ProjectProposal

Central Research Question

How does gender identity influence perceptions of political leadership competence in U.S. elections?

Hypotheses

Primary Hypothesis

Voters perceive female and gender-minority candidates as less competent than male candidates. For this hypothesis, we would control for the following variables: partisanship, ideology, and experience. However, these biases are stronger in more conservative or rural regions compared to urban or liberal regions.

Secondary Hypothesis

Media coverage strengthens these perceptions by associating feminine candidates with fewer competence-related descriptors and more qualities that are linked to sensitivity and emotion, while emphasizing strength and experience for male candidates. These framing techniques are more pronounced in right-leaning or rural media markets.

Expected contribution

The study aims to distinguish whether gender-based competence gaps persist once we control for experience and ideology–and whether these gaps are region-specific.

Reasoning

Perceived "competence" is a significant predictor of electoral success. Voters often evaluate competence through gendered norms–where leadership is subconsciously associated with masculinity and experience. Prior studies demonstrate that women are often evaluated as less decisive or qualified, particularly within economic policy or international security. This project will introduce regional cultural variation and media framing as mechanisms shaping these perceptions.

- Mechanism 1 (norm lens): gender norms differ by region–voters in rural or conservative states may hold stronger traditional expectations of leadership, amplifying gender gaps in perceived competence.
- Mechanism 2 (Experience lens): female candidates are often newer entrants into politics.
- Mechanism 3 (media reinforcement): local news coverage may differ in how they describe male vs. female candidates, strengthening or weakening competence stereotypes.

Empirical strategy

- Design: cross-sectional quantitative analysis of 2020-2024 Senate races, focusing on four candidates (two Democrats, two Republicans–one female and one male in each party)
- Data Sources:
  - Voter perceptions: AP-NORC VoteCast (2020 and 2024)–includes perceptions of candidate competence, gender, partisanship, ideology, and demographics
  - Media coverage: Media Cloud and/or GDELT database for text analysis of media framing (ex: sentiment, use of gendered adjectives).
- Analytic Approach:
  - Use matching or propensity score weighting to compare candidates who are similar in experience, issue positions, and incumbency, but differ in gender.
  - Estimate the average treatment effect of gender on perceived competence
  - Model interaction terms to test whether gender effects vary by region (urban vs rural) and partisanship
  - For media data, run text-based sentiment analysis and topic modeling to capture differences in competence framing

Data Selection and Preparation

We selected two datasets: one capturing **voter perceptions** and the other capturing **media framing**.

Dataset 1: AP-NORC VoteCast (2024)

Source: https://apnorc.org/projects/ap-votecast/
Purpose: To analyze how voter perceptions of political candidates' competence differ between male and female candidates, controlling for partisanship, ideology, and political experience. **Unit of Analysis:** Individual voters

Relevant Variables - Perceived candidate competence (leadership, experience, capability) - Candidate gender: male or female - Vote choice - Partisanship and ideology: party identification, ideology score - Demographics: age, education, income, race, and region (urban vs. rural indicators) - Candidate experience (incumbent status or prior political office, where available)

Planned Cleaning - Recode candidate gender into binary categories (male = 0, female = 1) - Construct competence indices from VoteCast trait measures related to leadership, strength, experience, and capability - Merge 2020 and 2024 Senate race data to expand the sample and enable cross-year comparisons - Verify consistent scaling across years and candidates to ensure comparability

Anticipated Challenges - Achieving comparable experience and issue-position data across candidates. - Accounting for varying regional identifiers (state vs. county-level). - Maintaining sufficient sample size after matching or weighting.

Dataset 2: Media Cloud (News Articles)

Source: https://www.mediacloud.org/
Purpose: To examine whether media coverage attributes different competence-related or emotion-related traits to male vs. female candidates, and whether these framing patterns vary across partisan or regional media markets.
Unit of Analysis: Individual news article mentioning 2020–2024 Senate candidates

Relevant Variables - Candidate name - News outlet and outlet partisanship (e.g., conservative, centrist, progressive) - Publication date - Full article text or excerpt - Geographic scope of outlet (national vs. regional)

Planned Cleaning - Collect articles referencing selected Senate candidates from both major parties (2020 and 2024 cycles) - Apply text preprocessing (tokenization, stopword removal, lemmatization) - Tag and classify words into competence descriptors (e.g., qualified, experienced, capable) vs emotion descriptors (e.g., empathetic, caring, sensitive) - Aggregate article-level data into candidate × outlet × region summaries to compare framing intensity

Anticipated Challenges - Differentiating gendered framing from partisan slant. - Limited full-text access (Media Cloud provides metadata and frequency-level data). - Balancing article representation across outlets and regions.

Planned Analysis

Analytic Approach

We will employ a matching and weighting design to isolate the effect of candidate gender on perceived competence. - Use propensity score matching (PSM) or propensity score weighting to compare male and female candidates who are similar in experience, issue positions, and incumbency, but differ by gender. - Estimate the average treatment effect (ATE) of candidate gender on perceived competence. = Incorporate interaction terms to test whether gender effects vary by region (urban vs. rural) and partisanship (liberal vs. conservative respondents). - For media data, conduct text-based sentiment analysis and topic modeling to identify differences in competence framing across candidates and outlets.

VoteCast Analysis

We will estimate voter perceptions of candidate competence as a function of candidate gender, controlling for ideology, partisanship, experience, and demographics.

Model Structure

```
Competence ~ CandidateGender + PartyID + Ideology + Experience
```

```
## Competence ~ CandidateGender + PartyID + Ideology + Experience
```

Design Steps:

- Match or weight observations using propensity scores to balance male and female candidates on experience, incumbency, and issue positions.
- Estimate the average treatment effect of gender on perceived competence.
- Include interaction terms to test whether gender effects are moderated by region or ideology.

Subgroup Analysis

- Compare within-party results (Democrats vs. Republicans).
- Examine whether gender gaps are stronger among conservative or rural respondents.
- Test whether gender effects persist even when partisanship does not align with vote choice (e.g., Republicans evaluating Democratic women).

Planned Visualizations (VoteCast)

- **Histograms**: comparing competence ratings for male vs. female candidates
- **Scatterplots / Boxplots**: showing competence by gender, ideology, and education
- **Coefficient plots from regression models**: displaying regression estimates and confidence intervals

These visualizations will highlight both raw differences and adjusted effects after accounting for ideology and partisanship.

Media Cloud Analysis

We will analyze article text to assess how media outlets describe male and female candidates, emphasizing competence and emotion-related framing.

Steps

- Extract and preprocess articles mentioning selected Senate candidates.
- Identify competence-related vs emotion-related descriptors using a custom dictionary of gendered leadership terms.
- Conduct sentiment and keyword frequency analyses.
- Compare framing patterns across outlets classified as conservative, centrist, or progressive.
- Examine whether regional outlets (e.g., rural vs. urban coverage areas) display different framing tendencies.

Planned Visualizations

- Word frequency bar charts
- Keyword comparison across outlet categories
- Word clouds (exploratory/descriptive)

Integration Strategy

We will compare: Voter level competence perceptions (VoteCast) Media framing patterns for candidate traits (Media Cloud) To assess whether media bias in competence framing corresponds with voter attitudes and whether partisan media environments condition gender-based competence evaluations. Specifically, we will examine whether candidates who receive fewer competence related descriptors in media are also rated lower on leadership and capability traits by voters, and whether these relationships differ across partisan and ideological contexts.

Why This Approach Is Appropriate

Combining VoteCast (voter-level attitudes) and Media Cloud (media framing data) allows a multi-layered analysis of how gender influences perceptions of political competence.

By using propensity score matching to control for candidate experience and media text analysis to quantify framing, this design provides both individual-level and contextual evidence. It reveals whether gender-based competence gaps persist after accounting for ideology and experience, and whether these gaps are reinforced by regional culture and media tone.

Github repo: https://github.com/ValeriaBE/FinalProject