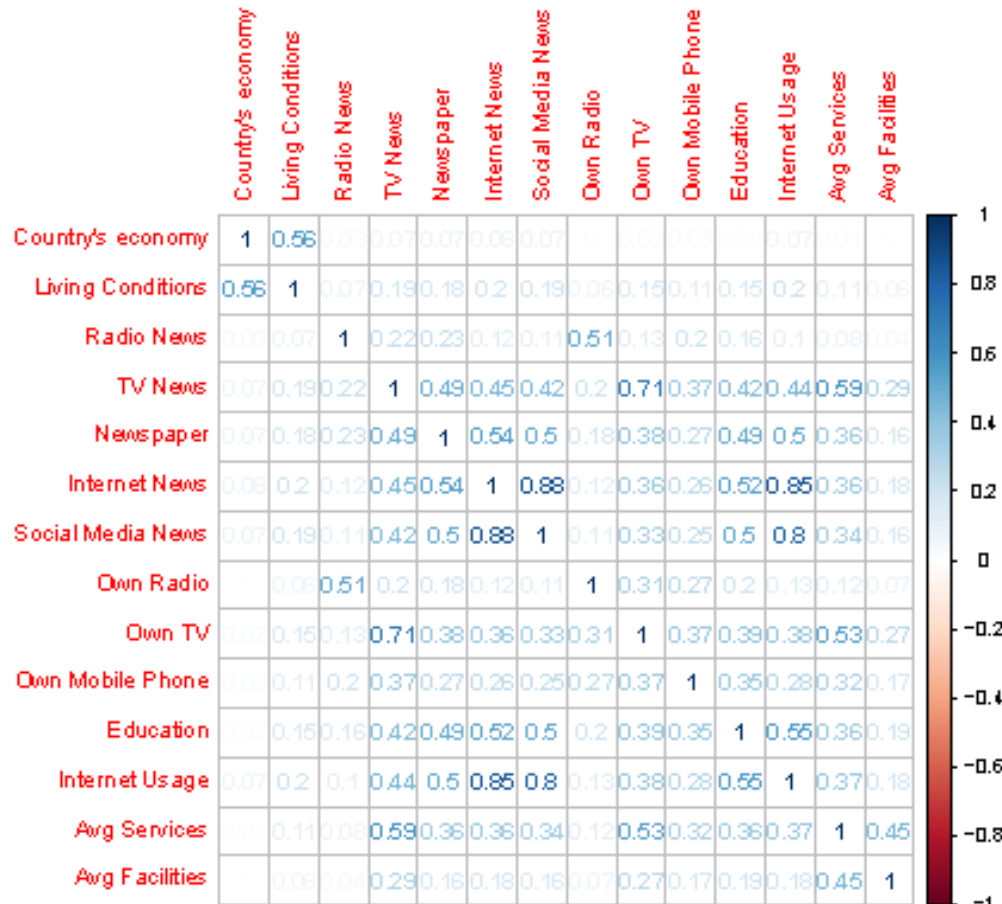


# Data Overview

- Pan African Survey Data provided by Afrobarometer
- Data size is nearly 52 MB (364 variables and 57K records)
- Dataset has individual responses to a survey consists of following categories of questions
  - Country's economic and political situation
  - Access to Services and Facilities
  - Access to News, Media and Communication Channels
  - Influenced by foreign countries such as US, India and China



# Exploratory analysis



- Conducted correlation analysis to find and eliminate highly correlated variables
- For example Internet and Social Media Usage (facebook, Twitter) have a strong correlation



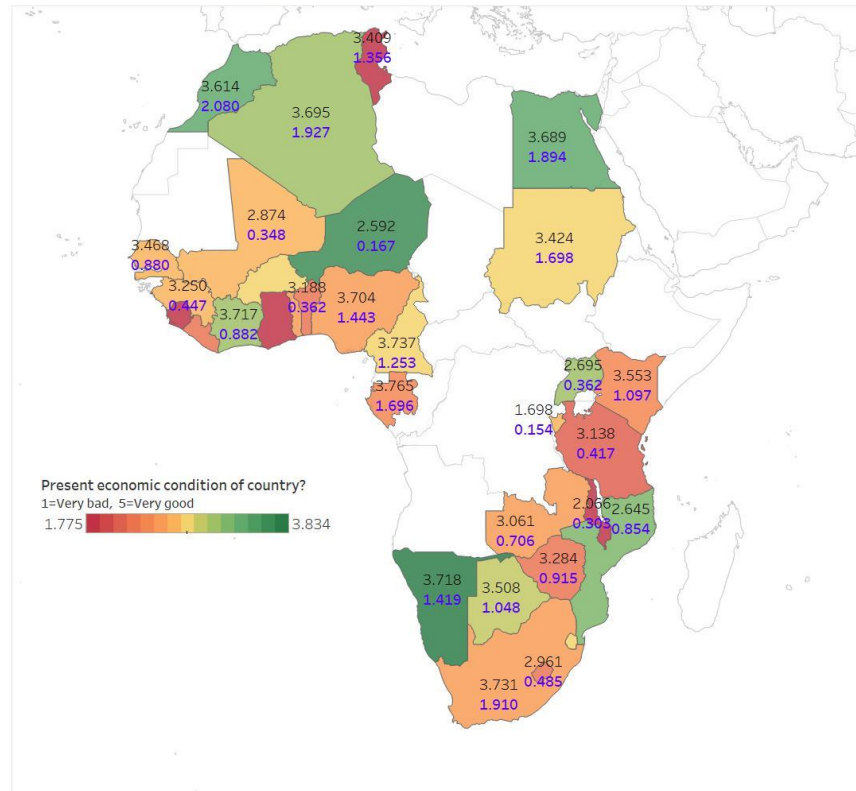
# Exploratory analysis

## Pan African Survey Countries

Color: People's opinion of country's economic condition (Avg.), 1=Very bad, 5=Very good

Black Text: Avg. Cell phone usage, 0=never, 4=everyday

Blue Text: Avg. Internet usage, 0=never, 4=everyday



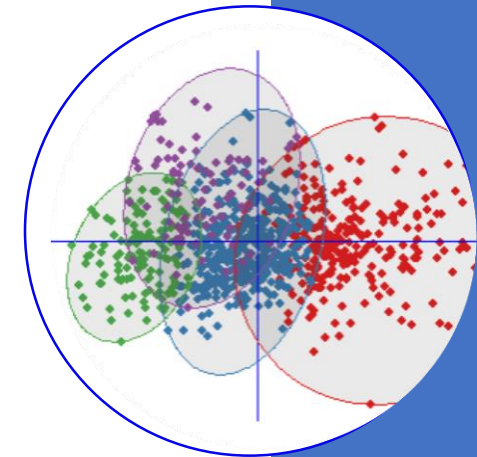
- Analyzed the variance in key variables among Pan African countries.
- For example mobile phone usage, internet usage and perception on country's economic condition



# Clustering Overview and Results

- Identified 10 clusters of Pan African nationals using k-means algorithm, with similar access to media and communication channels and having similar perception of country's economic and living conditions
- As an example below, cluster 1, 4 and 7 have different profiles relative to each other. Green dot indicates higher propensity.

Attributes	Cluster 1	cluster4	Cluster 7
Avg. Services	●	●	●
Avg. Facilities	●	●	●
Internet Usage	●	●	●
Mobile Usage	●	●	●
Radio News	●	●	●
TV News	●	●	●
Newspaper	●	●	●
Social Media	●	●	●
Rural	●	●	●



# Key Takeaways

- 75 % of survey population has mobile phone whereas only 10 % of them use internet everyday.
  - 4 out 10 clusters have high mobile usage
  - Businesses could develop unique strategies aligned to clusters' profile e.g. companies can invest in providing low cost internet options in the areas with high mobile usage.
- Significant diversity exists across clusters for access to news media
  - 3 out of 10 clusters have high consumption of Radio news but low social media and TV.
  - Profit and Non-profit companies can use a unique set of communication channel to reach the right audience cluster





# Fun Facts

- Few groups have mobile phones but don't have access to basic services and facilities such as school, sewage system, piped water and electricity

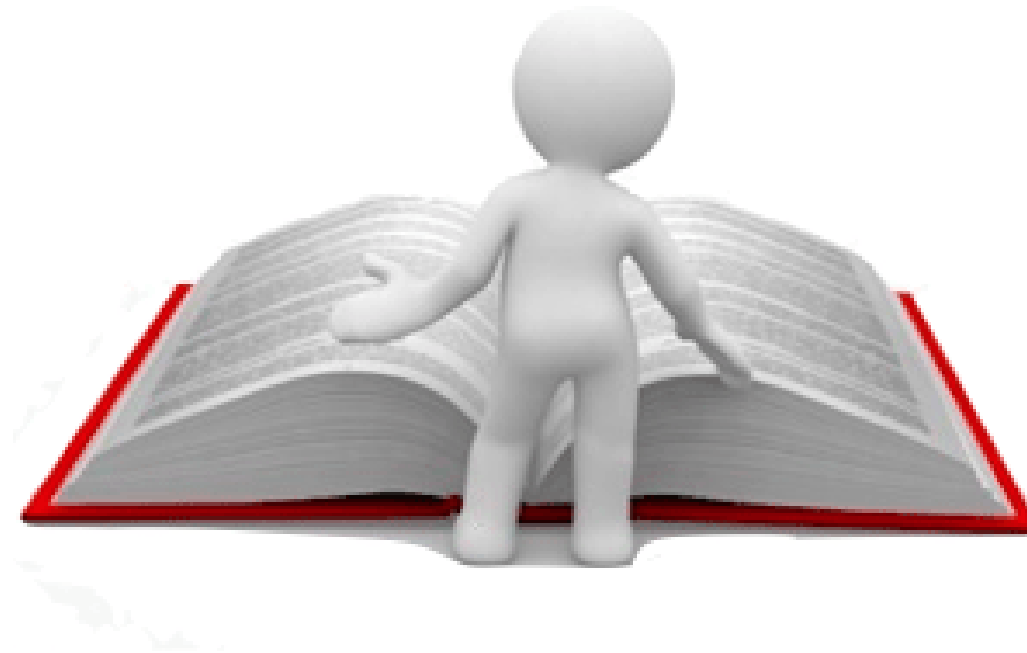




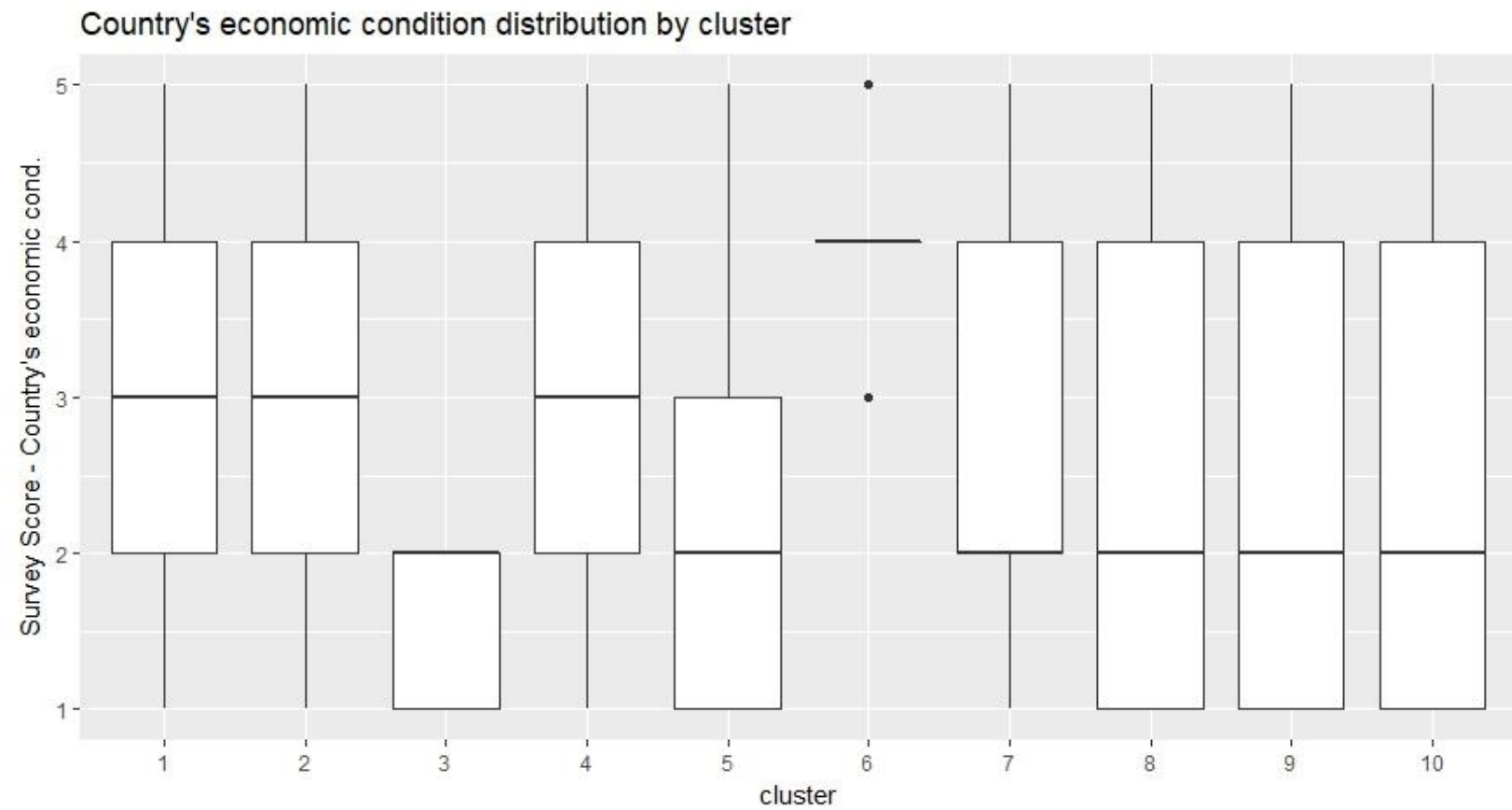
THANK  
YOU!



# Appendix



## Box Plot



Optimal  
Number  
of

