

# Sentiment and Topic Analysis of the Recent Presidential Debate

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USING R FOR QUANTITATIVE ANALYSIS

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21 November, 2024

## RESEARCH QUESTION:

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What are the main themes and sentiment patterns in the recent presidential debate, and how do these reflect each candidate's campaign focus?

## HYPOTHESIS:

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Language used by each candidate reflects their campaign priorities, with distinct themes and sentiment pattern aligning with their strategic messaging.

## D A T A S E T :

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- Dataset:

A transcript of the recent presidential debate, separated into statements by Donald Trump and Kamala Harris.

- Collection Method:

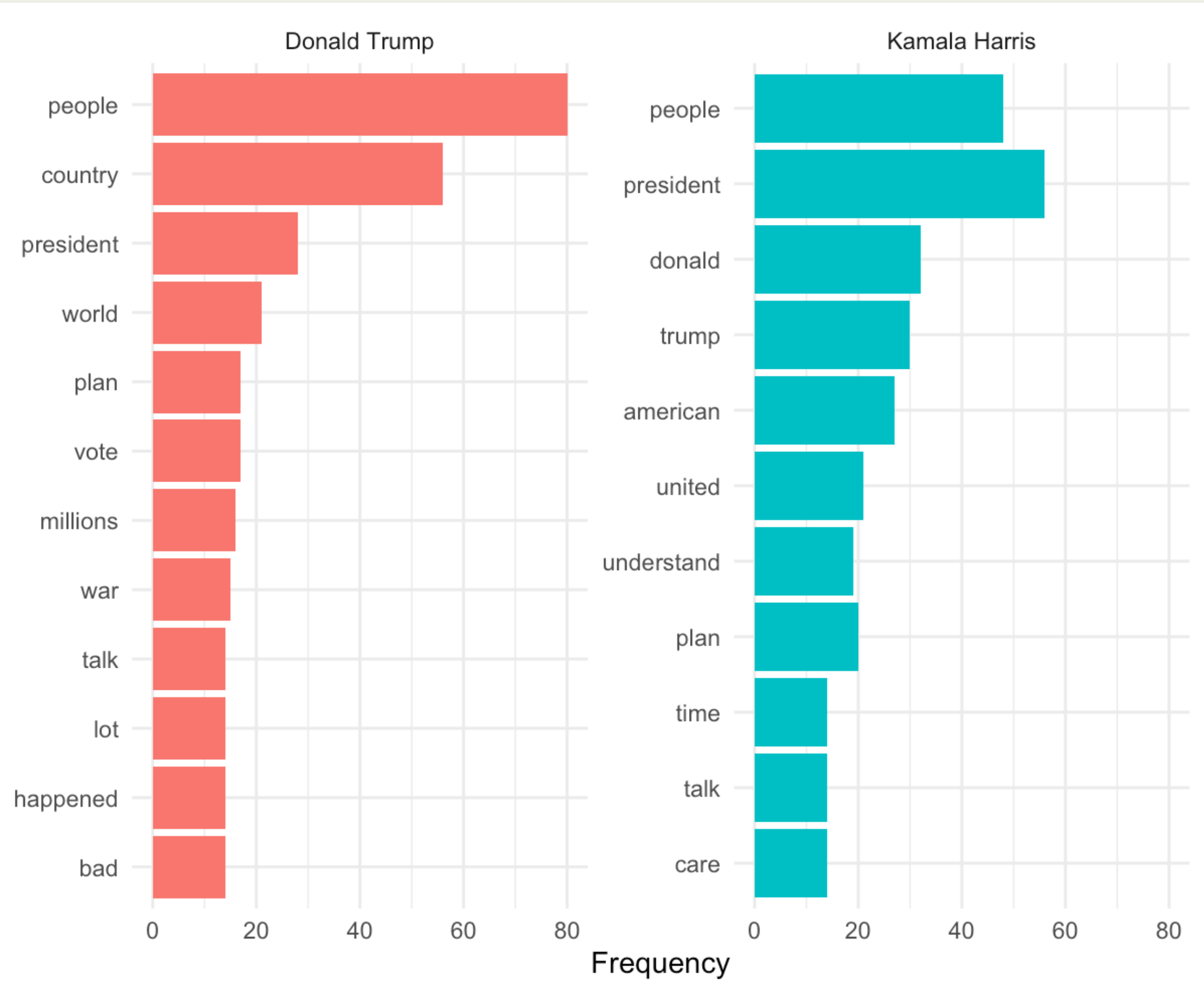
The data was sourced ethically from the official transcript published by ABC News.

# METHODS AND TOOLS (R IN ACTION)

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- **Text Processing:** Tools like **tidytext** and **stringr** helped clean and tokenize the transcript.
- **Sentiment Analysis:** I applied two methods: the **Bing Lexicon** for binary positive/negative classification, and the **NRC Lexicon** via **syuzhet** for a multi-dimensional emotional analysis.
- **Topic Modeling:** I used Latent Dirichlet Allocation (**LDA**) to uncover the main themes discussed.
- **Visualization:** Finally, I created charts and word clouds using **ggplot2** and **wordcloud** for easy interpretation.

# TOP 10 WORDS



# SENTIMENT ANALYSIS RESULTS

## Key Numbers:

- Donald Trump:

Negative Sentiment: 0.0975

Positive Sentiment: 0.0432

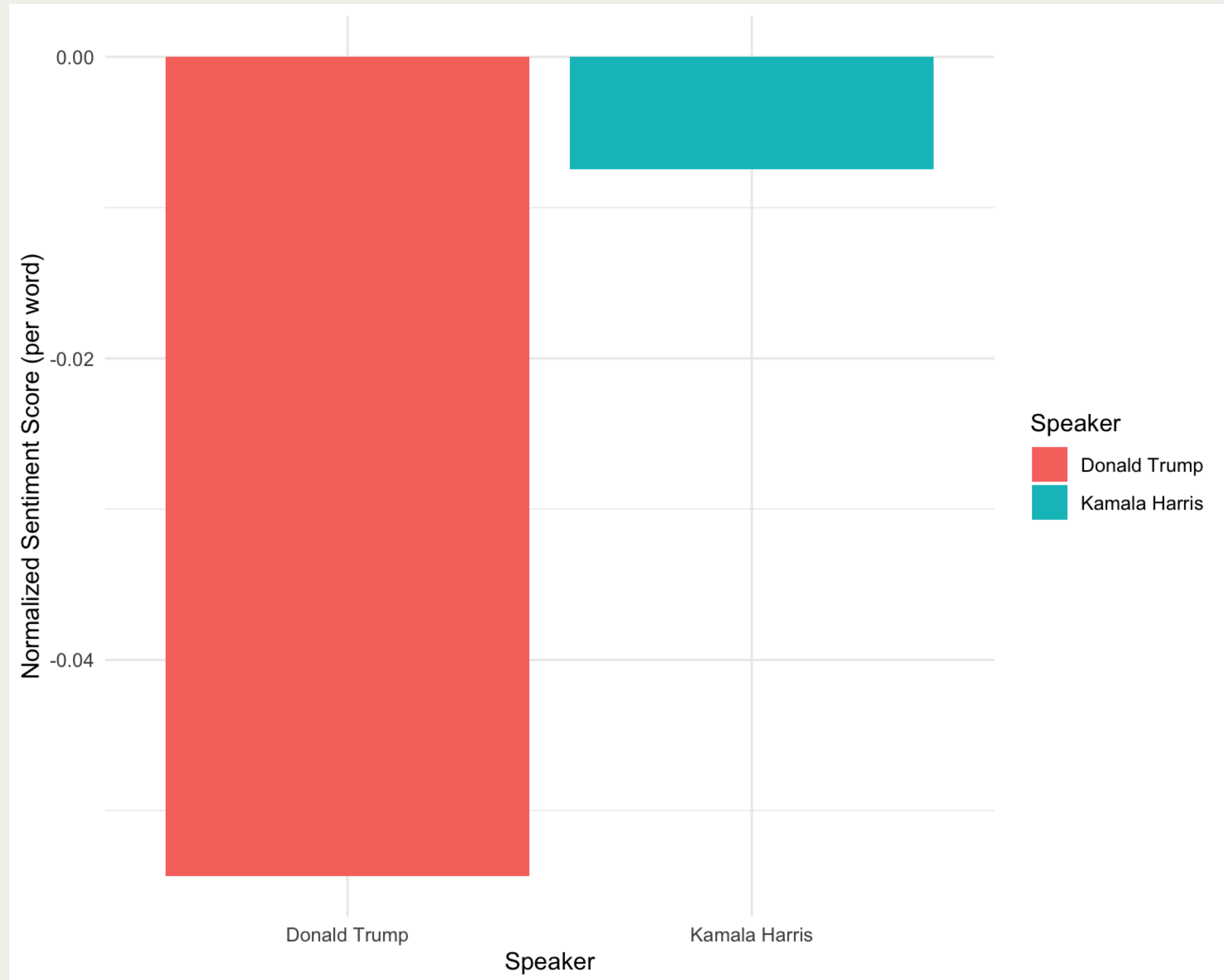
Sentiment Score: -0.0543

- Kamala Harris:

Negative Sentiment: 0.0698

Positive Sentiment: 0.0624

Sentiment Score: -0.00743

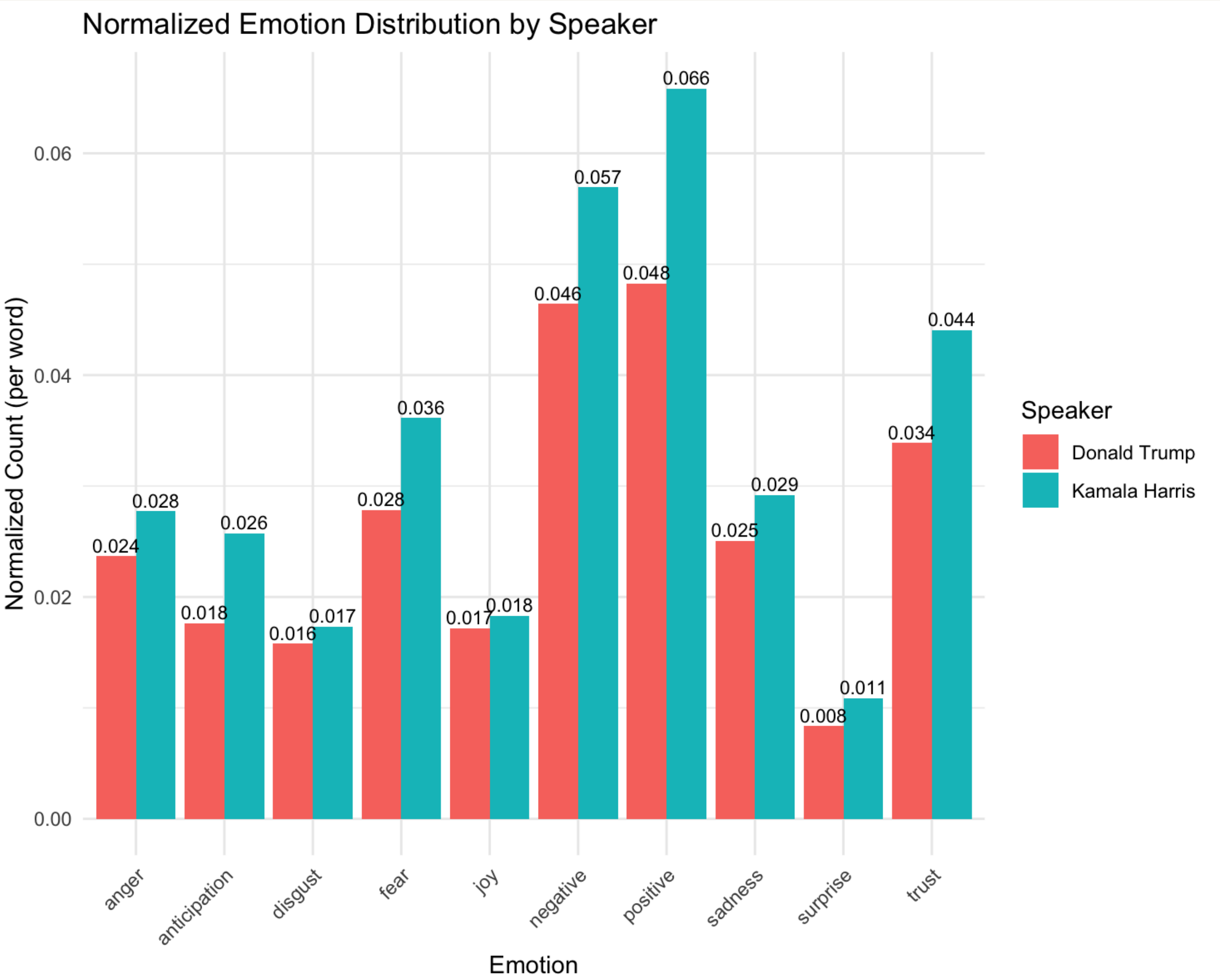


# EMOTION ANALYSIS

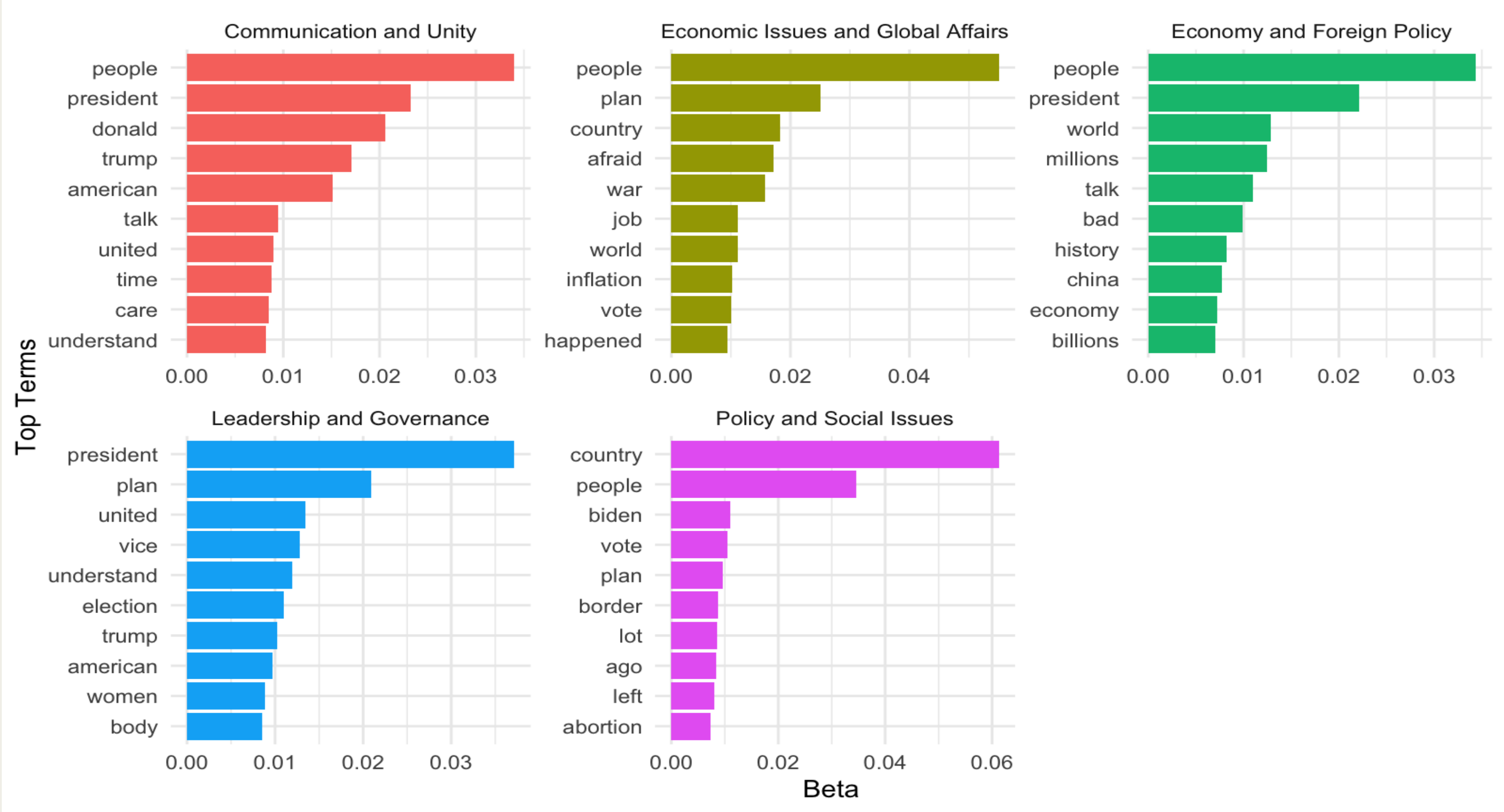
## RESULTS

### Key Insights:

- Donald Trump:
  - **Trust:** 0.0339,
  - **Fear:** 0.0279,
  - **Sadness:** 0.0251,
  - **Anger:** 0.0237
- Kamala Harris:
  - **Trust:** 0.0441,
  - **Fear:** 0.0361,
  - **Sadness:** 0.0292,
  - **Anger:** 0.0277



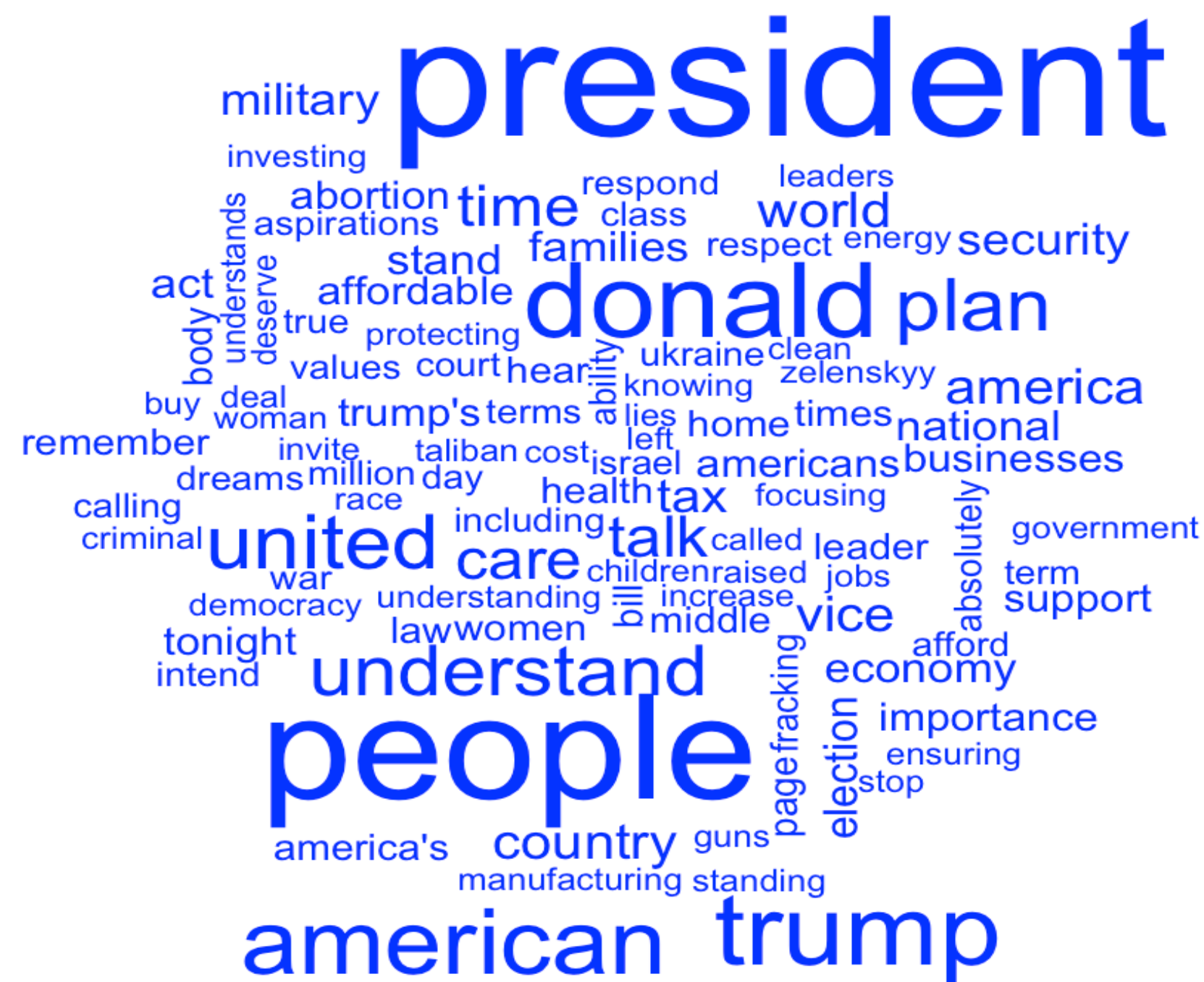
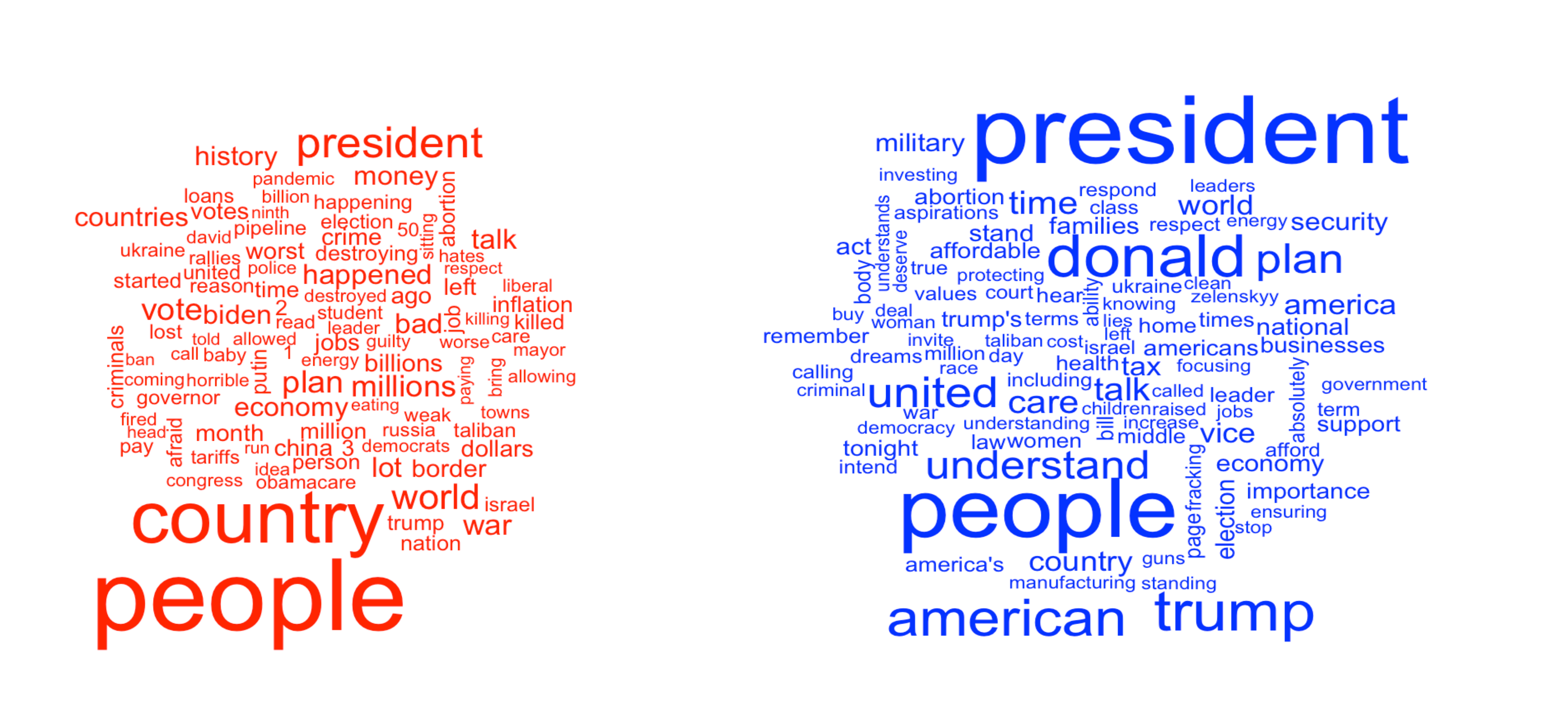
# TOPIC MODELING RESULTS





## WORD CLOUDS FOR EACH SPEAKER

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# CONCLUSION

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## Findings:

- Trump emphasized economic and foreign policy issues, reflected in words like "economy" and "China."
- Harris focused on unity and social policies, with frequent mentions of "understand" and "care."
- Both candidates used trust and fear to connect with their audience.

## Implications:

- Quantitative text analysis can reveal insights into political communication strategies.
- These methods can be applied to other contexts, such as marketing or public speaking.

# LIMITATIONS AND FUTURE WORK

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## Limitations:

- Limited dataset from a single debate.
- Possible bias in sentiment lexicons.

## Future Work:

- Analyze multiple debates for broader insights.
- Experiment with advanced sentiment methods like syuzhet's emotional trajectory analysis.

# Thank you!

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QUESTION?

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