

Online Appendix for The Ties that Double Bind

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For any questions about the online appendix, please contact Josh Kalla at josh.kalla@gmail.com.

1 Survey Details

TESS enumerated the population survey of American voters but the authors enumerated the 2014 and 2017 surveys of US public officials. The survey instrument included a battery of questions related to the politician’s career, political opinions, and history, as well as the conjoint experiments described in the paper. The background questions were designed to be comparable to other major surveys of legislators including the National Candidate Study and the Elite Survey.

1.1 Email Database

To build our database of US public officials, we consulted two sources. In the summer of 2014, we used a database compiled by the New Organizing Institute’s Governance Project. In the winter of 2017, we used email addresses compiled by Project Vote Smart.

1.2 Survey Invitation

Politicians invited to take the survey received emails from a yale.edu address. Note that nothing in the body of the email or the introduction to the survey should have signaled that we were interested in learning about gender (see below for email and introduction). Importantly, too, the conjoint questions came early in the survey so respondents should not have been primed to think about gender going into the conjoint questions.

1.3 Email Invitation to Survey

2014 SUBJECT: Please complete the 2014 Yale University Study

2017 SUBJECT: 2017 National Survey of American Politicians

As an elected official in the United States, you have been selected to participate in the [2014 Yale University Political Career Survey / 2017 National Survey of American Politicians], a brief, six-minute survey that will help scholars better understand how elected officials have achieved their positions in politics. Hundreds of legislators around the world have already answered these questions to help scholars understand electoral success and legislative effectiveness. **Please join them in answering this short survey.**

Please follow this link to the Survey: [LINK TO QUALTRICS]

All survey answers will be completely anonymous and confidential; neither your name or any identifying information will be made available to anyone at any time.

1.4 Survey Introduction

The [2014 Yale University Political Career Survey / 2017 National Survey of American Politicians] is an independent, confidential research study of the experiences and views of the remarkable people who run for public office across the United States.

The survey should take only a few minutes to answer, as most questions pertain to facts about your political career. There are a few open-ended questions where you can tell us about other issues you deem important to understanding your political career.

This survey is voluntary and completely anonymous. Your names will not be made available to anyone.

1.5 Survey Response Rates

Population	Data Source	Recruitment	Responses
2014 American Politicians, National, State, Local	Collected by researchers	21,754 emails sent in September 2014	1,866 (8.6%)
Sample Survey of American Voters	Time Sharing Experiments in the Social Sciences (TESS)	Conducted by GfK, December 2014	2,144 (n/a)
2017 American Politicians, National, State, Local	Collected by researchers	12,341 emails sent in February 2017	1,078 (8.7%)

1.6 Characteristics of Survey Respondents

2014 Legislator Survey

Below we present data on how the survey respondents compare to the starting population of legislators in the database who were emailed.

Characteristic	Emailed Population Share	Respondents Share
Local	7.3%	6.6%
County	67.5%	78%
State	22.7%	15.3%
Federal	2.4%	0.1%
Democrat	21.7%	18.6%
Republican	26.1%	21.8%

Note that we do not have gender data in the New Organizing Institute database of elected officials.

2017 Legislator Survey

Characteristic	Population Share	Sample Share
Local	71.3%	84.3%
County	1%	0.6%
State	27.7%	15%
Federal	0%	0%
Democrat	14.2%	9.7%
Republican	18.5%	10.4%
Female	15.2%	18.2%

Note that based on the low response rate from the 2014 survey, we excluded all federal offices from the 2017 survey.

Voter Survey

The voter survey was conducted by GfK (formerly Knowledge Networks) as part of TESS, the Time Sharing Experiments in the Social Sciences. GfK uses an online research panel that is representative of the entire U.S. population. Panel members are randomly recruited through probability-based address-based sampling, and households are provided with access to the Internet and hardware if needed. By randomly sampling from the GfK panel and applying weights to match the Current Population Survey, each GfK sample is representative of the US adult population.

1.7 Question Wording

Respondents in the 2014 voter and legislator surveys first began the conjoint task with this introduction:

For the next few minutes, we are going to describe to you three pairs of candidates considering running in **your party's primary for an open seat for [OUTCOME]**. For each pair of people, please indicate your attitudes toward the two candidates and which one you would be more likely to support in a congressional primary. Even if you aren't entirely sure, please indicate which of the two you prefer.

Please pause between each pair because every set will be different.

Then, on three separate pages, respondents were presented with three distinct tasks. The tasks read:

1. Suppose there is a primary in your party for an open seat for [city council / Governor / U.S. House of Representatives] and the two individuals below are considering running. We'd like you to consider the following two potential candidates for this office. Please review the following two resumes: [INSERT RESUMES] Based on the limited information above, which of the two candidates would you be more likely to support in the [city council / gubernatorial / congressional primary]?
2. One more time. Please review the following two resumes of candidates for [city council / Governor/ U.S. House of Representatives]: [INSERT RESUMES] Based on the limited information above, which

of the two candidates would you be more likely to support in the [city council primary / gubernatorial / congressional primary]?

3. One last time. Please review the following two resumes of candidates for your party’s [city council / gubernatorial / U.S. House of Representatives] primary: [INSERT RESUMES] Based on the limited information above, which of the two candidates would you be more likely to support in the [city council primary / gubernatorial / congressional primary]?

In the 2017 survey, legislators were always first presented with the introduction, “Suppose there is a primary in your party for an open seat for the U.S. House of Representatives and the two individuals below are considering running. We’d like you to consider the following two potential candidates for this office. Please review the following two resumes:” Below the introduction were the two candidates. Then they were asked, “Based on the limited information above, which of the two candidates would you be more likely to support in the congressional primary?”

In the 2017 survey, respondents completed 9 selection tasks: 3 using the original candidate attributes, 3 where corporate was removed from the lawyer occupation, and 3 where occupation and political post were separated. The order in which respondents completed each of these 3 task types was randomized. In our analysis, we only use the first task type they completed. Results are unchanged using all data or just the first task type.

Here is a screenshot of what the conjoint tasks looked like (note that the order of attributes was randomized for each respondent and for each task; order was not fixed):

Suppose there is a primary in your party for an open seat for the U.S. House of Representatives and the two individuals below are considering running. We'd like you to consider the following two potential candidates for this office.

Please review the following two resumes:

	Candidate 1	Candidate 2
Number of Children	3	3
Gender	Female	Male
Number of Years in Politics	3 years	8 years
Current Occupation	Mayor	Corporate Lawyer
Age	65	65
Spouse's Occupation	Farmer	Farmer

Based on the limited information above, which of the two candidates would you be more likely to support in the congressional primary?

Candidate 1 Candidate 2

1.8 Conjoint Attributes

Below are the attributes used in the 2014 Voter and Legislator Surveys and the 2017 Legislator Pure Replication. These are the primary conjoint attributes used in the main text of the paper.

Attribute	Values
Gender	Female, Male
Age	29, 45, 65
Number of Children	0, 1, 3
Current Occupation	Corporate Lawyer, Third Grade Teacher, Mayor, State Legislator
Number of Years in Politics	None, 1 year, 3 years, 8 years
Spouse's Occupation	Doctor, Farmer, Unmarried

We then conducted two conceptual replications in 2017. The first simply removed the word “corporate” from the current occupation. The second separated occupation from holding political office. The conjoint had the below attributes:

Attribute	Values
Gender	Female, Male
Age	29, 45, 65
Number of Children	0, 1, 3
Highest Elected Political Post	None, Mayor, State Legislator
Occupation	Corporate Lawyer, Third Grade Teacher
Spouse’s Occupation	Doctor, Farmer, Unmarried

2 Estimation Strategy

Following the empirical strategy of Hainmueller et al. (2014), we estimate the average marginal component effect (AMCE), which represents the marginal effect of a specific attribute over the joint distribution of all other attributes. Each respondent (indexed by $i \in \{1, \dots, N\}$) is presented with K ratings tasks ($k \in \{1, 2, 3\}$), and in each of her tasks the respondent chooses the most preferred of the J alternatives ($j \in \{1, 2\}$). Because each attribute was randomly assigned independently of all other attributes, we can estimate the AMCE using a simple linear regression of the form:

$$win_{ijk} = \beta_0 + \beta_1\{gender_{ijk} = female\} + \beta_2\{age_{ijk} = 45\} + \beta_3\{age_{ijk} = 65\} + \beta_4\{children_{ijk} = 1\} + \dots + \epsilon_{ijk},$$

where win_{ijk} is coded as 1 if that candidate is selected and 0 otherwise and $gender_{ijk} = female$, $age_{ijk} = 45$, etc. are dummy variables coded as 1 if that attribute applies to the candidate and 0 otherwise. The regression includes all attributes and traits listed in Table 1 of the main text. For each attribute, a reference category is withheld and β is the corresponding AMCE relative to the reference category. For example, the AMCE for the attribute measuring a candidate’s sex measures the average difference in the probability of a candidate winning if she is female compared to male, where the average is computed for all other possible combinations of the other attributes.

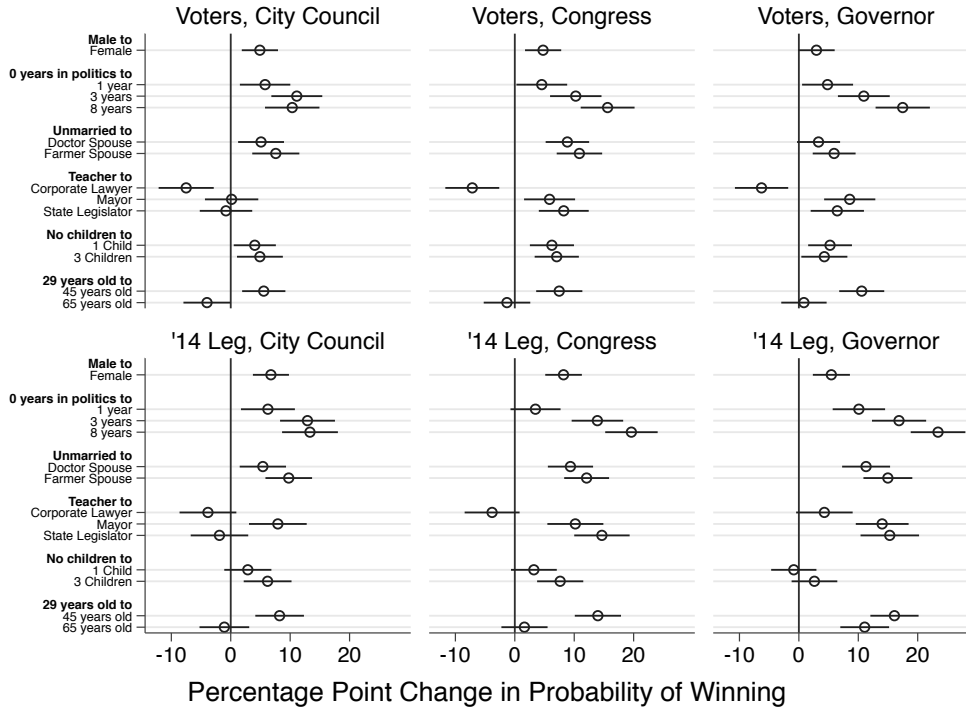
Hainmueller et al. (2014) show that the AMCE is identified non-parametrically under a minimal set of conditions. These include: the statistical independence of attribute combinations, which is confirmed by the experimental design because attributes are independently randomized every time a respondent sees a conjoint question; independence of choices to attribute ordering, which can be tested, but which we address by randomizing attribute order across respondents; and the independence of choices across different pairs of candidates. This last assumption is likely violated if respondents base later choices on their assessments of candidates made in previous conjoint questions. Following Hainmueller et al. (2014), we use cluster-robust standard errors at the respondent level to correct for the within-respondent clustering. As a robustness test, we subset our analysis to the first pair of candidates rated by a respondent and the substantive findings remain unchanged, as we show below.

3 Robustness Tests

Below we present a series of robustness tests showing that the results do not vary by question wording (in the 2014 experiments) or the first task (a learning effect).

3.1 Results from the 2014 Surveys by Outcome Question Wording

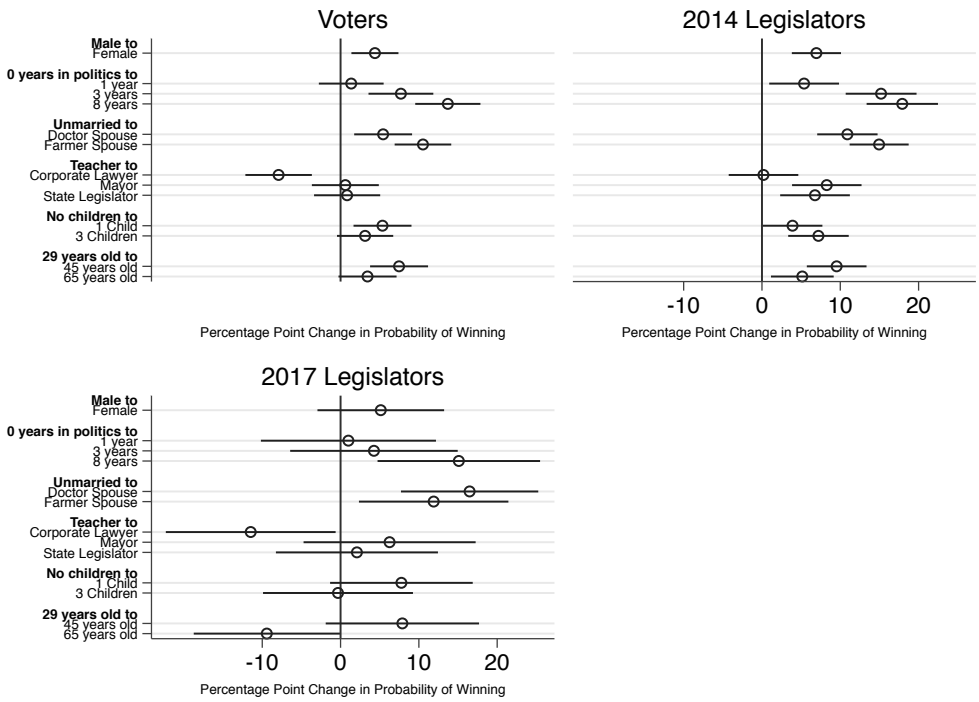
Each American voter and legislator who responded to the survey was asked to evaluate pairs of candidates for three offices: city council, congress, and governor. The results are nearly identical for these offices, which is why we collapse the results in the main results presented in the text.



Note that the 2017 survey of legislators did not include multiple outcome types.

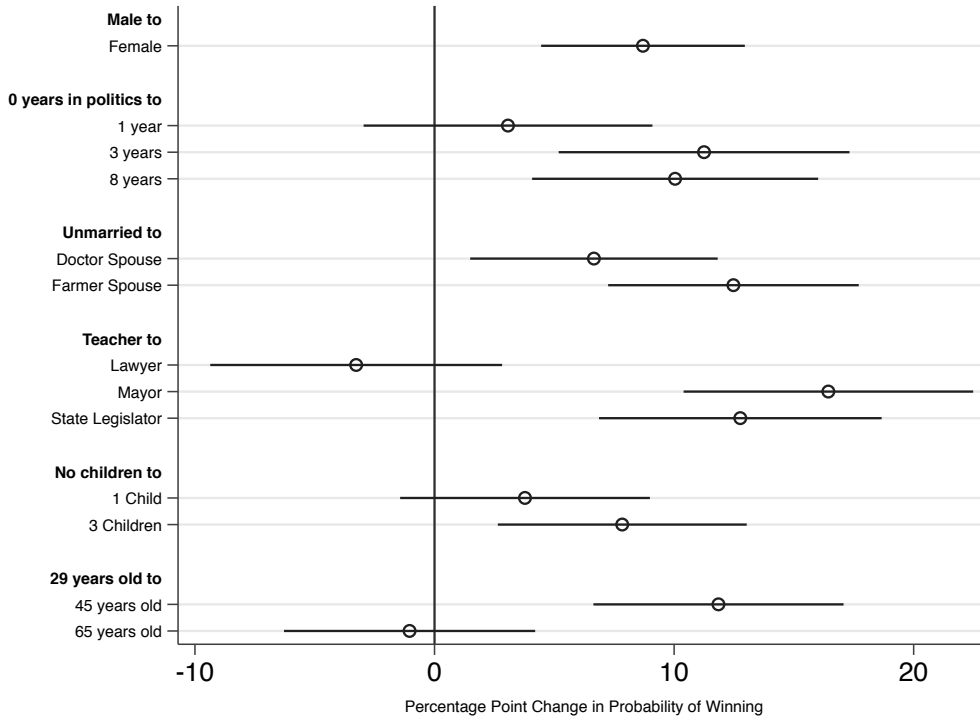
3.2 Results by First Rating Task

This figure replicates the main results using responses from the only the first of three conjoint rating tasks a respondent completed. This shows that the results are not driven by a learning effect.



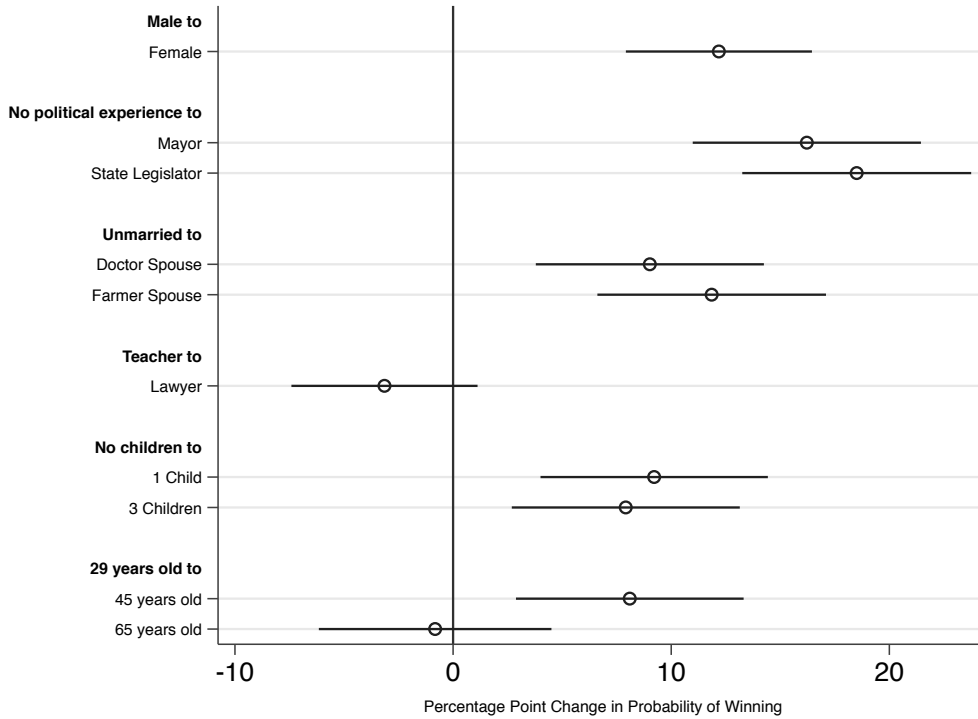
3.3 Replication Results, Removing Corporate Lawyer

The below results are from the replication in which corporate lawyer was replaced by lawyer. With the exception that lawyers appear to be more popular than corporate lawyers, all of the other results remain.



3.4 Replication Results, Separating Political Post from Occupation

The below results are from the replication in which corporate lawyer was replaced by lawyer and political post was separated from occupation. With the exception that lawyers appear to be more popular than corporate lawyers, all of the other results remain.



4 Results from Double Standards F-Test

4.1 Overall Results of F-Test

Overall, the p-value from our F-test of the joint significance of the interaction terms is 0.88. Below we present the results of the model with clustered standard errors.

	Estimate	Std. Error
(Intercept)	0.2296	0.0214
orig_1ys	0.04218	0.01705
orig_cand_female	0.07798	0.03186
orig_3ys	0.12	0.01726
orig_8ys	0.1497	0.01765
orig_MD_sp	0.05735	0.01522
orig_FM_sp	0.08169	0.01498
orig_law	-0.02913	0.01763
orig_may	0.06431	0.01764
orig_leg	0.0602	0.01767
orig_1ch	0.03818	0.01502
orig_3ch	0.05842	0.01522
orig_45	0.09466	0.01543
orig_65	0.003046	0.01554
orig_1ys:orig_cand_female	0.02794	0.02442
orig_cand_female:orig_3ys	0.007373	0.02433
orig_cand_female:orig_8ys	0.01472	0.02515
orig_cand_female:orig_MD_sp	0.004675	0.02139
orig_cand_female:orig_FM_sp	0.01542	0.02115

	Estimate	Std. Error
orig_cand_female:orig_law	0.004331	0.02484
orig_cand_female:orig_may	0.03607	0.0248
orig_cand_female:orig_leg	0.03141	0.02517
orig_cand_female:orig_1ch	0.000515	0.02143
orig_cand_female:orig_3ch	-0.0099	0.02138
orig_cand_female:orig_45	-0.006554	0.02097
orig_cand_female:orig_65	0.01482	0.02142

Table 7: Fitting linear model: $\text{winner} \sim \text{orig_1ys} * \text{orig_cand_female} + \text{orig_3ys} * \text{orig_cand_female} + \text{orig_8ys} * \text{orig_cand_female} + \text{orig_MD_sp} * \text{orig_cand_female} + \text{orig_FM_sp} * \text{orig_cand_female} + \text{orig_law} * \text{orig_cand_female} + \text{orig_may} * \text{orig_cand_female} + \text{orig_leg} * \text{orig_cand_female} + \text{orig_1ch} * \text{orig_cand_female} + \text{orig_3ch} * \text{orig_cand_female} + \text{orig_45} * \text{orig_cand_female} + \text{orig_65} * \text{orig_cand_female}$

Observations	Residual Std. Error	R^2	Adjusted R^2
12597	0.4875	0.05129	0.04941

4.2 Legislators Results of F-Test

Among legislators, the p-value from our F-test of the joint significance of the interaction terms is 0.22. Below we present the results of the model with clustered standard errors.

	Estimate	Std. Error
(Intercept)	0.1706	0.02927
orig_1ys	0.05929	0.02398
orig_cand_female	0.0807	0.04384
orig_3ys	0.1281	0.02443
orig_8ys	0.163	0.02441
orig_MD_sp	0.06208	0.02116
orig_FM_sp	0.07956	0.02086
orig_law	0.007576	0.02455
orig_may	0.1113	0.02432
orig_leg	0.06537	0.02493
orig_1ch	0.01515	0.02101
orig_3ch	0.04876	0.02158
orig_45	0.1317	0.02131
orig_65	0.0271	0.02165
orig_1ys:orig_cand_female	0.03506	0.0347
orig_cand_female:orig_3ys	0.03746	0.03384
orig_cand_female:orig_8ys	0.01735	0.03483
orig_cand_female:orig_MD_sp	0.02361	0.03034
orig_cand_female:orig_FM_sp	0.06507	0.0294
orig_cand_female:orig_law	-0.01729	0.03502
orig_cand_female:orig_may	-0.002459	0.03431
orig_cand_female:orig_leg	0.05613	0.03564
orig_cand_female:orig_1ch	0.01016	0.02932
orig_cand_female:orig_3ch	-0.0002731	0.0303

	Estimate	Std. Error
orig_cand_female:orig_45	-0.02237	0.02911
orig_cand_female:orig_65	0.03031	0.02987

Table 9: Fitting linear model: $\text{winner} \sim \text{orig_1ys} * \text{orig_cand_female} + \text{orig_3ys} * \text{orig_cand_female} + \text{orig_8ys} * \text{orig_cand_female} + \text{orig_MD_sp} * \text{orig_cand_female} + \text{orig_FM_sp} * \text{orig_cand_female} + \text{orig_law} * \text{orig_cand_female} + \text{orig_may} * \text{orig_cand_female} + \text{orig_leg} * \text{orig_cand_female} + \text{orig_1ch} * \text{orig_cand_female} + \text{orig_3ch} * \text{orig_cand_female} + \text{orig_45} * \text{orig_cand_female} + \text{orig_65} * \text{orig_cand_female}$

Observations	Residual Std. Error	R^2	Adjusted R^2
6323	0.4827	0.07174	0.06805

4.3 Voters Results of F-Test

Among legislators, the p-value from our F-test of the joint significance of the interaction terms is 0.6. Below we present the results of the model with clustered standard errors.

	Estimate	Std. Error
(Intercept)	0.2902	0.03116
orig_1ys	0.02502	0.02425
orig_cand_female	0.07647	0.04621
orig_3ys	0.1137	0.02426
orig_8ys	0.1384	0.02557
orig_MD_sp	0.05412	0.02188
orig_FM_sp	0.08651	0.02151
orig_law	-0.0693	0.02527
orig_may	0.01428	0.02534
orig_leg	0.04952	0.02496
orig_1ch	0.06144	0.02152
orig_3ch	0.06876	0.02149
orig_45	0.05536	0.02232
orig_65	-0.02277	0.02219
orig_1ys:orig_cand_female	0.01982	0.03434
orig_cand_female:orig_3ys	-0.02473	0.03487
orig_cand_female:orig_8ys	0.0105	0.03627
orig_cand_female:orig_MD_sp	-0.01708	0.03012
orig_cand_female:orig_FM_sp	-0.03815	0.03037
orig_cand_female:orig_law	0.03008	0.03507
orig_cand_female:orig_may	0.07769	0.03566
orig_cand_female:orig_leg	0.01428	0.03538
orig_cand_female:orig_1ch	-0.01073	0.03128
orig_cand_female:orig_3ch	-0.02051	0.03007
orig_cand_female:orig_45	0.007417	0.03032
orig_cand_female:orig_65	0.0002142	0.03068

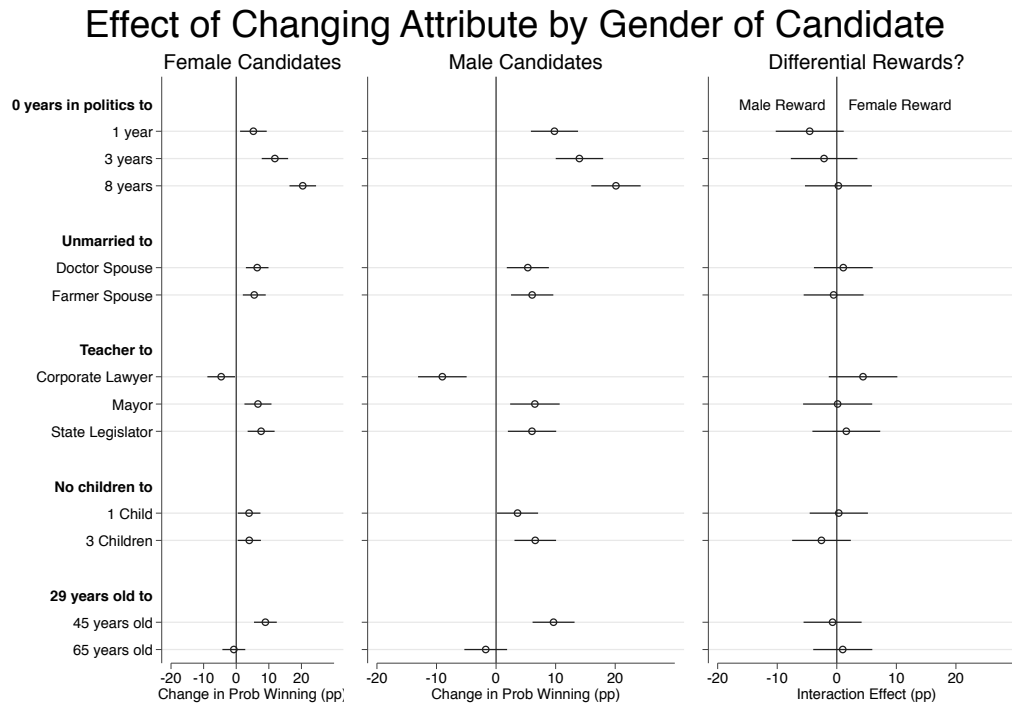
Table 11: Fitting linear model: $\text{winner} \sim \text{orig_1ys} * \text{orig_cand_female} + \text{orig_3ys} * \text{orig_cand_female} + \text{orig_8ys} * \text{orig_cand_female} + \text{orig_MD_sp} * \text{orig_cand_female} + \text{orig_FM_sp} * \text{orig_cand_female} + \text{orig_law} * \text{orig_cand_female} + \text{orig_may} * \text{orig_cand_female} + \text{orig_leg} * \text{orig_cand_female} + \text{orig_1ch} * \text{orig_cand_female} + \text{orig_3ch} * \text{orig_cand_female} + \text{orig_45} * \text{orig_cand_female} + \text{orig_65} * \text{orig_cand_female}$

Observations	Residual Std. Error	R^2	Adjusted R^2
6274	0.4909	0.04004	0.03619

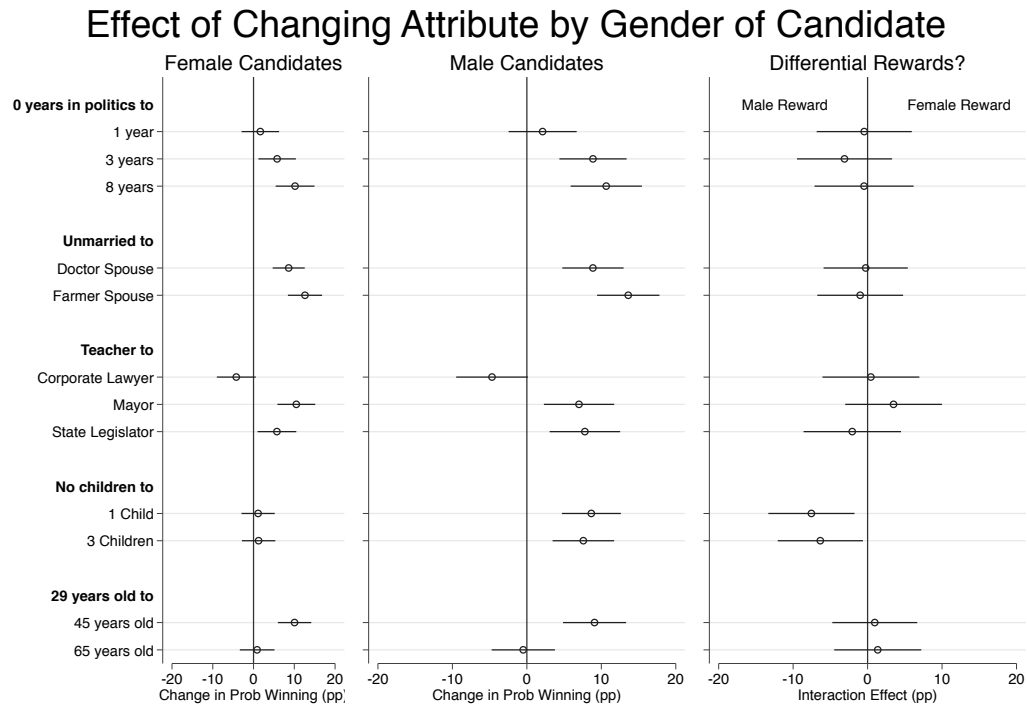
5 Additional Subgroup Findings

Below are additional subgroup findings mentioned in the main text.

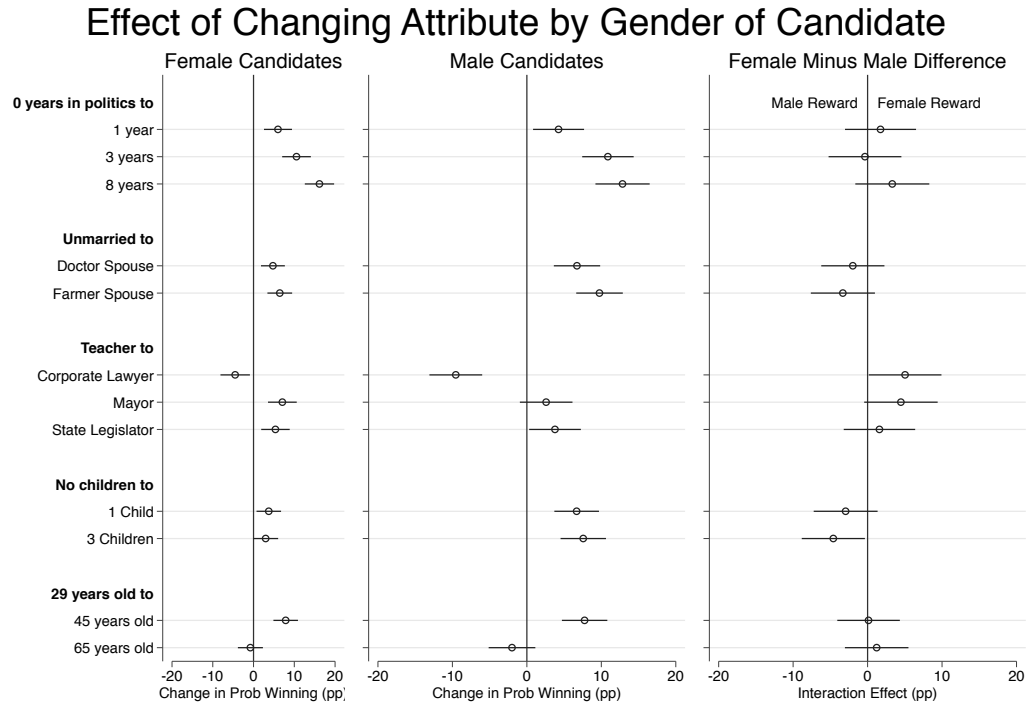
5.1 Effect of Changing Attribute by Gender of Candidate for Democratic Respondents



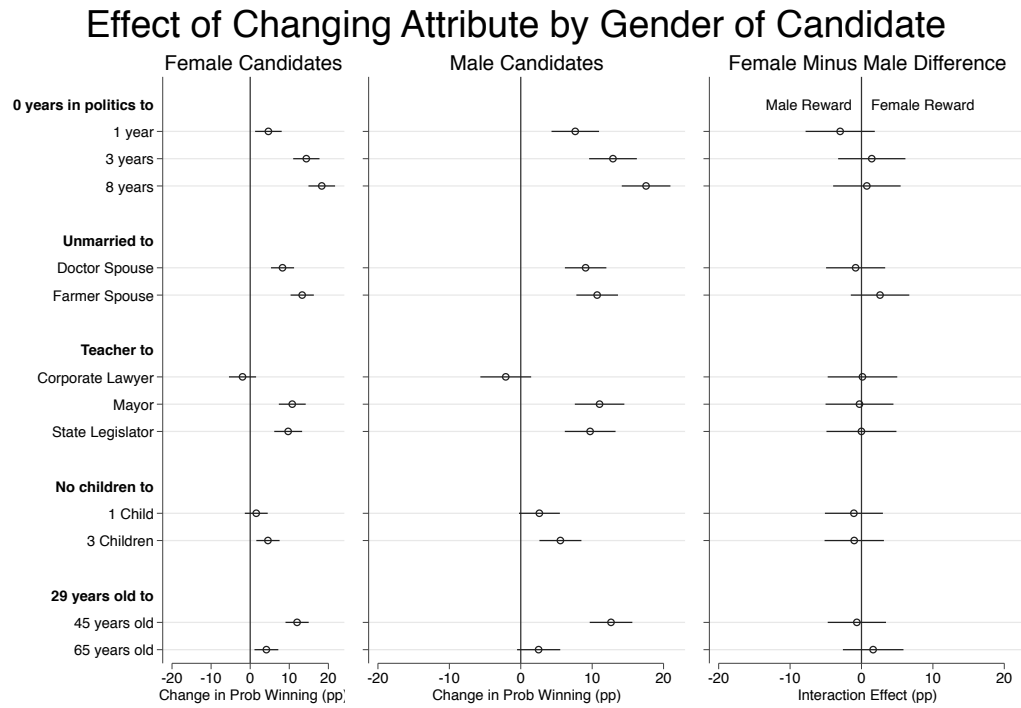
5.2 Effect of Changing Attribute by Gender of Candidate for Republican Respondents



5.3 Effect of Changing Attribute by Gender of Candidate among Voters



5.4 Effect of Changing Attribute by Gender of Candidate among Legislators



Note: Legislators Only