

Gender and information seeking in electoral campaigns

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Abstract

How does the gender of politician affects the expectations voters have from them? In this paper we focus on how the gender of a candidate influences the amount and type of information voters search on them.

Using data on profile clicks on a Voting Advice Application (VAA) for regional elections in Bern (Switzerland), we show variations on how female and male voters seek different information on female and male political candidates' profiles. We find that while men's behavior seem more to follow an uncertainty motivation, i.e. seeking information on the unlikely female candidate, women seem more to be motivated by a desire to confirm existing beliefs and search more information about women as well. Second - using an experimental setting - we show that politicians and voters' gender are relevant to understand how voters seek information on specific issues. Again, our results point more towards a confirmation mechanism. Overall, we find the candidate's gender to matter less than individual characteristics such as the gender of voters and their ideology.

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Introduction

A candidates sex provides a rapid and easy cue for voters. Studies have shown that voters infer ideological positions, competence areas and personality traits from a candidates' gender, especially in the absence of other important cues such as positions (see Rogers and Sanbonmatsu (2022) for a recent review).

Importantly, the gender of a candidate cannot only exert a direct influence but matter also indirectly as gender stereotypes influence the type and amount of information voters acquire about candidates. Recent work by Ditonto and her co-authors (Ditonto, 2017; Ditonto, Hamilton, & Redlawsk, 2014) for the US suggest that also substantive information search and processing during a campaign is influenced by the fact whether a candidate is male or female. They show that the both the information search *intensity* and the *type* of information is different when voters look for a male vs a female candidate. Andersen and Ditonto (2020) specify that uncertainty about a candidate could be the mechanism at play here. If confronted with a in-party female candidate, voters perceive this as an unlikely and perhaps also non-competent candidate and react by searching for more information about the given female candidate to ensure that the candidate is suited for office.

We argue that there is an important scope condition for this argument: Gender stereotypes about politicians are strong and make voters doubt the "electability" of a female candidate. In European democracies female candidates are more present and thus the "surprise" effect combined with a desire to check for more information might no longer apply. Lefkofridi, Giger, and Holli (2019) have for example shown that while gender stereotyped attitudes continue to exist, they don't influence electoral decision making in Finland and follow-up work suggests that gender stereotypes are nowadays associated with a right-wing ideology (Giger, Holli, & Lefkofridi, 2019).

A second reason why individual seek more information about politics could thus be more prevalent here: the desire to confirm their existing beliefs or what is known as motivated reasoning (Lodge & Taber, 2013; Taber & Lodge, 2006).

We study how the information search for female and male candidates differ in a real-world campaign setting with low information about individual candidates and put forward the argument that not primarily uncertainty but the confirmation of candidate choice and the desire to know more about an already preferred candidate are key here.

We test these two mechanisms in a different setting where multiple parties compete for votes in an open-list proportional system and where all major parties provide lists with both female and male candidates present: Regional elections in Switzerland. This setting allows us to disentangle the effect party preference and gender preferences which is impossible in the US

due to both the relatively low number of women running for office as well as the convolution with party ideology, i.e. the fact that women are much more likely to run for the Democratic party.

We present evidence from two studies treating first the *intensity* of the information search and second the *kind of information* voters are interested in. We study information search first in the context of a high-quality information intervention namely the use of a so-called "Vote Advice Application" (VAA) that allows users to search for additional information about individual candidates once they see the list of best-matching candidates.¹ This first study focuses on the information search *intensity* or the amount of information voters look after after conditional on how close these parties are to their own positions. In a second study, we focus instead on the *type* of information that voters are interested in when presented with a female or male candidate. We set up an experiment where we randomly present news headlines where a woman or man politician talks about an issue or his or her private life and ask respondents to indicate whether they would be interested to read this article.

Our findings indicate that men's information search behavior seems to follow the uncertainty logic as theorized for the US as they are especially prone to look for more information on female candidates and this effect for example. Women in Switzerland on the other hand seem more to be motivated by a desire to confirm existing beliefs and search more information on same-gender candidates and on topics such as family policy. In sum, we find that candidate's gender is not an important variable to explain information search, individual characteristics such as the gender of the voter or his or her ideological positioning are more important drivers. In conclusion, our findings both confirm and qualify the existing US findings while at the same time identifying important scope conditions for differential information search among women and men.

Theoretical background

Voters need certain criteria to base their decision on. The gender of the candidate is an obvious and easy to gather information. According to a large literature, voters use gender to infer a number of characteristics about candidates, including their personal traits, competence areas and position. In other words, individuals take the gender of the candidate as shortcut or heuristic to help them decide whom to vote for. However, it is unlikely that gender alone is sufficient to reach a decision and citizens will also take into account other pieces of information such as

¹The Swiss Vote Advice Application is candidate-based. This means that after having answered to a large variety of issue questions, the user is provided with a vote recommendation in the form of a list with the best-matching candidates including the percentage of agreement between own positions and those of the respective candidate.

issue positions but also the the partisan affiliation or the past performance of candidates before ultimately deciding whom to vote for. In sum, voting is the end of a long, sometimes complex information processing task (see also Lau & Redlawsk, 2006). According to this view, voters also do not begin this process as "blank slates" but instead bring existing beliefs and attitudes, partisan affiliation but also stereotypes (Lodge & Taber, 2013).

Still, voters possess not much direct information about the candidates at the beginning of a campaign and this is even more prevalent in multi-candidate district electoral systems. To generalize, we assume that gender based heuristics to matter most in low-information environments which are dominant at the beginning of a campaign (see e.g. Andersen & Ditonto, 2020) but can also be observed in experimental settings where respondents are not given much information beyond the gender of the candidate (e.g. Giger & Huber, 2015; Hayes, 2011).

However, gender can still assert an influence on candidate choice but in a more indirect fashion by shaping what and how much information voters look for in a campaign. There is indeed evidence that US voters show different information search behavior when confronted with a male or female candidate (Andersen & Ditonto, 2020; Ditonto, 2017; Ditonto et al., 2014).

We argue that the specific US setting with a strongly polarized two-party system with few women candidates make this less than ideal setting to study the influence of gender on information search. American voters mostly have a strong partisan preference that is often predominant to any other consideration and make it hard to observe the unbiased effect of gender stereotypes on information search or other political choices. We thus propose that decoupling partisan preferences from gender considerations must be a first step to advance the literature. Only in such a setting can we study the real, isolated effect of gender cues on candidate evaluations. European democracies which combine multi-party systems with a relatively high number of female politicians are a good case in point in our view. Here, a voter finds male and female candidates on all party lists and can thus freely choose his or her party while not having to compromise on his or her gender preference.

Such a setting allows us also to shed light on the drivers of gendered patterns in information search. Andersen and Ditonto (2020) theorize an uncertainty mechanism to explain gender differences in information search and ultimately vote: If confronted with an unlikely candidate, i.e. a female in-party candidate, voters will feel the need to check on this candidate to make sure she is competent and thus worthy of their vote. However, this argument rests on the assumption that female candidates are penalized by unfavorable gender stereotypes to start with. We argue that this scope condition potentially no longer applies in advanced European societies and perhaps not even in the US as also there gender stereotypes are changing (Eagly, Nater, Miller,

Kaufmann, & Sczesny, 2020). In European democracies female candidates are more present and thus the "surprise" effect combined with a desire to check for more information might no longer apply. (Lefkofridi et al., 2019) have for example shown that while gender stereotypes continue to exist, they don't influence electoral decision making in Finland. In fact, comparative evidence shows that stereotyped views about female and male politicians are diminishing over time and are dominant among right-wing men (Giger et al., 2019).

What is driving information search instead? We argue that individuals could also be motivated to search information to confirm their existing beliefs, i.e. by motivated reasoning (Lodge & Taber, 2013). Information search would thus be more prevalent for candidates that are similar to the individual. In terms of gendered searches this would imply that same-gender candidates would be more looked at than candidates from a different gender. In sum, we see two different mechanisms at play here which make other prediction for how information searches are structured. While the uncertainty mechanism predicts that the information search is highest for "unlikely" candidate of which the voters is surprised by, the confirmation mechanism predicts that information search is highest for candidates similar to the voter.

These are arguably very generic proposition that can hardly be tested. What underlies both mechanisms is that they predict information search to be higher for more proximate candidates. In other words, voters should be more likely to search information on candidates that share the same party brand or are otherwise close to their own positions. This makes sense from a broader perspective as well: Information search will be concentrated on candidates we consider voting for while it makes little sense to invest time and resources to inspect candidates which hardly have any chance to be voted for (see also Andersen & Ditonto, 2020, for a similar observation).

However, to derive testable predictions that differentiate both mechanisms, we have to bring voters and their characteristics and attitudes into play. This is what we turn to next. In the following, we argue that two individual characteristics should matter: The gender of voters and his or her ideology.

Gender differences in attitudes and voting behavior are well documented in the literature, e.g. the phenomenon of a "gender vote gap" with women increasingly holding leftist attitudes in recent years (see e.g. Dassonneville, 2021). But we also find gender difference in how much political behavior is driven by a desire for descriptive representation which is more prevalent among women (e.g. Holli & Wass, 2010) and that women have a higher probability to have a same-gender "baseline gender preference" (Sanbonmatsu, 2002). Less has been written about differences in the priority both genders give to issues. Differences in which issues candidates campaign on have been documented (e.g. Dolan, 2005; Evans & Clark, 2016) and we also find some evidence that women prioritize other issues than men (e.g. Yildirim, 2022). Ditonto et al.

(2014) also report some differences in the information search of women and men. Republican men were for example most interested in learning about the issue positions of female candidates.

The fact that these findings were most pronounced for Republicans vs Democrats makes clear that the ideology of voters factors in here as well. A conservative ideology is associated with a traditional view of women in society and feminist issues are more salient among citizens with a left-wing ideology. It is also an established finding in the literature that more left-wing parties feature more female representatives and more female candidates on their lists (Keith & Verge, 2018; Kittilson, 2006). Research shows further that right-wing men more likely to belief in gender stereotypes (Lefkroft et al 2019) and also less likely to vote for female candidates (Erzeel & Caluwaerts, 2015; Giger, Traber, Gilardi, & Bütikofer, 2022).

Hypotheses

In this study, we focus on how a candidate's gender influences the information search of individuals in an electoral campaign. To do so, we focus on a context where party and gender are separated and we can thus isolate the effect of gender on information search. We theorize that besides the mechanism found in the USA which is based on overcoming uncertainty about (female) candidates with searching for more information, a second mechanism emphasizing a desire to confirm existing beliefs could be at play as well. In order to develop testable implications of these two mechanisms, we discussed two features of voters that we deem crucial here: Their own gender and their ideology. In this way, it is also possible to derive some hypotheses.

First, the gender of the voter plays a role. For the uncertainty argument in the sense that to be confronted with a ideologically close candidate of the opposite gender can be seen as more surprising than a candidate from the same gender. We thus count it as evidence for the uncertainty mechanism if we find search patterns that are higher for men when they see a women and vice versa. For the confirmation mechanism instead we expect exactly the opposite, i.e. to see higher search pattern for same-gender candidates - again provided they are proximate and thus a viable choice.

Uncertainty mechanism: Information search is higher for men confronted with a female candidate and for women confronted with a male candidate

Confirmation mechanism: Information search is higher for same gender candidates, i.e. women search more information about female candidates and men about male candidates

Regarding ideology, we have seen that gender stereotypes should be most prominent among right-wing individuals. This means that the moment of surprise and uncertainty should be

strongest for voters adhering to a right-wing ideology. At the same time, we can theorize that female voters should be most surprised when confronted with a male proximate candidate. Evidence in favor of a confirmation mechanism would instead be if right-wing voters would search most information for male candidates and individuals with a leftist ideology most about women candidates.

Uncertainty mechanism: Information search is higher for right-wing (left-wing) individuals confronted with a female (male) candidate

Confirmation mechanism: Information search is higher for right-wing (left-wing) individuals confronted with a male (female) candidate

Also, we have seen that issue priorities differ across men and women. In our second study, we emphasize this dimension of information search. Prior research looking at gendered vision of competence areas has established that female and male politicians are ascribed to different areas of competence (e.g. Huddy & Terkildsen, 1993). In particular, social policy and family issues are more seen as "feminine" issues while the economy or defense are more male connoted. We argue that being confronted with an issue that is either congruent or not to the candidate can also be considered a trigger of surprise or if aligned motivate information search in a desire to comfort prior beliefs. We thus hypothesize the following:

Data and method

We conducted a two wave survey in the Canton of Bern, Switzerland, before the regional election which took place the 27th of March 2022. In our view, this setting represents a perfect environment to study these questions. While being a real-world election contest with all parties running, the lower relevance of these regional elections still ensures that for the vast majority of voters, the individual candidates are blank sheets in the sense that they don't know more about them than what is on their ballot and thus the situation resembling an experimental setting.

The first wave of the survey was conducted before the election and the second wave was conducted after the election. We invited 60'000 randomly drawn citizens from the canton of Bern to participate to our survey. In the first wave, 9773 citizens participated to the survey while 5909 respondents participated to the post-election wave. In addition, we invited two thirds of the first wave respondents to use a voting advice application between the first survey wave and the election. Overall, 2918 respondents participated to the voting advice application.

In the paper, we use both the first survey wave and the voting advice application to provide two complementary research designs that enable us to test whether the gender of politicians influences the way voters seek information on politics. We first use the clickstream

data generated with the VAA. With this data, it is possible to see whether the likelihood to click on candidates' profile is influenced by the gender of the politicians - thus providing real world information seeking digital data from an existing voting advice application. Second, we use the results from an experiment conducted during the pre-election survey wave. In this experiment, we assign respondents to generated newspaper headlines that depict political candidates presenting information and positions on four different issues. We randomize the name and gender of politicians to assess the causal effect of the politicians' gender on the information seeking behavior of voters. These two design complement each-other and allow us to observe how politicians' gender influence information seeking behavior of voters with both an observational design using digital trace from real-world voting advice application and an experimental design.

In the following, we first present the data, method and results of the observational design using clickstream data from the VAA and second the experimental design of the pre-election survey wave.

Observational design: Gender and information seeking on politicians using a Voting Advice Application.

Between the pre-election survey wave and the election day, we invited a random sample of two third of first survey wave participants to use a voting advice application. Voters were directed to a clone of a real-life voting advice application which asks them about political positions on more than 50 policy questions. More than 1800 candidates for the regional election also gave their positions on the VAA and when voters completed the question list, they were presented with a list of candidates from the highest policy match to the lowest policy match, an example is presented in Fig 9. Various information are at voters' disposal in these lists. Voters can directly see the name, party, list position and party of candidates. Most candidates also provide a picture. In the first page, the 20 first matches are shown and voters can click to find out the following matches. In Bern, voters elect candidates by district thus voters also can select the different district and generate recommendation lists for all the different districts. Depending on the district, there are between 88 and 334 recommendations generate - representing the number of candidates by districts. Once recommendation lists are generated, VAA users can click on candidates profile to learn more about their political positions and other information.² In this design, we use the clickstream data generated in this step in our analyses to evaluate whether the gender of politicians influences voters information seeking behavior on candidates. Overall,

²An example of how the individual candidate profiles looked like is provided in the Appendix.

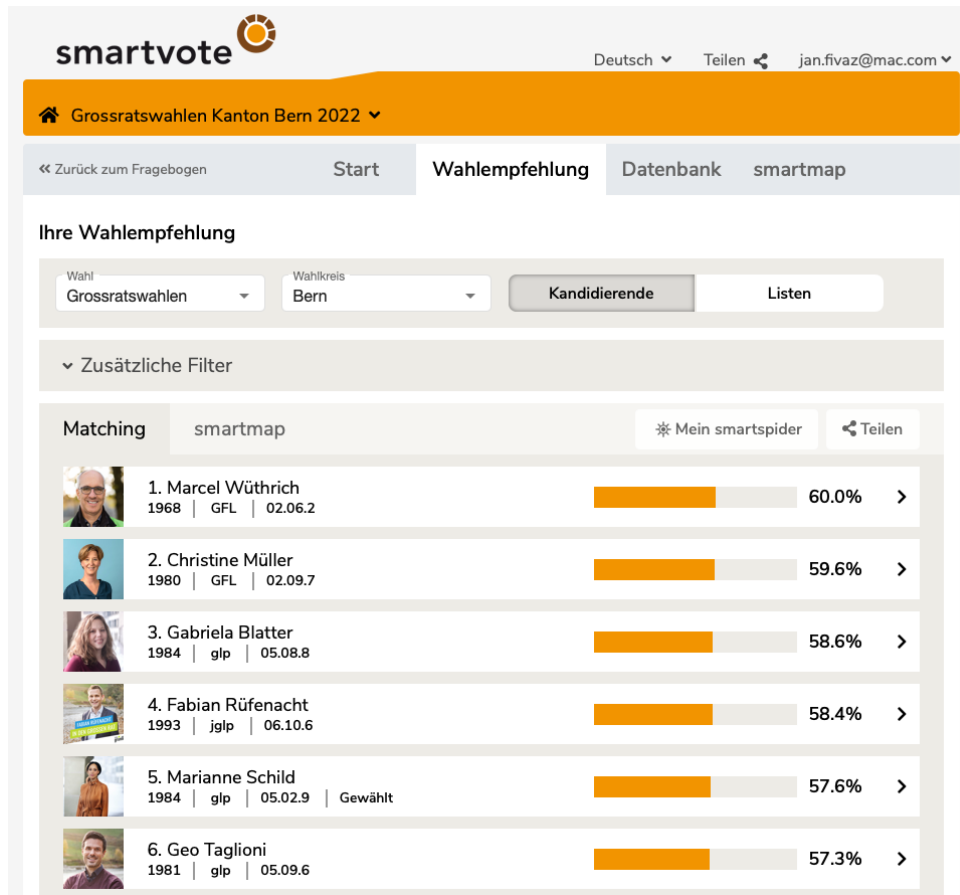


Figure 1: Screenshot of candidate list as shown to Respondents

our analyses uses the recommendations from 2218 candidates for 2918 VAA users.

When VAA users generate recommendation lists, voters can click on candidates to have further information about them. However, not all VAA participate have the same propensity to vote on candidates. Additionally, the position of candidates in the recommendation list affects the likelihood that VAA users click on the profile for additional information. On the left side of figure 2 we show the distribution of the number of profiles clicked by users. We see that a large majority of VAA users do not seek further information on candidates once the recommendation list are generated. Our analyses will focus on users that seek additional information on at least one candidates. On the right side of figure 2, we show the distribution of clicks for candidates based on their position in the recommendation list. We see that voters are more likely to seek additional information on candidates at the top of the recommendation list and that the more candidates are at the bottom of the list, the less likely it is that voters seek additional information about their profiles. This make sense from a theoretical perspective as additional information makes more sense if this is a viable candidate you can imagine voting for.

To test whether the gender of candidates influences information seeking behavior of voters in the VAA, we will use the data from VAA users that clicked on at least one politicians' profile.

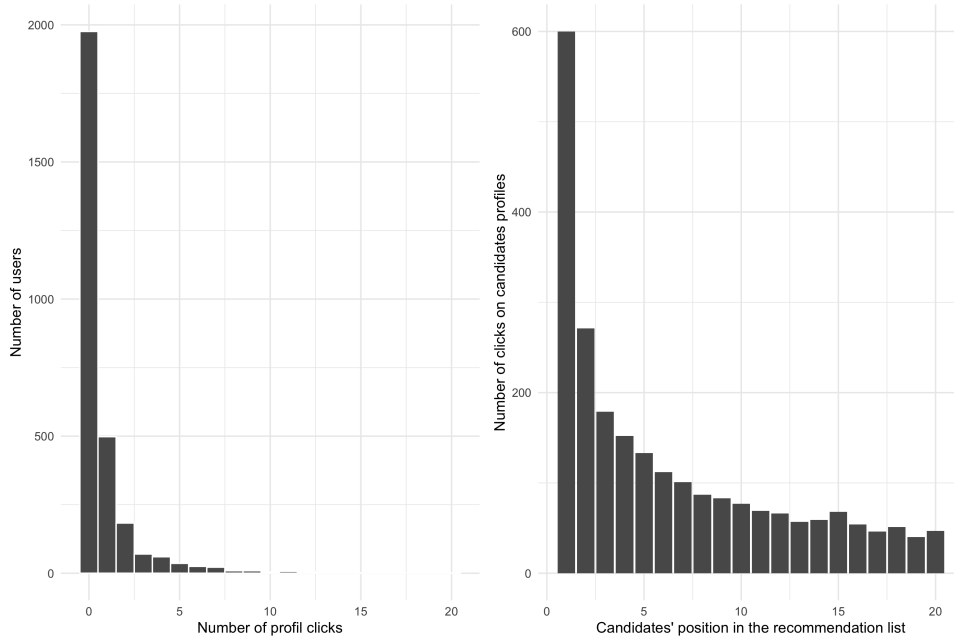


Figure 2: Caption

The number of recommendations generated depend on the district chosen by the VAA user and can vary between 88 and 334. To improve the balance of the dependent variables we consider only the candidates that appear in the first page of the recommendation lists - the first 20 candidates matches. Beyond the 20th recommendation, user have to click on different pages to see the candidates match which we consider an additional hurdle. Overall, we consider the 20 first recommendations generated for 1244 VAA users who clicked on at least 1 candidates' profile leaving us with 24880 observations - 20 observations by users.

Our dependent variables *Profile clicks* is binary and indicates whether the user clicked on the politicians' profile or not. Our main independent variables are the gender of the politician, the gender of the VAA user and the respondents' ideology. To operationalize the respondents' ideology, we use the respondents' left-right self position on a 10 points scale from the pre-election survey wave that we recode into a categorical variable that is coded as left - if the position is under 5 - center - if it is equal to 5 - and right - if it is above 5. At the end of the analyses, we also use a variable indicating whether candidates are from the party the respondents intended to vote for in the first-survey wave as well as a binary variable indicating whether the candidates are first in the recommendation list as moderating variables to see whether the effect of gender are moderated by the candidates' party and positions in the list of recommendation.

We also include a list of control variables in all of our regressions. First, we use the position of candidates in the recommendation list. As shown in figure 2, this influences likelihood that voters' click on the candidates profiles. This variable takes values between 1 and 20 indicating the position in the recommendation list. As shown in figure 2, this has a strong impact on

the likelihood of clicking on candidates' profile. - the matching values a continuous variable that indicates the matching score between voters and candidates and can take values between 0 and 100 - indicating the percentage of match between voters and candidates. Finally we also control for the incumbency of political candidates and the party match between VAA users vote intention and party affiliation of the candidate. Table 1 summarizes the variables we use in the regression models, as well as their value and their function.

Table 1: Variables summary for the observational design with the clickstream data.

Variable	Value	Type
Profile clicks	0/1	Dependent variable
Candidates' Gender	Male/Female	Independent variable
Respondents' Gender	Male/Female	Independent (Moderating) variable
Ideology of respondents	Left/Center/Right	Independent (Moderating) variable
Party match	Yes/No	Control (Moderating) variable
First in list	Yes/No	Moderating variable (last model)
List position	1-20	Control variable
Match values	0-100	Control variable
Candidates' incumbency	Yes/No	Control variable

As shown in table 1, we have three main independent variable - Candidates' gender, respondents' gender and respondents ideology. In a first step, we evaluate the direct effect of these variables on the probability to click on candidates' profiles. In a second step, we test the moderating effect of respondents' gender and the candidates' gender on the probability to click on profiles. Then, we use a three-way interaction and moderate the effect of the candidates' gender by the respondent's gender and ideology. Finally, we use the list position and party match as moderating variable in three way interaction model to see if the the interaction between the candidates' gender and the respondents' gender is moderated by the list position or the party matches.

One important aspect of the design is that VAA users are subjected to vote recommendation lists that are diverse. In these recommendation, VAA users are subjected to both candidates with different gender and party affiliation. Figure 3 presents the share of female candidate - left - and candidates from party VAA users did intend to vote for - right - that appear in the first 20 places of the recommendation list generated after using the VAA.

On the left, we see that a large number of recommendation list come with substantial shares of female candidates. This highlight the gender diversity of the lists generated for the users when they finish using the VAA. On the right of the figure, we show that recommendation list

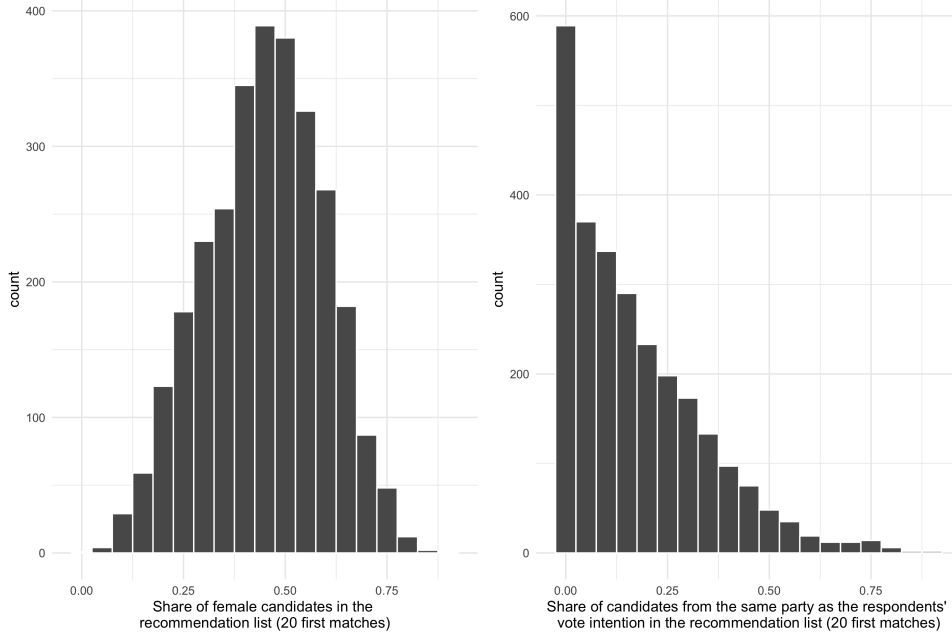


Figure 3: Distribution for the share of female candidates - left - and candidates from the same party voters intend to vote for - right - in the first 20 places in the recommendation list of VAA users.

mostly largely display profile from out-party candidates. This shows that with the VAA setting we use for this study, a large majority of VAA users are presented with candidates from parties they do not intend to vote for. Overall, figure 3 shows that VAA users are presented with lists of female and male candidate, from in and out party.

In the following we present the results of our analyses. First, we show the direct effect of the different variables on the probability to click on candidates' profiles. In a second step, we present figures with the results for the interaction between the gender of the candidate and the gender of the voter, the gender of the candidate the voters' ideology, and the results of a three way interaction between the gender of the candidate, the gender of the voter and the voters' ideology. Finally, we show two additional three way interaction between the candidate's gender, the voters' gender and the party match between the voter and the candidate or the position of the candidate in the list. All models presented are logistic regressions.

Table 2 shows the results for the direct effect of the different variables of interest - candidates and voters' gender, voters' ideology, and party affiliation - on the information search at the end of the voting advice application. The dependent variable is whether the user clicked on a profile or not.

Table 2 shows that the gender of the candidates and the gender of the voters have similar effects. Indeed, we see that VAA users are more likely to seek information on female candidates overall. Similarly, we see that female VAA users are seeking more information than their male

Table 2: Regression results for the direct effect of the observational design

	Profile click
Candidate's Gender (Male)	−0.102* (0.048)
Voter's Gender (Male)	−0.211*** (0.048)
<i>Voter's ideology (ref: center)</i>	
Left	0.235** (0.073)
Right	0.039 (0.076)
List position	−0.158*** (0.005)
Match value	−0.005 ⁺ (0.003)
Candidates' incumbency	0.363*** (0.101)
Party match	0.599*** (0.056)
Constant	−0.724*** (0.191)
Observations	22,500
Log Likelihood	−6,307.347
Akaike Inf. Crit.	12,632.690
<i>Note:</i>	⁺ p<0.1; *p<0.05; **p<0.01; ***p<0.001

counterparts. When we look at voters' ideology, we see that centrist voters are less likely to seek more information on candidates and that leftists users are more likely to do so. Finally, we see that VAA users are more likely to seek information on incumbent candidates and candidates from their party. This suggest that VAA users actually seek more information on candidates that they consider as viable - incumbent candidates and candidates from their party.

In this first result table it becomes visible that the gender of both voters and candidates influence information seeking behavior of voters. Indeed, female voters are more likely to seek additional information and more information are searched on female candidates than for their male counterparts. However, to test the mechanism, we need to interact the voters and the candidates' gender. Figure 4 shows the results of this interaction.

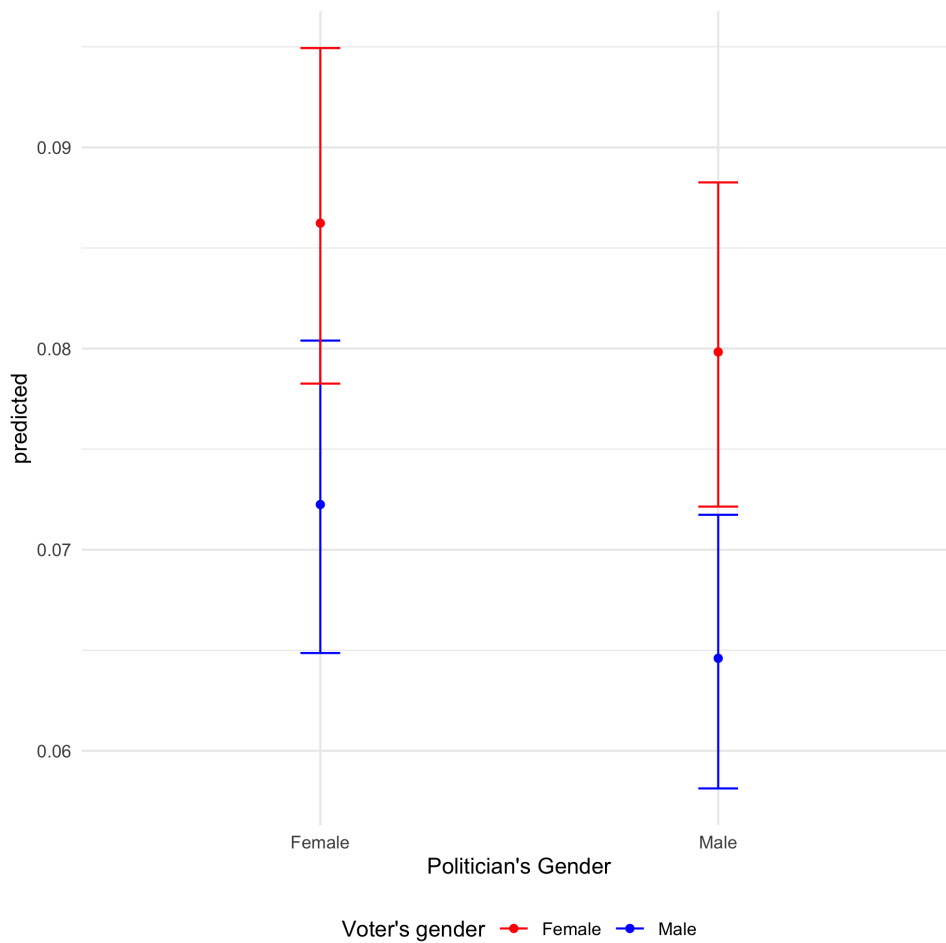


Figure 4: Results for the interaction between the candidates and the voters' gender effect on candidates' profile click in VAA.

Results in figure 4 show that there are no real interaction effect between the gender of the candidates and the voters.³ Indeed, female voters are more likely to click on both male and

³In the Appendix, we show similar findings if we differentiate between in- and out-party and the first vs any other place on the recommendation list.

female candidates’ profile and we see that both male and female voters are slightly more likely to click on female than male profiles. This do not confirm either mechanism highlighted in the hypotheses. Indeed, the confirmation mechanism stipulates that male voters are more likely to seek information on male candidates and female voters seek more information on female candidates. Inversely, the uncertainty mechanism implies that make male voters more likely to seeking information on female candidate and female voters seek more information on male candidates. Figure 4 shows that neither of the confirmation or uncertainty mechanism are confirmed overall. We interpret our finding that male and female voters mainly have parallel information seeking patterns towards male and female candidates as evidence that different motivations might be at play: While men’s information search behavior suggests that they are driven by an uncertainty mechanism as they seek information on female candidates. Women on the other hand as they are interested in female candidates as well seem to look more for confirmation of existing beliefs, their motivation is therefore more directional.

The next step is to test whether the effect of candidates’ gender on voters’ information seeking behavior is moderated by voters’ ideology.

To test our predicted, we turn to a three way interaction between the gender of candidates, of the voter and the voters’ ideology. Figure 5 presents the effect of the three way interaction on the information seeking behavior of voters in the VAA.

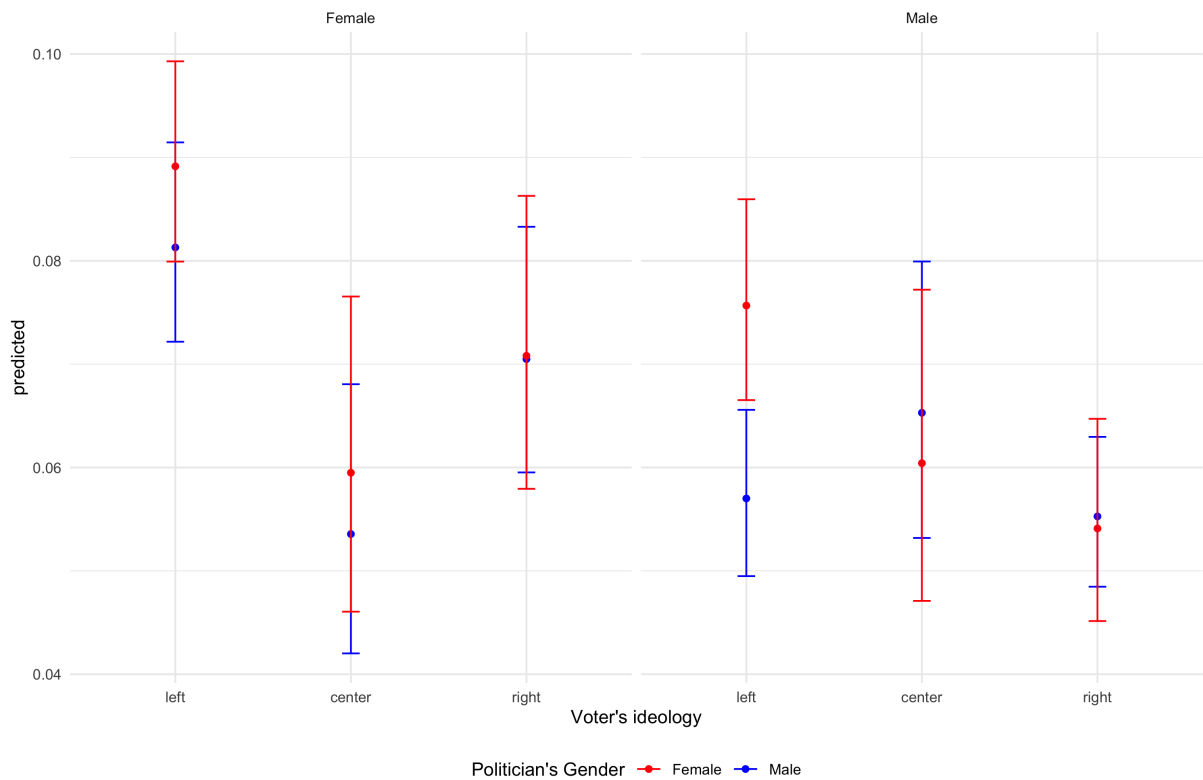


Figure 5: Caption

Several interesting aspects are shown in figure 5. In the figure, we show how the effect of candidates' gender and voters' ideology is moderated by the gender of voters. On the left side of the figure we show results for female voters and the results for male voters are shown on the right side of the figure. First, we see that female with an ideological position on the left and the right seek more information than their male counterpart. However, this difference is not true for voter who self position in the center of the scale. Second, we see that the gender of candidates does not impact the way voters seek information except for voters on the left of the political spectrum - as highlighted above in figure ???. In addition, we see that male voters who self-position in the left of the scale are significantly more likely to seek more information on female candidates than on male candidates. This tend to support more the confirmation mechanism, as highlighted in the hypotheses.

Overall, the first part of the analyses tend to show more support for the confirmation mechanism than for the uncertainty mechanism. Although we show that the gender of voters and candidates do not play a large role in the process, we see that voters on the left are more likely to seek more information on female candidates than their male counterparts. Even if we do not observe the inverse information seeking behavior on the right side of the political spectrum, our results tend to show that voters seek more information as a confirmation mechanism.

In the next section, we will present the data, the research design and the method we use for the experimental design. Then we will present and discuss the results before discussing some concluding remarks.

Experimental design: Gender of Politicians and information-seeking on issues.

In this paper, we first aim to test whether voters' information seeking behavior on issues is influenced by their gender and the gender of the politicians. To test our related hypothesis, we conducted an experiment in four parts. We presented survey respondents with fabricated news headlines related to economic, welfare, family policies and personal issues. Each headline propose the view of a fictional politician on an issue. For each headline, we treated respondents with a fictional male or female politician. After the treatment we asked respondents on a scale from 0 to 10 if they would be interested to read the article. This design enables us to estimate how the gender of the politician influences the interest of voters in information search about an issue. Table 3⁴ present the different headlines used in the experiment and the average interest value from the 10 point scale.

Table 3: Issues, headlines and average interest of respondents for the experimental designs.

Issue	Statement	Average
Economy	<i>Matin/Martine</i> Number explains how the new economic policies <i>he/she</i> proposes will help boost growth in Switzerland.	4.65
Welfare	How to reform pensions in Switzerland? <i>Thomas/Verena</i> Arnold explains how <i>his/her</i> plan will change the way pensions work.	6.63
Family	<i>Markus/Ruth</i> Burchs explains how <i>his/her</i> proposal will affect family support and child care subsidies.	4.87
Personal	How to reconcile family and politics? <i>Stefan/Stefanie</i> Odermatt talks about <i>his/her</i> very personal experience to achieve this.	4.43

As shown in table 3, respondents were subjected to four headlines. The treatment is the name and the pronoun in italics in the statement columns. These first and last name were chosen among a list of frequent names in the canton to increase the external validity of the treatments. We see that average interest is bellow the middle point of the scale for all issues except for the welfare issue regarding pension reform which is a salient issue in Switzerland.

The four issues have been chosen based on their relation to gender bias that have been highlighted in previous research. The economy, often has been referred to a hard issue that would benefit male politicians. The welfare issue is also a hard issue but with a *care* dimension that

⁴The statements presented in table 3 are translated in English from the original statements. As Bern is a bilingual canton, these statement were in French or German based on the language respondents choose to reply to the survey.

Table 4: Variables used in the linear regression to test the treatment and conditional treatment effect.

Variable	Values	Type
Interest in the article	0-10	Dependent variable
Gender of Politician in headline	Male/Female	Independent variable (Treatment)
Gender of respondent	Male/Female	Independent (Moderating) variable
Ideology of respondent	Left/Center/Right	Independent (Moderating) variable
Importance of the Economic policies	1-5	Control variable
Importance of the Family allowance policies	1-5	Control variable
Importance of the Pension reform	1-5	Control variable
Average interest	0-10	Control variable

has often been attributed to female representative. Female politicians are usually considered to be more competent on family policies. Finally, the reconciliation of family and politics is expected to have more relevance for female legislators.

In our analyses, we aim to measure how the gender of the politician displayed in the headline influences the interest respondents have in reading the full article. We use linear regression with the interest in reading the full article as the dependent variable and the gender of the politicians respondents were subjected to as the main independent variable - our treatment. We also include the gender of the respondents and the ideology as important independent or moderating variables. To measure respondents' ideology, we use the left-right self-placement of respondents on 10 point scale where 0 is all left and 10 is all right. We recode this variable in three categories with values under 5 being left, above 5 being right and the center for all respondents who indicated their position in the middle of the scale. Finally, we use the average interest of respondents and the importance of the economy, of family allowances and of pension reform for respondents based on a 5 points scale. Table 4 summarizes the variables used in the different models and well as their values and their role in the different regressions.

In the first step of the analyses, we use test the direct effect of the independent variables. In a second step, we aim to test how the treatment effect is conditional to the gender of respondents. In a third step we use a three way interaction to see how the treatment is conditional on the gender and the ideology of respondents.

Table 5 shows the regression coefficient for the four linear regression we conducted in the first part of the analyses. The results show that the gender of candidates presented in the article headlines as virtually no effect on the information seeking behavior of voters. Not only are the results not significant, the coefficients are rather small for a dependent variable with

Table 5: Regression for the direct effect of independent variables in the experimental design.

	Economy	Welfare	Family	Personal
Politicians' gender(Male)	−0.025 (0.043)	0.033 (0.040)	−0.047 (0.042)	0.074 ⁺ (0.043)
Gender of respondents (Male)	−1.031*** (0.044)	−0.157*** (0.040)	0.609*** (0.043)	0.582*** (0.044)
<i>Respondents' ideology (ref: Center)</i>				
Left	−0.646*** (0.058)	−0.157** (0.053)	0.402*** (0.056)	0.401*** (0.058)
Right	0.576*** (0.062)	−0.021 (0.057)	−0.449*** (0.060)	−0.105 ⁺ (0.062)
<i>Control variables</i>				
Importance of pension reform	0.004 (0.004)	0.024*** (0.003)	−0.016*** (0.004)	−0.012** (0.004)
Importance of family Allowance	−0.016*** (0.003)	−0.013*** (0.003)	0.024*** (0.003)	0.005 (0.003)
Importance of the economy	0.014*** (0.003)	0.002 (0.003)	−0.012*** (0.003)	−0.004 (0.003)
Average interest	0.951*** (0.012)	0.937*** (0.011)	1.072*** (0.011)	1.039*** (0.012)
Constant	1.370*** (0.103)	2.137*** (0.095)	−1.585*** (0.100)	−1.938*** (0.104)
Observations	7,710	7,710	7,710	7,710
R ²	0.502	0.504	0.567	0.523

Note: ⁺p<0.1; *p<0.05; **p<0.01; ***p<0.001

values between 0 and 10. For the personal issue - the reconciliation of family and politics - respondents are slightly more interested to read the headline with the female candidate than with the male candidate. However, we see that the gender of respondent has a strong impact on their information seeking behavior of voter. Indeed, we find that female voters are less interest in the economic and welfare issues and more interested to the family and personal issues. This is in line with previous literature documenting differences in priorities according to gender (Yildirim, 2022).

Table 5 also indicates that the ideology of voters also plays a role in the way they seek information. Indeed, voters on the left are less interested about economic issues and voters on the right are more interested to read more on this issue. Inversely, we see that voters on the left are seeking more information on family allowance and personal issue. Interestingly, we see that centrist voters are seeking more information on the welfare headline than voters on the left and the right - although the difference with voters on the right is not significant.

Finally, it is interesting to note that the importance of the issues is an important driver for information search: The effect of the respective salience variable are all significant and positive. This can be seen as first evidence of a confirmation mechanism where voters seek out information on topics already relevant to them.

In the second step of the analysis, we moderated the treatment - gender of the candidate in the headline - with the gender of the voter. Figure 6 show the results of this interaction for the four issues under studies.

Results in figure 6 show that the moderation of the treatment with the gender of the voter does not impact the information seeking behavior of voters. Indeed, we see that while the gender of voters impacts their interest in the issue, the gender of the candidate does not impact this behavior. The only issue where we can observe a small interaction effect is the family allowance issue. Indeed, in this case we see that female voters are seeking slightly more additional information with the female candidate's treatment, while male voters seek more additional information with the male candidates' treatment which points more towards a confirmation effect. For the personal story (reconciliation of family and work) instead a similar pattern than in study 1 is observed: Women are more likely to be interested in the female candidate articles while men in the male candidate.

In the second part of the analyses, we aim to observe how the candidates' gender treatment effect is moderated by the respondents' ideology. Figure 7 shows the results of this interaction.

Figure 7 shows that, overall, the ideology of respondents is decisive for their information seeking behavior on issues. Indeed, except for the welfare issue where only marginal differences subsist for voters with different ideological identification, for the economic, family and personal

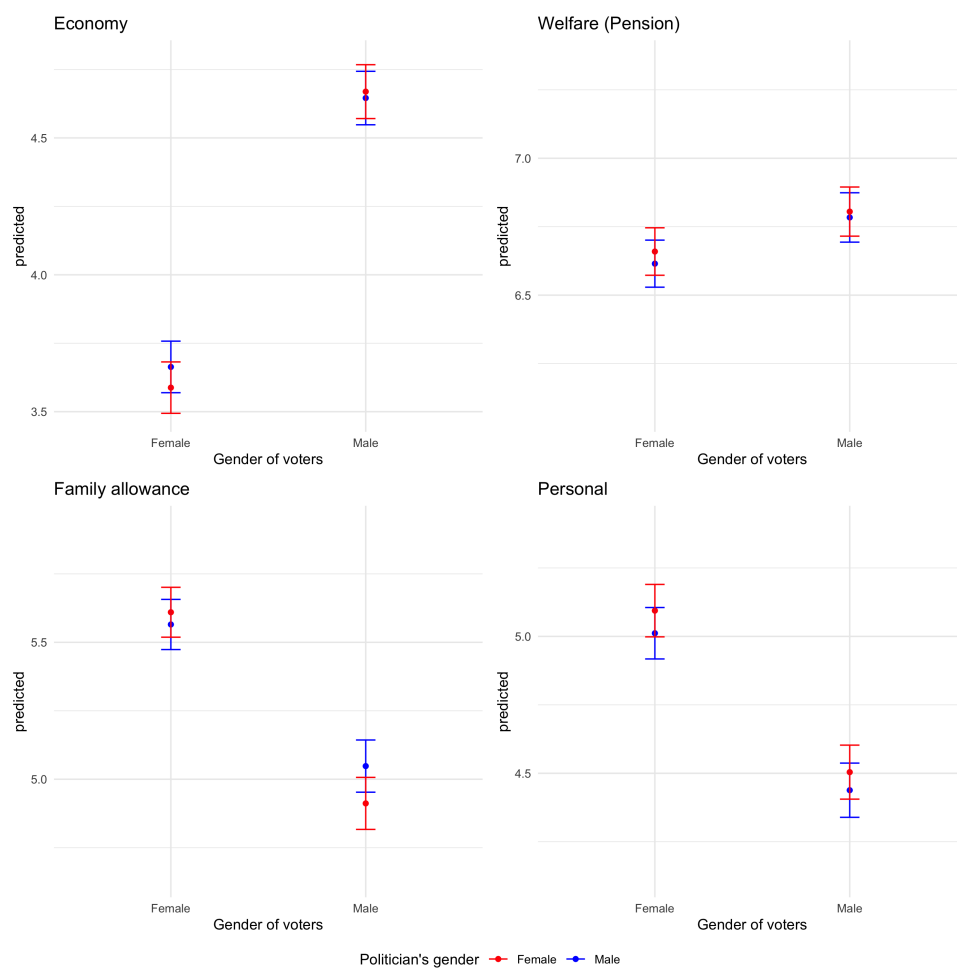


Figure 6: Effect of gender and issue on information seeking

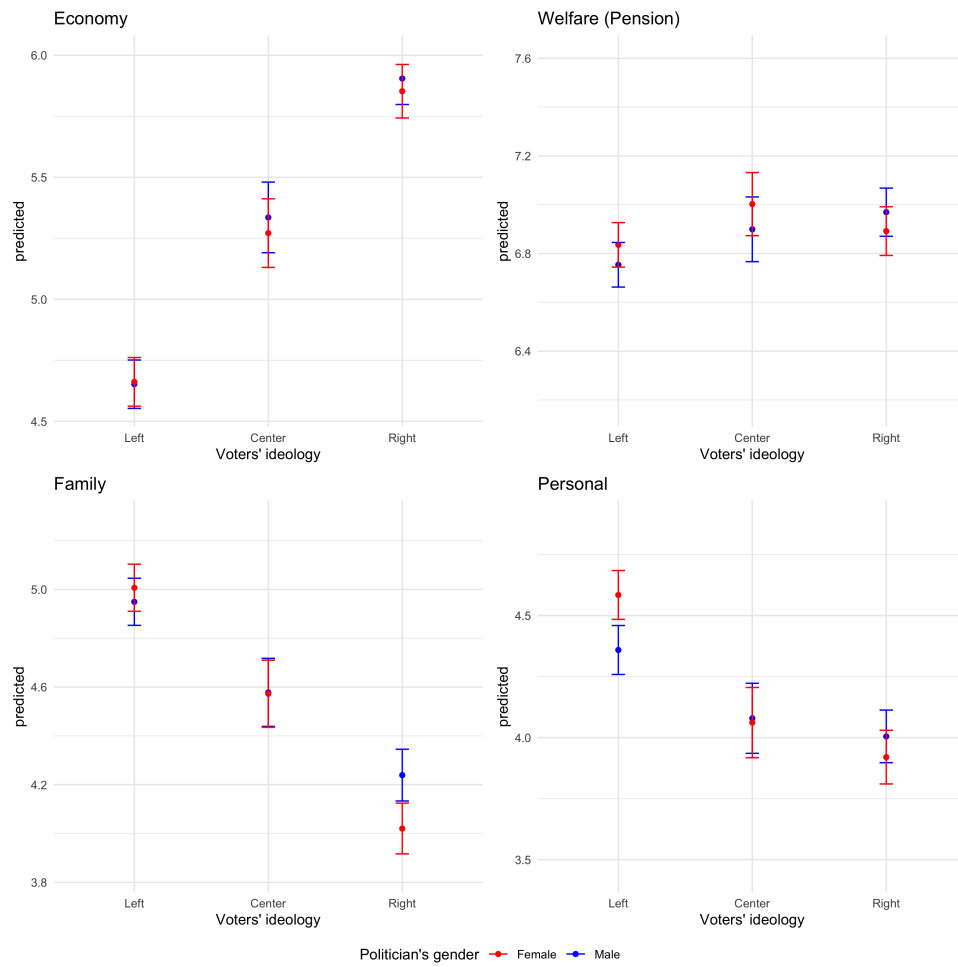


Figure 7: Effect of gender and issue on information seeking

issues, we see that ideology plays a large role in the way voters seek information on issues. However, the interaction between the treatment and the ideology of voters highlights interesting differences. Indeed, generally we see that voters on the left side of the ideological spectrum seek more information when female candidates are depicted in the headline. In the opposite, voters on the right side of the scale seek more information when male candidates are depicted in the article headlines. This is especially true for the family and the personal issues. For the family issue, we see that voters on the right seek significantly more information when male candidates are depicted while voters on the left are seeking slightly more information when female candidates are depicted. For the personal issue, we see that voters on the left are seeking significantly more information when female candidates are present in the headline while voters on the right seek more information when male candidates are shown in the headline compared to female candidates. The differences we observe between voters with different ideological self-identification point to the direction of the confirmation mechanism - as left voters seek more information when female candidates are depicted in article headlines and the opposite is true for right wing voters. Although this results is not clearly significant in all issues, it is important to notice that the interaction between the treatment and the voters ideology always go in this direction. Left voters are relatively more seeking information with articles presenting female candidates than male candidates compared to the right wing voters.

For the final part of the analyses we tested the moderating effect of the voters' gender and ideology on the treatment - the candidates' gender in the headline. Figure 8 presents the results of the three way interaction for the four issues.

Numerous interesting results are presented in figure 8. First, we see that the interaction between voters' gender and ideology have parallel effect on their information seeking behavior. Indeed, if we consider the economic issue, we highlighted in table 5 that voters on the left and women seek less information. Figure 8 show that this trend is confirmed in the interaction. Indeed, male voters seek more information on this issues - no matter their ideology. However, we see that female voters on the right side of the ideological spectrum seek as much information than male voters on the left. Thus it is interesting to note that the difference between male and female voters is constant through the ideological spectrum. Furthermore, we can observe the exact opposite for the family and the personal headlines. Women are more interested than men no matter their ideology but women on the left side of the ideological spectrum seek more information than female on the right.

Key results of the three way interaction can be found in the family and the personal issues. Indeed, in these two cases, we see that the female candidates' treatment increase information seeking behavior for leftist voters while rightist voters seek more information with the male

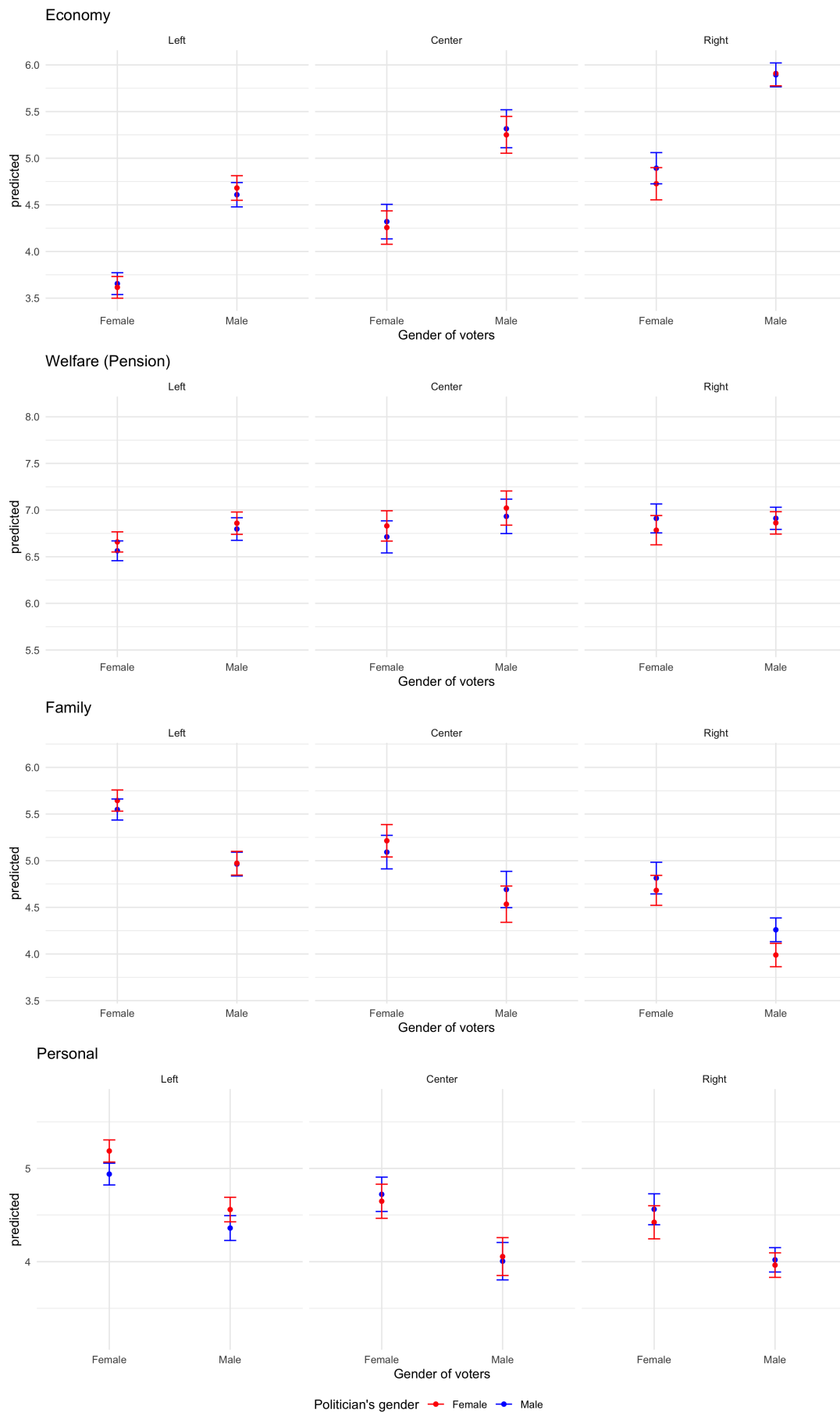


Figure 8: Effect of gender and issue on information seeking

treatment. Indeed, for family allowance we see that men on the right of the ideological spectrum seek more information when male candidates are depicted in the headline and for the personal issue we see that voters on the left - especially female voters - seek more information with the female treatment.

Overall, the results of this experiment seem to add to the confirmation hypotheses. Although the gender of candidates depicted in the headlines has a small impact on voters information seeking behavior - and certainly less than identity markers of voters such as gender and ideology - we still see that voters on the right seek more information when the issue depicts a male candidate and voters on the left seek more information when subjected to the treatment with the female candidate.

Conclusion

In this paper, we are interested in how the gender of a candidate influences the amount and type of information voters search after. While a large literature exists on the direct effects of gender on candidate evaluations, less is known about this indirect yet potentially consequential effect of gender on candidate choice.

While US-based work finds partial evidence for an uncertainty mechanism at play, we qualify this research by arguing that in more gender-equal settings, a second mechanism could be drive information search: the aim to confirm existing beliefs and attitudes or motivated reasoning.

We test our predictions in Swiss regional elections with innovative and real-world behavioral data on information search (study 1) and in a survey experiment (study 2). Our findings on the one hand conform existing studies showing higher information search for women among men while women in our sample show more patterns that are consistent with a confirmation mechanism. These findings indicate in our view the importance of the context and of scope conditions for an argument to work: In this case it is the presumed existence and relevance of gender stereotypes about politicians. Consistent with earlier work showing that gender stereotypes are more prevalent among men and right-wing ideologists and diminishing over time, our findings show that changing context conditions also affect how women and men search for information about political candidates. It would thus make sense to study the same phenomenon in settings with more or less stereotyped views of women in politics being present to further stretch the argument. In any case, our study makes clear that the US setting might not reflect an average case and in addition makes it difficult to disentangle gender from partisan preferences. Finally, our effort to study gendered information search in a real-world setting with behavioral measures coupled with an experimental design hopefully push the literature to study gender and politics with the best possible designs.

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Appendix

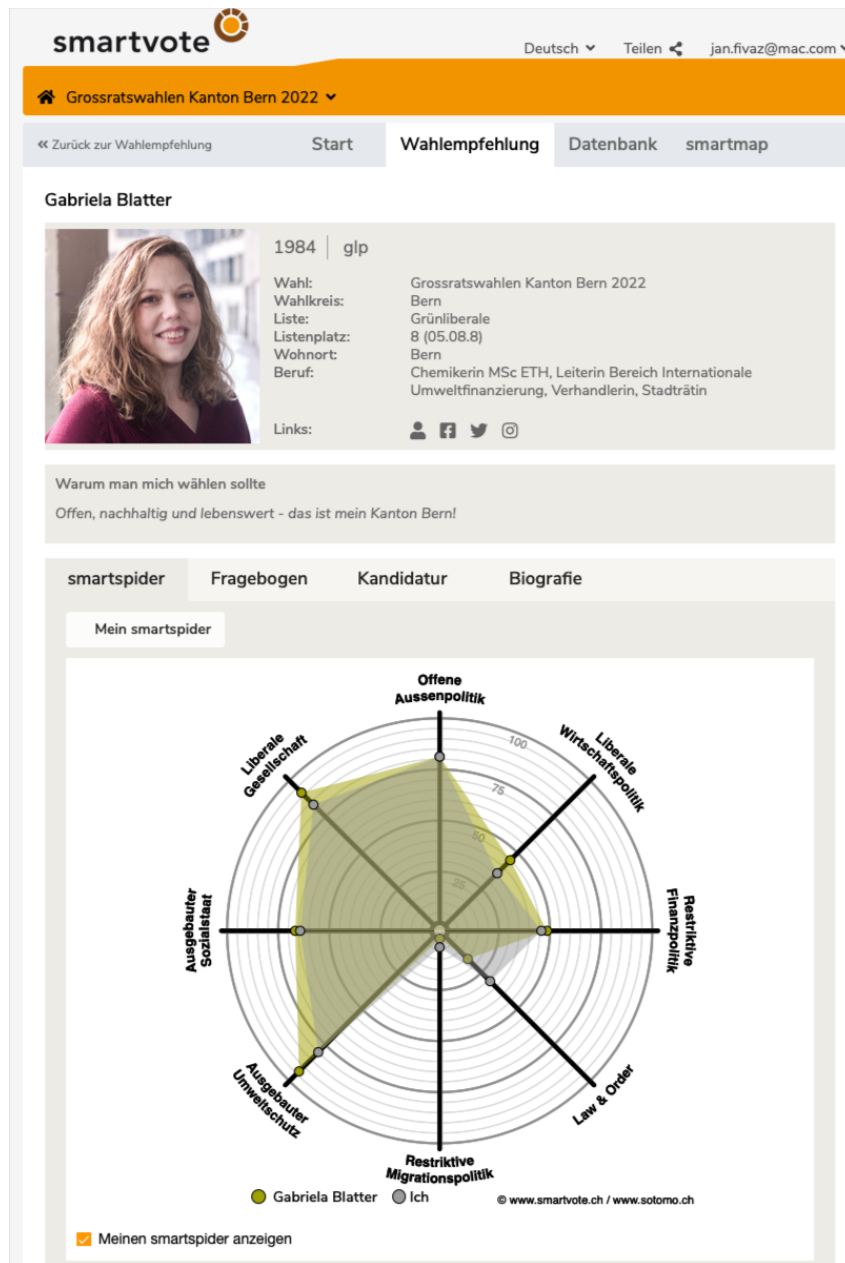


Figure 9: Screenshot of candidate profile as shown to Respondents

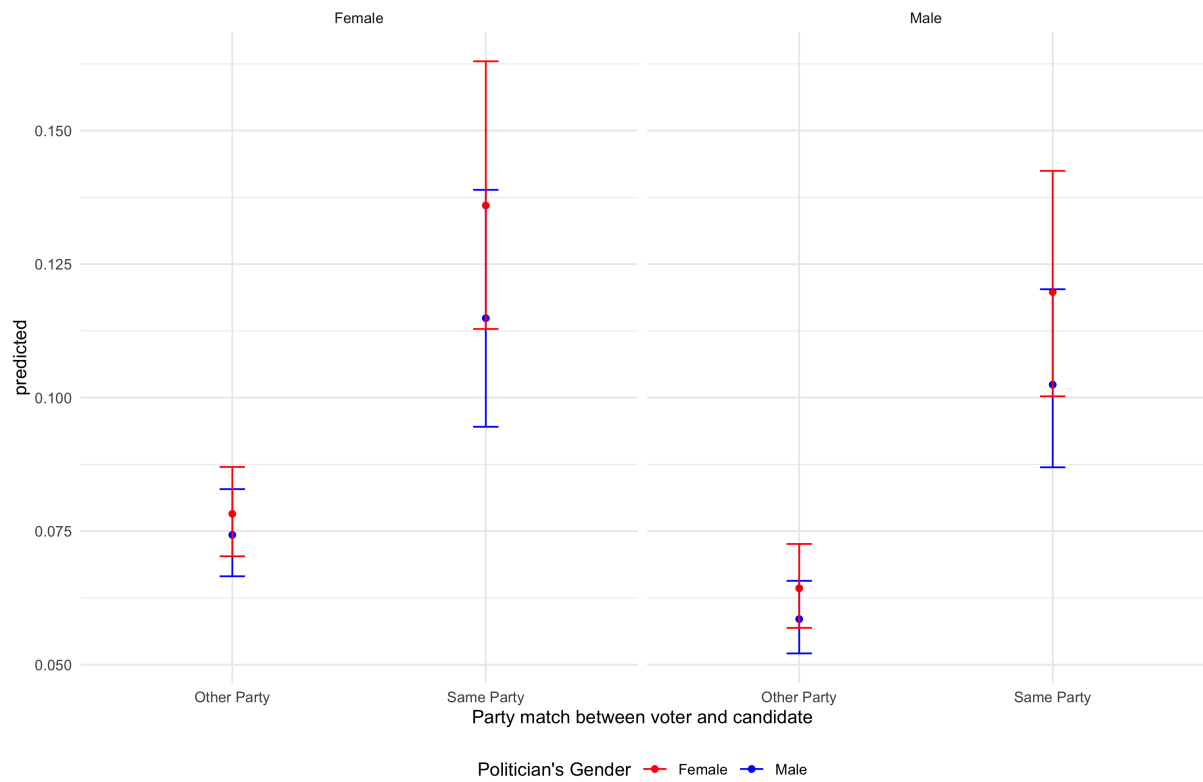


Figure 10: Caption

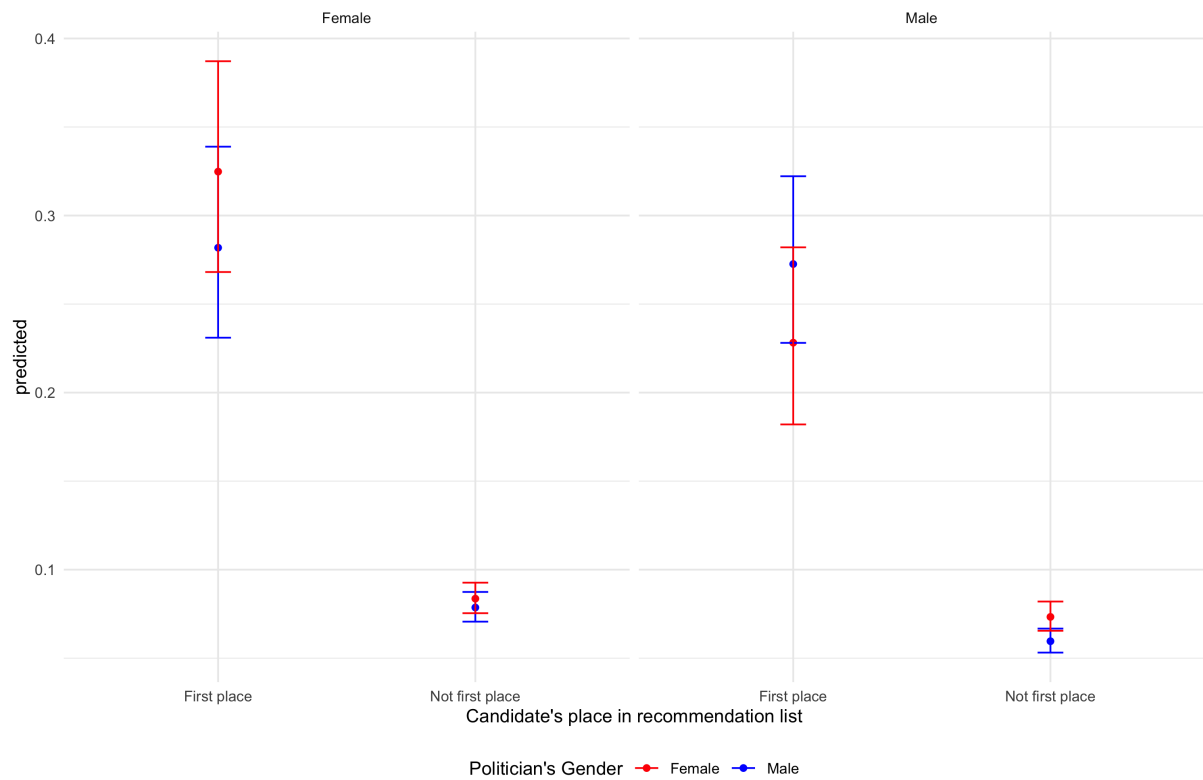


Figure 11: Caption