

Using All Possible Means to Win?

Explaining Gender Differences in Online Campaigning

DRAFT VERSION, DO NOT QUOTE.

Maarja Lühiste
Newcastle University
Maarja.Luhiste@ncl.ac.uk

Laura Sudulich
University of Kent
sudulichm@tcd.ie

The existing literature on politics and gender offers little insights into explaining potential gender variations in the use of different campaigning tools, especially with regards to cyber campaigning. While past research offers little evidence of gender differences with regards to the use of traditional campaigning tools, online campaigning might on the other hand display significant differences across men and women. In order to employ campaign websites and/or social media in one's campaign, a candidate (and her team) must have the relevant resources and skills to make the best use of them. To expect female and male candidates to campaign to the same extent online, women and men in general should have similar levels of digital literacy and competence. Hence we theorise that the political elites' employment of online campaigning tools is directly linked to the extent to which the general public uses internet. Moreover, we hypothesise that the demographic characteristics – such as respondent's sex and age – that predict the public's use of internet will also explain the variations in how candidates campaign online. We anticipate the effects of gender to be moderated by age, with the gender gap fading away across younger generations of users, both amongst general public and amongst political elites. This contention is tested on multiple data sources to capture the diversity in the use of new technologies. We analyse the general population usage side by utilising data from Eurobarometer 76.3 (2011) and the candidate component by exploring the European Candidates Study 2009.

Paper prepared for the “Final Conference of the European Election Study 2014” conference, November 6-8, 2015 University of Mannheim. Mannheim Centre for European Social Research (MZES).

Introduction

Electoral campaigns are becoming increasingly complex battlegrounds for candidates and parties. While traditional canvassing techniques are still part of the electoral persuasion strategy put in place by contenders, campaigns have embedded digital components to a large extent. A series of contributions have unveiled nuances of the campaign process and explored how the new media have changed both campaign styles and affected candidates' electoral fortunes (to name a few studies: Bimber and Davis 2003; Gibson, Lusoli, and Ward 2005; Gibson and McAllister 2006; 2011; Herrnson, Stokes-Brown, and Hindman 2007; Strandberg 2009; Sudulich and Wall 2010). Yet, the extent to which male and female candidates differ with regard to the adoption of cyber campaigning tools remains largely unknown, especially in a comparative setting.

The scholarship on gender and politics has not directly addressed this question either. While a growing body of literature examines variation in the share of women among candidates and/or elected representatives at the macro level (Jones 2009; Kantola 2009; Norris and Krook 2014; Norris 1996; Paxton and Kunovich 2003; Schwindt-Bayer and Mishler 2005; Tripp and Kang 2008), limited attention has been paid to explaining how individual level electioneering impacts women's likelihood of success. Yet, scholarly attention on female candidates' individual characteristics and behaviours can lead to a better understanding of the mechanisms explaining women's political underrepresentation (Schwindt-Bayer et al. 2010).

This study takes the first step at examining how gender influences individual candidates' campaign activity. Do female candidates campaign more or less than their male counterparts and do they use the same array of campaigning tools? In other words, we

explore the extent to which male and female candidates differ in the adoption of tools put forward to secure election. In particular, we address potential gender differences in the use of digital campaign technologies.

The internet is nowadays a key space for the production and communication of political information between the public and political elites both directly and indirectly via the mass media (Dolan 2005; Niven and Zilber 2001). Direct communication should be particularly appealing to women candidates as cyber communication tools, such as campaign websites and social media profiles (e.g. Facebook and Twitter), can enable them to avoid the gender stereotyping of mainstream media (Dolan 2005). Digital campaign technologies enable candidates to communicate their message to voters without journalistic intervention and might help women candidates avoiding the disfavouring sex role stereotypes often reported in the media depiction of the female candidates (Devitt 2002; Kahn 1996; Kahn and Goldenberg 1991).

Yet, in order to employ campaign websites and/or social media, a candidate must have the relevant resources and skills to make use of these tools. To expect female and male candidates to campaign to the same extent online, women and men in general should have similar levels of digital literacy and competence. What differences exist between men and women in the use of new technologies at large? Acknowledging gender differences – if any – in the use of the internet in the population at large constitutes a solid prior on which to build expectations about political elites' usage of cyber-campaigning. Hence we claim that use of online campaigning tools by political elites is linked to the extent to which the general public uses the internet. Moreover, we hypothesise that the demographic characteristics – such as respondent's sex and age – that predict the public's use of internet will also explain the variations in how candidates campaign online.

To empirically investigate this question we employ data from the 2009 European Election Study (EES) Candidate Study and the Eurobarometer 76.3 survey (2011). The EES Candidate Study allows us to examine gender differences in the use of campaigning tools among the political elites of the 27 European Union member states,¹ in parallel we use Eurobarometer data to understand gender variation in the use of internet within the public. Combining evidence and linking these two data sources enables us to examine how the patterns in the use of the internet amongst the general public translate (or not) into the political elites' cyber-campaigning strategies.

Preliminary results suggest that female candidates use online campaigning tools less than their male counterparts. This is in line with an overall trend whereby women, in general, use internet to a lesser extent than men – although younger women tend to be online as much as younger men – and are less likely to rely on the internet political newsgathering. As we find no significant gender differences in the usage of traditional campaigning instruments, our results suggest the gender gap in online electioneering is not due to women campaigning less in general. Rather, the evidence points to women's limited confidence, competence and/or willingness of using the internet to the same extent as men, which in turn carries over to the political elites' employment of these modern technologies, too.

Gender, campaigning, and new technologies

Despite the growing body of literature on women's political representation, relatively little attention has been paid to gender differences in relation to campaigning strategies. Yet, in order to understand women's political underrepresentation, it is crucial to know whether women and men run for elected office similarly. While current scholarship is lacking

¹ In 2009, the EU comprised 27 members.

thorough investigation of gender and electioneering in a comparative setting, past research (largely focusing on the United States) offers some cues on the relationship between candidate gender and campaign effort.

Much of the early research on the matter focused on comparing background characteristics of female and male candidates and provides some evidence of gender differences among candidates, especially with regard to the gendered stereotypes in the traditional media's depiction of candidates (Bernstein and Bernstein 1975; Darcy and Schramm 1977; Gertzog 1979; Welch 1978). More recently, attention has shifted to studying gender differences in the way candidates present themselves to the electorate (Dolan 2005; Schaffner 2005) and how voters perceive female and male candidates (Koch 2002; Sanbonmatsu 2002; Steb et al. 2008). Despite both scholarly and popular assumptions, this research offers little straightforward evidence that women campaign differently from men (Sapiro et al. 2011), suggesting that both women and men conform to the rules of the political game by using comparable campaign strategies and techniques (Darcy, Welch, and Clark 1994; Dabelko and Herrnson 1997). Moreover, research since the 1980s consistently shows that there are also no significant gender differences in fund-raising abilities, with women candidates spending similar levels of campaign funds to those spent by men when running for a wide variety of elected offices in the US (Biersack and Herrnson 1994; Burrell 1985; Dabelko and Herrnson 1997; Darcy, Welch, and Clark 1994; Hogan 2007; Werner 1997).

All in all, the state of the art suggests no substantial gender differences in the employment of traditional campaigning tools and strategies. While this evidence originates from the US context, there is little reason to anticipate a different relationship between gender and campaign effort in European democracies. *We therefore expect women and men, who ran for the 2009 European Parliament, to employ similar campaign strategies and communication techniques to one another when it comes to traditional campaigning tools.*

With regard to cyber-campaigning we lack a similarly extensive literature providing priors. Should we expect cyber-campaigning to be no different from traditional campaigning with regard to gender differences? To address this question, we begin by briefly reviewing past research on the use of new technologies in the general public to then empirically assess (a) whether there actually is a substantial difference between men and women with regard to internet use at large and (b) internet use for political newsgathering. As argued above, a persistent gender gap in internet use among the general public is likely to carry over to political elites' employment of cyber campaigning.

Early accounts of the digital divide point at socio-economic status as responsible for the gap between those who had internet access and those who did not (Hüsing and Selhofer 2002; Mossberger, Tolbert, and Stansbury 2003; Norris 2001). These studies also showed a consistent difference across gender, with men displaying higher likelihood of being wired. Moreover, as online communication technologies have largely been designed and produced by men, rooted in the military industry, the internet has been predominantly viewed as a masculine domain (van Zoonen 2002). However, access to the technology has grown across all member states of the EU, with certain countries having achieved almost full coverage – The Netherlands, Denmark, Sweden (World Bank, 2013). Without having to fully embrace technological determinism, it is reasonable to expect that increases in broadband coverage will dramatically reduce the divide between do and don't with implications for the male/female divide. However, access to the technology *per se* does not fully solve the divide. The digital divide has indeed evolved from being determined solely by access, to being determined by factors like digital literacy and online skills. For instance, a substantial gender gap has been showed to persist in the extent to which men and women engage with particular types of online activities, such as contributions to social media platforms (Hargittai and Shaw 2015) and sharing content on social networking websites (Hargittai and Walejko 2008).

While previous research on gender and electoral campaigning offers little evidence of systematic differences between women's and men's campaign strategies and techniques, *the overall gender gap in digital literacy and online skills suggest that differences in the adoption of cyber campaigning tools exist.*

Earlier studies have paid passing attention to gender when explaining differences in candidates' websites (Greer and LePointe 2001; Klotz 1998; Williams, Aylesworth, and Chapman 2002). Recently more focused accounts on women and their use of digital campaigning have been conducted in the Scandinavian context, failing to find systematic gender gaps in cyber electioneering when controlling for candidate age, incumbency, and party size (Carlson 2007; Larsson and Kalsnes 2014). These studies focus merely on individual campaign websites, leaving aside social networking sites, weblogs, podcasts, etc. When a wider array of digital campaigning tools are being looked substantial gender differences emerge: female politicians are considerably less likely than their male counterparts to use social media (Twitter) to communicate with the electorate (Larsson and Kalsnes 2014). Moreover, accounts relying on data from Scandinavia, may not be generalizable to other contexts in which women enjoy considerably lower levels of descriptive representation and where smaller proportions of the overall population are wired. As both internet penetration and ratio of women in political life are likely to affect women's adoption of digital campaign, addressing the digital gender gap by using a pool of countries with larger levels of variation could unveil a different picture.

Besides candidate's sex and overall internet usage among women and men, we expect candidate's age, incumbency status, and viability (election list placement), too, to influence the probability of using online campaigning tools. Past research suggest that general predictors of campaigning carry over to online campaign. We therefore anticipate that

traditional campaign effort and party size contribute to explaining whether candidates opt for cyber campaigning or not.

Overall gender gap in the use of internet

Before examining the potential gender gap in digital campaigning by the political elites, we explore the extent to which gender affects usage of the medium and address the moderating role of age, under the premise that younger generations have embedded the use of such technology in their everyday life with no apparent difference between young men and women. We then explore – within the group of internet users – the extent to which there are differences between men and women in using the medium to gather politically relevant information. This account will provide an insight into the structure of the online audience for politics.

First, we provide a snapshot of internet usage across EU member states, relying on a large probability sample of the European population. The Eurobarometer 76.3 (November 2011) posed a battery of questions on media consumption in general and specifically about the extent to which EU citizens use different media to gather politically relevant information. This unique source of data about online habits enables us to dig deeper into the determinants of usage as well as into the structure of that portion of the online population that uses the internet for political information.

We begin by visually exploring differences in internet use between men and women across the 27 member countries at the time of fieldwork. Figure 1 depicts simple averages for the male and female populations, by country. It shows a consistent difference across gender, with women using the internet less than men. Several countries – the Netherland, Denmark,

Romania, Lithuania, the UK – show small differences, whereas Malta, Cyprus, Greece, Spain and Austria display significantly different averages (all T-tests are significant at p .05) indicating a defined gender gap, although its magnitude is small in size.

[Figure 1 about here]

In other words, although women are less likely than men to make use of the internet, in absolute terms differences are small, though consistent. If we dig deeper into the role of age in determining such gap we immediately appreciate that for younger generations gender differences are almost nullified. Figure 2 shows that in the group of 14-25-year-old, if gender gap persist in Portugal, Spain and Greece, for most countries the dots overlap. With regard to older generations, variation is however large in terms of general use. In countries like Cyprus, Portugal, Poland, Romania and Bulgaria the average population over 55 reports almost no use of the internet whatsoever. Not surprisingly, Sweden and the Netherlands show the highest level of usage among over 55. Men are consistently more likely than women to use the technology and gender differences appear dramatically more prominent than in the 15-24-year-old age group.

[Figure 2 about here]

In sum, internet use differs across gender and the gender gap becomes more substantial for older generations. There is considerable country level variation, although the youngsters appear to make intensive use of the medium everywhere. This scattered evidence of the relationship between gender and internet use suggests that age may be a moderator of the gender gap and, that contextual elements are key in determining differences. Therefore we perform an analysis of variation in internet use, by specifying individual level socio-economic predictors as well as country level indicators. Given the nested nature of the data we use a multilevel model, where level 1 is the individual level and level 2 is the country.

Results are presented in Table 1, where model 1 is a simple additive model and model 2 specifies an interaction between age and gender to clarify whether the impact of gender is significantly conditioned by age.

With regard to socio-economic predictors we control for occupation, level of education, urban/rural place of residence, marital status and we avail of a self-assessed economic status indicator based on behaviour.² Moreover, we include variables that account for the overall status of women in society, by controlling for the share of women among elected representatives and among managerial positions in private and public sector (ISCO 1 level occupations).

Table 1 shows that all the traditional SES explanation of internet use are still good predictors of variation. Younger, more educated, richer citizens are more likely to use the internet to a greater extent than their older, less affluent and rural counterparts. Gender is clearly a significant predictor pointing at a substantial gap between men and women. However, in line with what was detected in the descriptive figures, the extent to which men and women differ is modest in size. Moreover, in model 2 the interaction between age and gender is negatively signed and significant at conventional levels indicating that the younger cohorts experience fewer differences than older ones. In other words, the gender gap substantially fades away for youngsters while it remains a stable characteristic for older generations. The data also show levels of internet usage are higher in countries where women are better represented in politics. As women enjoy relatively higher levels of descriptive representation at national level in Northern Europe compared to Southern Europe, this variable is likely to capture the overall South-North divide in digital literacy and skills.

[Table 1 about here]

² Respondents assessed whether they had difficulties playing the bills over the past 12 months.

Having explored the effects of age and gender on internet use, we proceed to investigate – among those citizens that claim they gather politically relevant information on the internet – whether the gender gap persists and, if so, in what forms.

About 30 per cent of the EU population use the internet to access politically relevant information. Over half of the EU population still gathers most information on political matters (both national and EU level) on TV. Those who claim they use the internet as either first or second source of information for national matters is 30% of the European population, while the group using the web for EU level political information accounts for 27% of the population. Within these groups there is a significant gender imbalance, with women being significantly less likely to use the internet as second or first source of information; the gap is about 5% (Prtests significant at .001).³

When we predict the likelihood of gathering online information on national political matters we indeed find that women are less likely than men to do so. Even among younger generations women are less likely to use the internet as first or second source of political information, although the probability decreases dramatically as age goes up for both men and women. Figure 3 shows predictions – for the fix part of the model only – for men and women. The probability of using the internet as a source of political information is always higher for men. On average, a 15-year-old individual is three times more likely to use the internet as first or second source of political information (61%) than a 45-year-old (20%). The data thus suggest that the online audience mostly constitutes of young people.

[Figure 3 about here]

³ According to the Eurobarometer data, men are also more likely than women to use newspapers as the most or the second most important source for getting political information (51% and 44% respectively). However, there is no gender gap in using TV or radio as the most important or as the second most important source for political information (81% of men and women use the TV and 38% of women and 39% of men use radio as the most important or as the second most important source).

The picture we gather from the overall European population points to a small but persistent gap in internet use in general and to a significantly large male/female divide when it comes to politically relevant information consumption online in particular. The question that remains is whether the demographic characteristics – such as respondent’s sex and age – that predict the public’s use of internet will also explain the variations in how candidates campaign online.

European Parliament Elections

We place our study in the context of the 2009 EP elections. European Parliamentary elections are ‘a fascinating research site’ because it ‘presents the opportunity to craft powerful research designs incorporating an unusual, indeed probably unique degree of controlled comparison: between members [candidates] of the same political institution chosen under a range of different electoral arrangements’ and country contexts (Farrell and Scully 2010: 36). Therefore, we consider the European elections the most suitable testing ground for the main hypotheses of the paper.

However, we also need to account for the particular nature of these electoral appointments, frequently classified as second-order, which are considered less important than national elections as there is no government formation (Hix and Marsh 2011; Reif and Schmitt 1980). In addition, second order elections are characterised by lower levels of electoral participation and importantly, for the issue under scrutiny here, low levels of traditional media attention. This latter element may indeed push candidates to make more extensive use of digital forms of campaigning. Specifically, with regard to gender, previous research has showed that women have better access to second-order elected offices than to national legislative seats (Darcy et al. 1994; Ford and Dolan 1999; Kantola 2009; Matland

and Studlar 1998). As a result, the European elections offer a more conservative testing ground for our hypotheses because the higher number of women running for the EP, compared to national elected office, and the potentially more extensive use of cyber campaigning may, if anything, narrow the gender gap in the use of digital electioneering. Moreover, due to the second order nature of the EP elections, candidates are more likely to be left to their own devices when designing their campaigns and choosing between electioneering techniques and tools. This may result in a greater within-party variation across candidates with regards to their personal campaign strategies than in first order national election where individual candidates' campaigns are far more dependent on party organisation.

Data

In order to measure the potential digital divide among political elites across gender, this paper relies on the 2009 European Election Study (EES) Candidate Survey and general institutional and contextual data. The 2009 EES Candidate Study offers a unique data set to examine candidates at the European Elections. In total, more than 6500 candidates were contacted, ranging from 29 candidates in Cyprus to 881 in the United Kingdom. The mean response rate for all countries combined is 22%. There is a significant variation of response rate by party and country. In order to address the dissimilarities in response rates, survey weights are used in the analysis. This paper utilises a combined weight for party affiliation and the number of MEPs per country. There seem to be no systematic patterns of non-response in terms of gender, chance to get elected or in regard to actual electoral success (Giebler et al. 2010). Hence, there is no significant response bias regarding the central variables of interest.

We use a battery of questions, asking the candidates whether they employed a range of campaign tools to capture use of both traditional and cyber campaigning. We construct two count variables – one measuring the application of traditional campaign techniques and the other measuring the utilisation of digital campaigning tools; both variables range from 0 to 5. The items of the traditional campaigning tools variable include the use of: (i) personal flyers, (ii) personal campaign posters, (iii) personal newspaper ads⁴, (iv) personal spots on TV⁵, and (v) personal radio commercials⁶ for the election campaign. The items of the cyber campaigning tools variable include the use of: (i) personal webpage (either designed/maintained by the party or the candidate), podcasts (audio or video files on the Internet), (iii) weblog (public diary or journal on the Internet), (iv) networking on the net (e.g. Myspace, Facebook, etc.), and (v) online chat with voters for the election campaign. Since both these indexes are count variables and the data are nested, we employ ordered probit regression models with country fixed effects and robust standard errors to estimate the impact of gender on the utilisation of different campaigning instruments.

The central expectation of this paper is that the gender gap in digital campaigning is explained by gender differences in the use of internet among the general population. Based on the Eurobarometer 76.3 survey data, we have created three country level variables measuring the percentage of respondents who use internet as the most important or as the second most important source for acquiring political information (i) among the total population, (ii) among women, and (iii) among men. We account for the demand for digital campaigning in the candidate models by linking to the 2009 EES Candidate Study this information on the general population's use of internet for political information consumption.

⁴ In France, this question was not asked due to legal restrictions on campaigning.

⁵ In Belgium, the Czech Republic, and France, this question was not asked due to legal restrictions on campaigning.

⁶ In Belgium, the Czech Republic, and France, this question was not asked due to legal restrictions on campaigning.

We control for both incumbency (1 – incumbent; 0 – non-incumbent) and candidate's party-determined viability⁷. Those who fight an open race are more likely to put forward a stronger effort than no-hopers and likely winners; in a similar vein we expect incumbents to campaign differently from challengers. We account for a key system related elements: the electoral incentives by distinguishing between open list (including STV), ordered list and closed list voting systems, where closed list voting system is the baseline category⁸. Further to this we provide controls for party affiliation by setting apart left-wing / liberal/ ecological parties from right-wing / conservative / nationalist parties; here the latter is the baseline category. We draw a further distinction between large parties (more than 10% of the vote achieved) and small parties (less than 10% of the vote gained), once again by means of a binary variable where small parties is the reference category.

Results

The data depicted on Figure 4 describes female and male candidates' use of varying online campaigning tools. The most popular online campaigning tool amongst the 2009 European Parliament candidates was an individual campaign website (64 percent of all candidates reported having a campaign website, either provided by the party or designed personally),

⁷ For the latter, we use a measure developed by Giebler and Wessels (2010). The categorisation of the overall viability variable is based on the candidate's list position in relation to the potential number of seats won by her party (Hix et al. 2009). In order to incorporate uncertainty in the measure, the standard deviation of discrepancy between the predictions and the seats that were actually won was calculated for each country. As a result, candidates with a list position below the predicted seats minus one standard deviation were classified as 'safe' candidates. Candidates with a list position above the predicted seats plus one standard deviation were classified as 'unpromising' candidates, and all other candidates were classified as 'doubtful' (Giebler et al. 2010). 5.7% of the respondents are coded as 'safe', 12.7% as 'doubtful', and 81.6% as 'unpromising' candidates.

⁸ Member states are classified similarly to Farrell and Scully (2005), with the exception of Poland, which according to its Electoral Law is an open list, not a closed list system (Giebler 2012; Kotnarowski 2012). Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Latvia, Lithuania, the Netherlands, Slovakia, Slovenia, and Sweden are coded as ordered list voting systems. Estonia, France, Germany, Greece, Hungary, Portugal, Romania, Spain, and the United Kingdom (excl. the Northern Ireland constituency) are coded as closed list voting systems.

followed by the use of social networking sites (56 percent of all candidates), such as Facebook, Myspace, etc. Yet, less than a quarter of the MEP candidates reported using the internet for chatting online with voters. It is noteworthy that women candidates rely somewhat more on the support of party organisation than men with regards to online campaigning. As can be seen on Figure 4, while more men than women have a personal campaign website set up by themselves, the opposite gender discrepancy holds for having a website supported by the party. In general, the results from the descriptive analysis suggest that women make somewhat lesser use of online campaigning techniques, though the gender differences are small. Is this because women, in general, used fewer campaigning tools – both online and offline – during the 2009 EP elections or are these findings specific to cyber electioneering only?

[Figure 4 about here]

When controlling for other factors, the results in Table 2 reveal that the relationship between gender and use of different campaigning tools varies considerably depending on the type of electioneering instruments. While the data show that women and men are quite similar with regard to traditional campaigning possibilities, female candidates make less use of cyber campaigning tools compared to men. We find similar patterns with regards to age, with older candidates using a narrower range of online campaigning techniques than younger candidates, while there are no differences due to age in the employment of traditional campaigning tools. These results mirror the findings from the general population models, where we also found that men and younger respondents were more likely to use the internet in general and for learning about politics in particular. Hence, our data suggest that political elites are no different from the general population when it comes to technology. Having found that within the EU citizenry the use of digital technologies is moderated by age, we include an interaction effect of age and gender in the candidate models. In contrast to general

population models, we find no evidence that the gender gap in the usage of cyber campaigning tools is different among younger candidates compared to older candidates.

Besides age and gender, the results in Table 2 suggest that traditional and digital campaigning go hand in hand. These results are well in line with past literature discussed above, which argues that the advent of Internet and cyber campaigning has not fully democratised and levelled the campaigning effort of different types of political actors. While we find no direct evidence that candidates representing larger political parties make more extensive use of online campaigning possibilities, incumbents are more likely to use a wider range of cyber campaigning tools. This may be the case because, unlike the majority of past research, we do not concentrate on campaign websites only, but on a wider variety of online campaigning tools. In fact, those past accounts that have looked at different cyber campaigning possibilities, including social media, actually find smaller and more marginal parties and political actors to make better use of Web 2.0 campaigning tools (see Gibson 2012 for an overview). Moreover, as candidates' party-determined viability is a strong predictor explaining the use of conventional campaigning techniques, the variance of using cyber-campaigning tools across parties is likely to be captured by the 'traditional campaigning tools' variable.

In terms of context, the data show that candidates competing in preferential (PR open list and STV) electoral system use a wider variety of both traditional and cyber campaigning tools compared to candidates running in closed list PR-list systems. Since we concentrated on personalised campaigning tools (e.g. personal leaflets, personal newspaper ads, candidate websites, etc.), rather than general party level campaigning materials, it is unsurprising that we find candidates who run under more personalised and candidate-centred electoral rules to utilise a wider variety of personalised electioneering instruments.

We hypothesised above that the extent to which women and men, in general, use the internet is likely to influence the extent to which female and male candidates campaign online under the premise that the structure of the online demand (the public) should impact upon the offer (the candidates). Contrarily to expectations, the results in Table 2 show no relationship between the use of internet for politically relevant newsgathering among general population and the likelihood of candidates making more extensive use of cyber campaigning tools. Hence, while we find comparable age and gender patterns in the use of digital technologies among the general public and the political elites, the data do not show that the proportion of politically interested internet users influences the level at which candidates in a given country campaign online.

[Table 2 about here]

To examine this question further, we also report the results of the model of digital campaigning separately for male and female candidates in Table 3. As with the previous findings, the variable capturing the extent to which women or men in the general population use the internet for political information consumption has no statistically significant impact on either female nor male candidates' usage of online campaigning tools⁹. In addition, the results in Table 3 further confirm that age has the same impact for both women's and men's probability to extensively campaign online. In contrast, incumbency affects only female candidates' cyber campaigning likelihood and not that of the men. One possible explanation to this is that incumbents are likely to enjoy greater party support, including assistance with web campaigning, than challengers. Since the data from the general population suggest men to be digitally more confident than women, the incumbency advantage may be thus less

⁹ As these results are not in line with the expectations, we hope to test the same hypothesis with data from the 2014 European Parliament Election, too, in the future.

prominent among male candidates compared to female candidates because the former may require less assistance from the party in setting up their cyber campaigning profiles.

[Table 3 about here]

Figure 5 illustrates the probability of using none, one, two or four different online campaigning tools by age and gender, based on estimated probabilities derived from ordered probit models run separately for male and female candidates (Table 3). As can be seen from Figure 5, male candidates more likely to use a wider range of cyber campaigning techniques than female candidates of the same age. The results depicted on Figure 5 also show that younger candidates of both sex have a higher probability of campaigning more on the web than older politicians running for the elected office. The data thus suggest that the supply of digital campaigning shares characteristics with the demand: as the online audience mostly constitutes of young people, younger candidates are also more active in capturing their attention in the digital world. Yet, while both young men and women use the internet, in general, to a similar extent, the fact that there is a gender gap in consuming political information online also among the youth may explain why we find that young men campaign online more than young women.

[Figure 5 about here]

Preliminary conclusions

Data from the 2009 European Parliament elections, covering all 27 EU member states, show that female candidates employed a narrower range of cyber campaigning tools (including personal websites, podcasts, weblogs, online chat with voters, social media sites) than their

male contenders. At the same time, we find no comparable gender gap in the use of traditional campaigning instruments. Hence, our data appears to support the hypothesis that the demographic characteristics – such as respondent’s sex and age – that predict the public’s use of the internet also explain the variations in how candidates campaign online

We assume that our findings are somewhat at odds with past scholarship – that has found little differences between male and female candidates with regard to launching campaign websites – mostly due to the fact that our data covers a wider range of countries, accounting for greater variation in terms of both internet penetration and women’s representation. In addition, we have examined the usage of a variety of cyber campaigning tools and not explicitly concentrated on the employment of candidate websites.

We find that younger candidates are more likely to use a wider range of online campaigning instruments than their older contenders. Yet, similarly to gender, we find no age gap in the employment of more traditional campaigning tools. Moreover, the results concerning political elites mirror to a large extent what we see in the general public: as young people are in general more wired, younger candidates, too, are more present in the cyber world. While the gender gap in terms of overall use of the internet fades away for the youngsters (young women are as likely to be online as young men), young female candidates still lag behind their male counterparts.

The picture we gathered by looking at internet use for political news consumption is also characterised by a gender divide. If we take these two elements together it appears that the well mapped gap between men and women in political interest and engagement holds in online environments. Moreover, online environments while not being hostile to women as such – as showed by the lack of differences in use between young man and women – are somewhat underexploited by female candidates.

While the data from the EU show the same overall patterns in the usage of digital tools in the general population and among candidates, country level variable capturing the use of the internet for political information does not explain candidates' use of digital campaigning. This could be a *caveat* in the data and hence we aim to further test this relationship with data explaining the use of social media across all candidates running at the 2014 European Parliament election.

But what are the potential implications of these findings? Considering that online campaigning is becoming more and more important, female candidates may potentially lose out on votes by not making the best use of the new tools available. Therefore, it is essential that individual female candidates and parties invest more resources in cyber campaigning to assure that male and female candidates compete on equal grounds in all campaign environments.

References

- Bernstein, Robert A. and Jayne D. Bernstein. 1975. Role, class, and support for female candidates. *Western Political Quarterly*, 28, pp. 733-36.
- Biersack, Robert, and Paul S. Herrnsen. 1994. 'Political Parties and the Year of the Woman'. In Elizabeth Adell Cook, Sue Thomas, and Clyde Wilcox, eds., *The Year of the Woman*. Boulder, CO: Westview Press.
- Bimber, B. and R. Davis. 2003. *Campaigning Online: The Internet in US Elections*, New York: Oxford University Press.
- Burrell, Barbara C. 1985. 'Women's and Men's Campaigns for the U.S. House of Representatives, 1972-1982: A Finance Gap?' *American Politics Quarterly*, 13, pp. 251-72.
- Carlson, Tom. 2007. 'It's a Man's World? Male and Female Election Campaigning on the Internet'. *Journal of Political Marketing* 6(1), pp. 41-67.
- Dabelko, Kristen LaCour, Paul S. Herrnsen. 1997. 'Women's and Men's Campaigns for the U. S. House of Representatives'. *Political Research Quarterly*, 50(1), pp. 121-135.
- Darcy, Robert and Sarah S. Schramm. 1977. 'When Women Run Against Men.' *Public Opinion Quarterly*, 41(1), pp. 1-12.
- Darcy, Robert, Susan Welch, and Janet Clark. 1994. *Women, Elections, and Representation*, 2nd edition. Lincoln: Nebraska University Press.
- Devitt, J. 2002. 'Framing Gender on the Campaign Trail: Female Gubernatorial Candidates and the Press'. *Journalism & Mass Communication Quarterly*, 79, pp. 445-463.
- Dolan, Kathleen. 2005. 'Do Women Candidates Play to Gender Stereotypes? Do Men Candidates Play to Women? Candidate Sex and Issues Priorities on Campaign Websites'. *Political Research Quarterly*, 58(1), pp. 31-44.
- Farrell, David M., and Roger Scully. 2010. 'The European Parliament: One Parliament, Several Modes of Political Representation on the Ground?' *Journal of European Public Policy* 17 (1), pp. 36- 54.
- Ford, Lyanne, and Kathleen Dolan. 1999. 'Women State Legislators: Three Decades of Gains in Representation and Diversity.' In *Women in Politics: Outsiders or Insiders? A Collection of Readings*, ed. Lois Duke Whitaker. Upper Sadler River, NJ: Prentice Hall.
- Franklin, Mark. 2006. 'European Elections and the European Voter.' In *European Union: Power and Policy Making*, 2nd edition, ed. Jeremy Richardson. Oxon, UK: Routledge.
- Giebler, Heiko, and Bernhard Wessels. 2010. '2009 European Election Candidate Study — Methodological Annex.' https://dbk.gesis.org/dbksearch/file.asp?file=ZA5048_bq.pdf (accessed November 11, 2014).
- Giebler, Heiko, Elmar Haus, and Bernhard Wessels. 2010. '2009 European Election Candidate Study — Codebook.' https://dbk.gesis.org/dbksearch/file.asp?file=ZA5048_cod.pdf (accessed November 11, 2014).

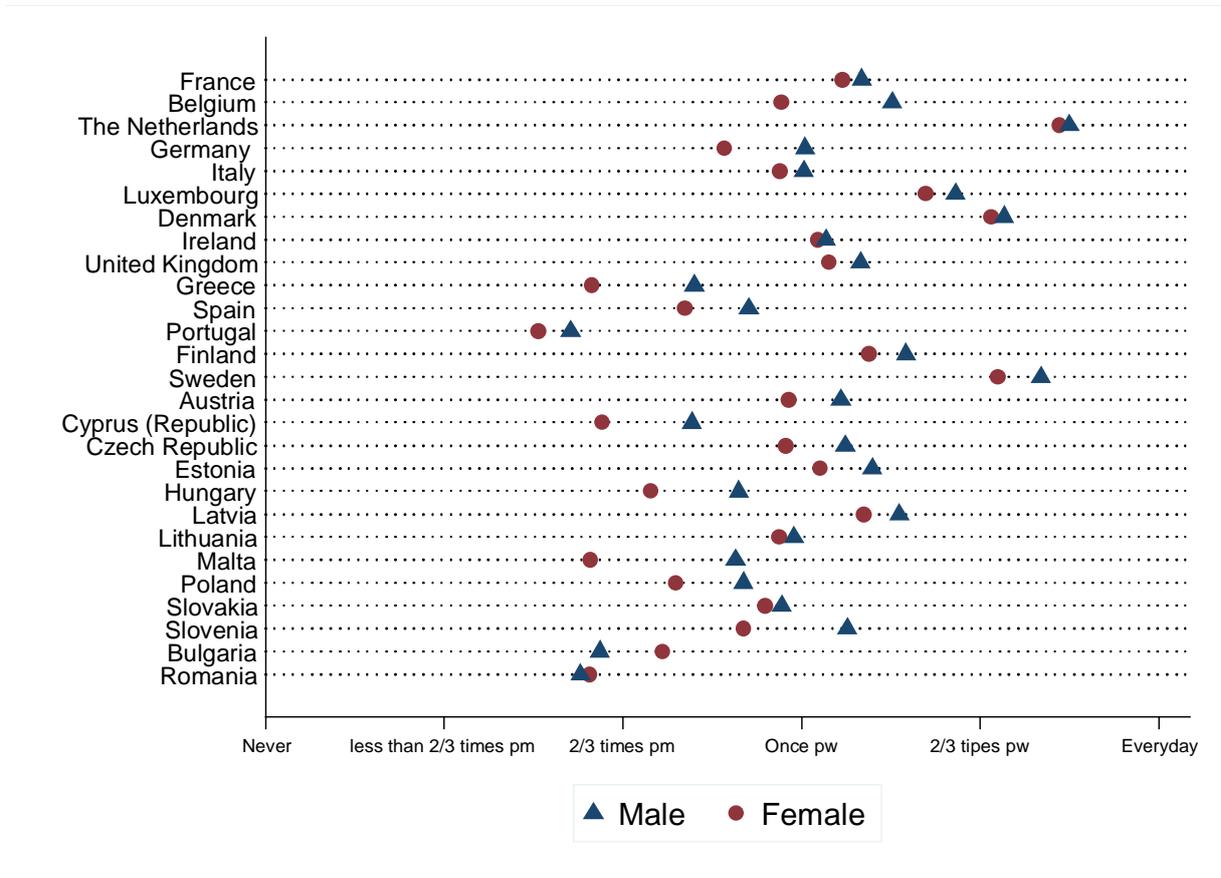
- Gibson, Rachel K., Lusoli, W. and Ward, S.J. 2005. 'Online Participation in the UK: Testing a Contextualised Model of Internet Effects', *British Journal of Politics and International Relations* 7(4), pp. 561–583.
- Gibson, Rachel K. and Ian McAllister. 2006. 'Does Cyber-Campaigning Win Votes? Online Communication in the 2004 Australian Election'. *Journal of Elections, Public Opinion & Parties*, 16(3), pp. 243 – 263.
- Gibson, Rachel and Ian McAllister. 2011. 'Do Online Election Campaigns Win Voters: The 2007 Australian "YouTube" Election', *Political Communication* 28(2), pp. 227–244.
- Gibson, Rachel. 2012. 'From brochureware to 'MyBo': An overview of online elections and campaigning'. *Politics* 32 (2), pp. 77-84.
- European Commission, Brussels: Eurobarometer 76.3, November 2011. TNS OPINION & SOCIAL, Brussels [Producer]; GESIS, Cologne [Publisher]: ZA5567, data set version 1.0.0, doi:10.4232/1.11448
- European Election Study. 2010. Candidate Survey Data 2009. <http://www.piredeu.eu> (accessed February 1, 2012).
- Gertzog, Irwin N. 1979. 'Changing patterns of female recruitment to the U.S. House of Representatives'. *Legislative Studies Quarterly*, 4, pp. 431-32.
- Greer, J. and LaPointe, M. 2001. 'Cyber-campaigning Grows Up: A Comparative Content Analysis of Senatorial and Gubernatorial Candidates' Web Sites, 1998-2000'. Paper presented at the annual meeting of the American Political Science Association, San Francisco, CA.
- Hargittai, Eszter, and Aaron Shaw. 2015. 'Mind the skills gap: the role of Internet know-how and gender in differentiated contributions to Wikipedia'. *Information, Communication & Society*, 18 (4), pp. 424-442.
- Hargittai, Eszter, and Gina Walejko. 2008. 'The participation divide: content creation and sharing in the digital age 1'. *Information, Community and Society*, 11 (2), pp. 239-256.
- Herrnson, S., A.K. Stokes-Brown and M. Hindman. 2007. 'Campaign Politics and the Digital Divide: Constituency Characteristics, Strategic Considerations, and Candidate Internet Use in State Legislative Elections', *Political Research Quarterly*, 60, pp. 31–42.
- Herrnson, P. S., and Stokes, A. K. 2003. Politics and the Digital Divide: District Characteristics and Candidate Internet Use in State Legislative Campaigns'. Paper presented at the annual meeting of the Midwest Political Science Association, Chicago, IL.
- Hix, Simon, and Michael Marsh. 2011. 'Second-Order Effects Plus Pan-European Political Swings: An Analysis of European Parliament Elections Across Time.' *Electoral Studies*, 30 (1), pp. 4–15.
- Hix, Simon, Michael Marsh, and Nick Vivyan. 2009. 'Predict09.EU.' http://www.astrid-online.com/Documenti/Politica-i/Documenti/Burson-Marsteller_Predict09_07_04_09.pdf (accessed November 29, 2014).
- Hogan, Robert E. 2007. 'The Effects of Candidate Gender on Campaign Spending in State Legislative Elections', *Social Science Quarterly*, 88(5): pp. 1092-1105.

- Hüsing, T., and H. Selhofer. 2002. 'The digital divide index—a measure of social inequalities in the adoption of ICT'. The Proceedings of ECIS, 2002.
- Jones, Mark P. 2009. 'Gender Quotas, Electoral Laws, and the Election of Women: Evidence from Latin American Vanguard.' *Comparative Political Studies*, 42(1), pp. 56-81.
- Kahn, Kim Fridkin. 1996. *The Political Consequences of Being a Woman*. New York: Columbia University Press.
- Kahn, Kim Fridkin and Goldenberg, E. N. 1991. 'Women Candidates in the News: An Examination of Gender Differences in U.S. Senate Campaign Coverage'. *Public Opinion Quarterly*, 55, pp. 180-199.
- Kantola, Johanna. 2009. 'Women's Political Representation in the European Union'. *The Journal of Legislative Studies*, 15(4), pp. 379-400.
- Klotz, R. 1998. 'Virtual Criticism: Negative Advertising on the Internet in the 1996 Senate Races'. *Political Communication*, 15, pp. 347-365.
- Koch, Jeffrey W. 2002. 'Gender stereotypes and citizens' impressions of House candidates' ideological orientations'. *American Journal of Political Science*, 46(2), pp. 453-62.
- Larsson, Anders O. and Bente Kalsnes. 2014. "'Of course we are on Facebook': Use and non-use of social media among Swedish and Norwegian politicians'. *European Journal of Communication*, 29(6): pp. 653-667.
- Matland, Richard E., and Donley T. Studlar. 1998. 'Gender and the Electoral Opportunity Structure in the Canadian Provinces.' *Political Research Quarterly*, 51 (1), pp. 117 –40.
- Mossberger, K., and R. S. McNeal. 2007. *Digital citizenship: The Internet, society, and participation*. The MIT Press.
- Mossberger, K., C. J. Tolbert, and M. Stansbury. 2003. *Virtual inequality: Beyond the digital divide*. Georgetown Univ Pr.
- Niven, David and Jeremy Zilber. 2001. 'Do Women and Men in Congress Cultivate Different Images? Evidence from Congressional Web Sites'. *Political Communication*, 18(4), pp. 395-405.
- Norris, Pippa. 1996. 'Legislative Recruitment.' In LeDuc, Lawrence, Richard G. Niemi, and Pippa Norris (Eds.), *Comparing Democracies: Elections and Voting in Global Perspective*. Thousand Oaks, California: Sage.
- Norris, Pippa. 2001. *Digital divide: Civic engagement, information poverty, and the Internet worldwide*. Cambridge Univ Pr.
- Norris, Pippa and Mona Lena Krook. 2014. 'How Quotas Work: The Supply and Demand Model Revisited' in R. Campbell and S. Childs (eds) *Deeds and Words: Gendering Politics after Joni Lovenduski*. Colchester: ECPR Press, pp. 185-205.
- Paxton, Pamela and Sheri Kunovich. 2003. 'Women's Political Representation: The Importance of Ideology'. *Social Forces*, 82(1), pp. 87-113.

- Reif, Karlheinz, and Hermann Schmitt. 1980. 'Nine Second-Order National Elections: A Conceptual Framework for the Analysis of European Election Results'. *European Journal of Political Research* 8(1), pp. 3–44.
- Sanbonmatsu, Kira. 2002. 'Gender stereotypes and vote choice'. *American Journal of Political Science* 46(1), pp. 20-34.
- Sapiro, Virginia, Katherine Cramer Walsh, Patricia Strach, and Valerie Hennings. 2011. 'Gender, Context, and Television Advertising: A Comprehensive Analysis of 2000 and 2002 House Races'. *Political Research Quarterly*, 64(1), pp. 107-119.
- Schaffner, Brian F. 2005. 'Priming gender: Campaigning on women's issues in U.S. Senate elections'. *American Journal of Political Science*, 49 (4), pp. 803-17.
- Schwindt-Bayer, Leslie A., Michael Malecki, and Brian F. Crisp. 2010. 'Notes and Comments. Candidate Gender and Electoral Success in Single Transferable Vote System'. *British Journal of Political Science*, 40(3), pp. 693-709.
- Schwindt-Bayer, Leslie A. and William Mishler. 2005. 'An Integrated Model of Women's Representation'. *The Journal of Politics*, 67(2), pp. 407-428.
- Streb, Matthew J., Barbara Burrell, Brian Frederick, and Michael A. Genovese. 2008. 'Social desirability effects and support for a female American president'. *Public Opinion Quarterly*, 72 (1), pp. 76-89.
- Strandberg, K. 2009. 'Online Campaigning: An Opening for the Outsiders? An Analysis of Finnish Parliamentary Candidates' Websites in the 2003 Election Campaign', *New Media and Society*, 11(5), pp. 835–854.
- Sudulich, Maria Laura and Matthew Wall. 2010., 'Every Little Helps: Cyber Campaigning in the 2007 Irish General Election', *Journal of Information Technology and Politics*, 7(4), pp. 340–355.
- Tripp, Aili M. and Alice Kang. 2008. 'The Global Impact of Quotas: On the Fast Track to Increased Female Legislative Representation'. *Comparative Political Studies*, 41(3), pp. 338-361.
- Van Zoonen, Liesbet. 2002. 'Gendering the Internet Claims, Controversies and Cultures'. *European Journal of Communication*, 17(1), pp. 5-23.
- Werner, Brian L. 1997, 'Financing the Campaigns of Women Candidates and Their Opponents', *Women & Politics*, 18(1), pp. 81-97.
- Welch, Susan. 1978. 'Recruitment of women to public office: A discriminant analysis'. *Western Political Quarterly*, 31, pp. 372-80.
- Williams, C. B., Aylesworth, A., and Chapman, K. J. 2002. 'The 2000 E-Campaign for U.S. Senate'. *Journal of Political Marketing*, 1, pp. 39-64.
- World Bank, 2013. <http://data.worldbank.org/indicator/IT.NET.USER.P2> [accessed: March 24th]

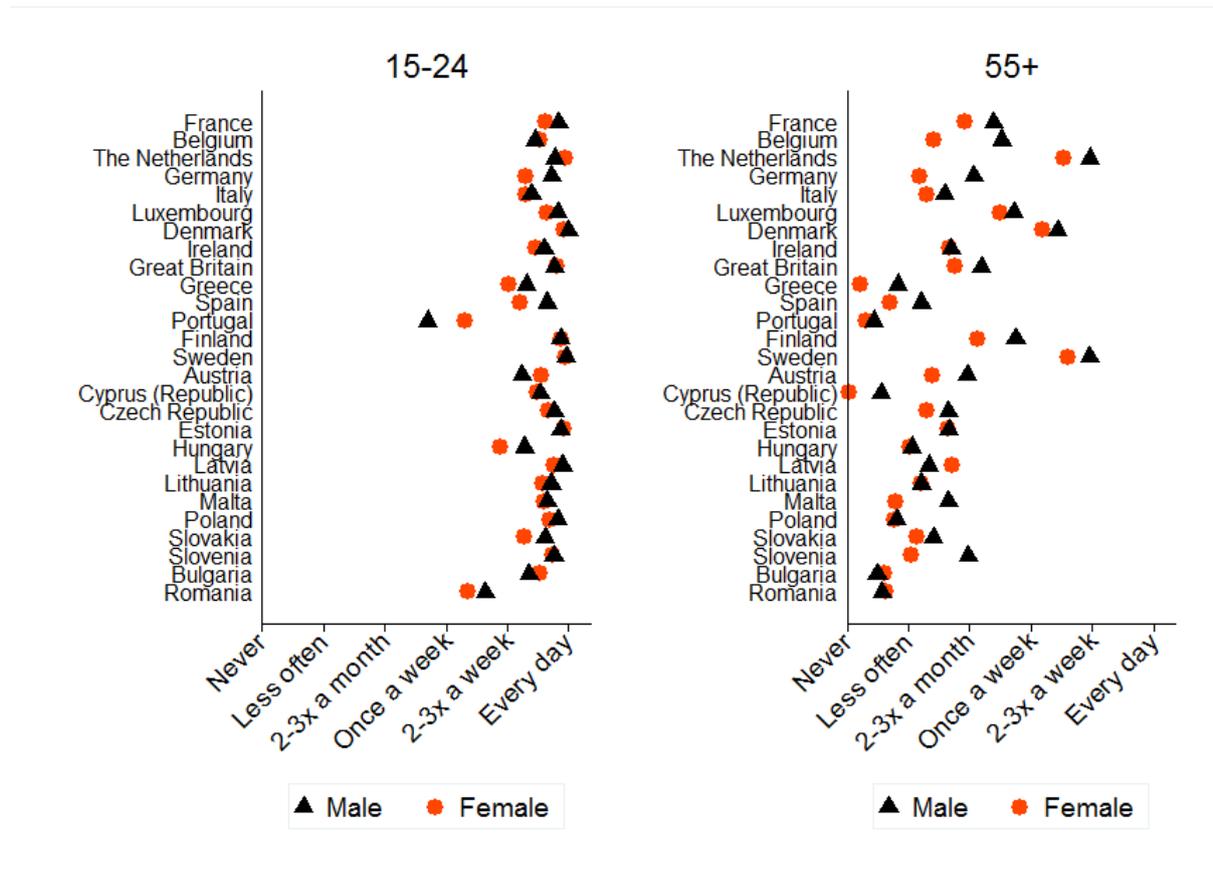
Tables and Figures

Figure 1: Average internet use in the European Union by gender



Source: Eurobarometer 76.3

Figure 2: Average internet use in the European Union by gender and age



Source: Eurobarometer 76.3.

Table 1: Determinants of internet use in general population in the EU

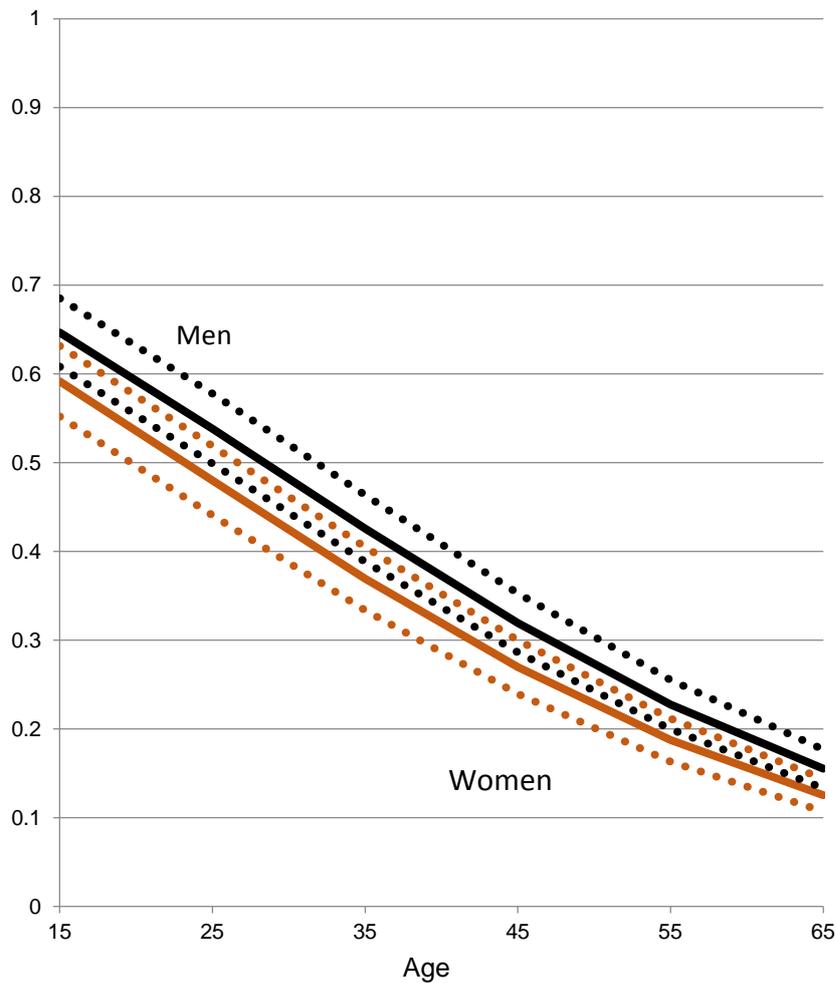
	Use of internet				
	Model 1			Model 2	
	Coef.		S.E.	Coef.	S.E.
Female	-0.10	**	(0.02)	0.06	(0.06)
Age	-0.06	**	(0.00)	-0.05	** (0.00)
Urban / rural	0.16	**	(0.01)	0.16	** (0.01)
Occupation	0.03	**	(0.00)	0.03	** (0.00)
Employment	0.10		(0.52)	0.10	(0.52)
Education: 15 years	-0.74	**	(0.08)	-0.74	** (0.08)
Education: 16-19 years	0.19	*	(0.08)	0.19	* (0.08)
Education: 20+ years	1.00	**	(0.08)	1.00	** (0.08)
Education: still studying	0.77	**	(0.09)	0.77	** (0.09)
Difficult to pay bills: from time to time	0.30	**	(0.03)	0.30	** (0.03)
Difficult to pay bills: almost never / never	0.57	**	(0.03)	0.57	** (0.03)
Marital status: married / in partnership	0.23	**	(0.03)	0.23	** (0.03)
Marital status: divorced / separated	0.05		(0.05)	0.05	(0.05)
Marital status: widowed	-0.21	**	(0.05)	-0.19	** (0.05)
Women's political representation	1.32	**	(0.38)	1.32	** (0.38)
Women's socio-economic representation	0.17		(0.62)	0.17	(0.62)
Female * age				-0.00	** (0.00)
Constant	3.73	**	(0.31)	3.55	** (0.31)
				0.31	
Level 1 N	25528			25528	
Level 2 N	26			26	

**p<0.01; *p<0.05

Standard errors in parentheses.

Source: Eurobarometer 76.3.

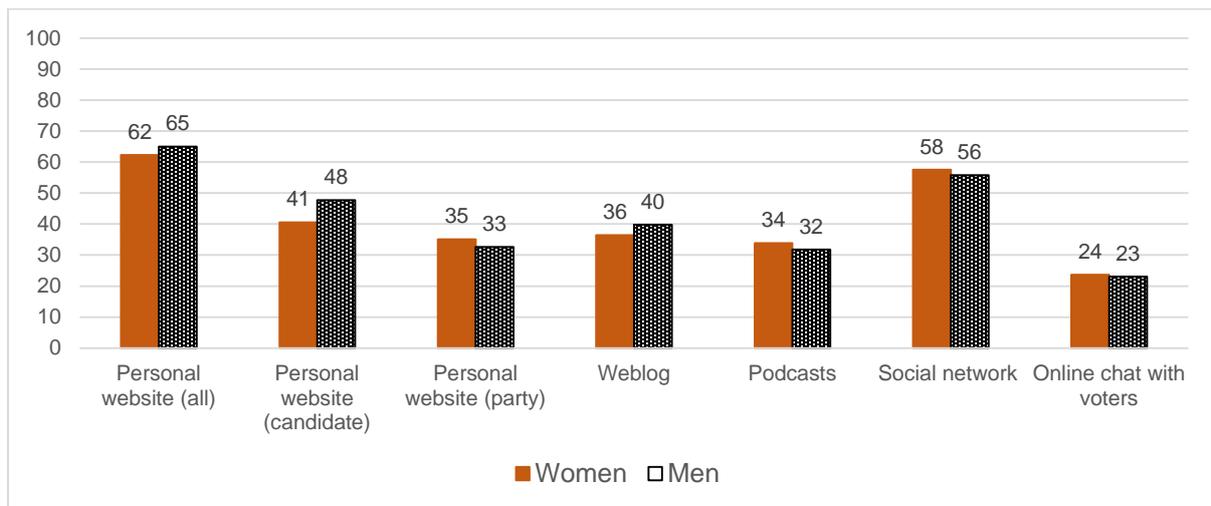
Figure 3: Estimated probabilities of using the internet for political information by age and gender



Source: Eurobarometer 76.3

Note: Estimates represent the probability of using internet as the most important or as the second most important source for gaining political information. Estimates are derived from a multilevel logit models controlling for respondent's occupational status, education, socio-economic well-being, employment status, urban/rural, level of women's political representation, and level of women's representation in ISCO1 occupations; broken line represents 95% confidence intervals.

Figure 4: Candidates self-reported use of online campaigning tools in the 2009 EP elections



The bars represent the percentage of candidates who reported using the given tool.
Source: European Election Study 2009 Candidate Study.

Table 2: Explaining MEP candidates' use of different campaigning tools (ordered probit regression coefficients)

	Use of traditional campaigning tools				Use of digital campaigning tools			
	Reduced model		Full model		Reduced model		Full model	
	Coef.	S.E.	Coef.	S.E.	Coef.	S.E.	Coef.	S.E.
Use of traditional campaigning tools					0.15	** (0.05)	0.15	** (0.05)
Female	0.07	(0.16)	-0.39	(0.47)	-0.41	** (0.12)	-0.43	(0.47)
Age	0.00	(0.00)	-0.00	(0.01)	-0.03	** (0.01)	-0.03	** (0.01)
Viability: safe candidate	0.79	** (0.25)	0.76	** (0.24)	-0.02	(0.32)	-0.02	(0.32)
Viability: doubtful candidate	0.54	* (0.23)	0.54	* (0.23)	0.37	(0.23)	0.37	(0.23)
Incumbency	-0.11	(0.28)	-0.06	(0.28)	0.72	* (0.30)	0.72	* (0.31)
Party viability (>10% votes)	0.04	(0.14)	0.04	(0.14)	-0.11	(0.15)	-0.11	(0.15)
Ordered list system	0.15	(0.27)	0.17	(0.27)	0.19	(0.15)	0.19	(0.15)
Open list system	1.18	** (0.33)	1.20	** (0.33)	1.71	** (0.44)	1.71	** (0.44)
Public internet use for political information					0.03	(0.03)	0.03	(0.03)
Female * Age			0.01	(0.01)			0.00	(0.01)
/cut1	0.40	(0.28)	0.26	(0.33)	-1.06	(0.97)	-1.07	(1.00)
/cut2	1.06	(0.29)	0.93	(0.34)	-0.33	(0.97)	-0.34	(1.00)
/cut3	1.89	(0.29)	1.76	(0.33)	0.36	(0.97)	0.35	(1.00)
/cut4	2.54	(0.31)	2.41	(0.35)	0.94	(0.98)	0.93	(1.01)
/cut5	3.24	(0.33)	3.11	(0.36)	1.70	(0.98)	1.69	(1.01)
Wald chi ²	347.49		354.92		269.20		270.53	
Prob > chi ²	0.00		0.00		0.00		0.00	
Pseudo R ²	0.19		0.19		0.11		0.11	
N	1270		1270		1255		1255	

**p<0.01; *p<0.05

Robust standard errors in parentheses; all models control for country fixed effects.

Source: European Election Study 2009 Candidate Study.

Table 3: Explaining female and male MEP candidates' use of digital campaigning tools (ordered probit regression coefficients)

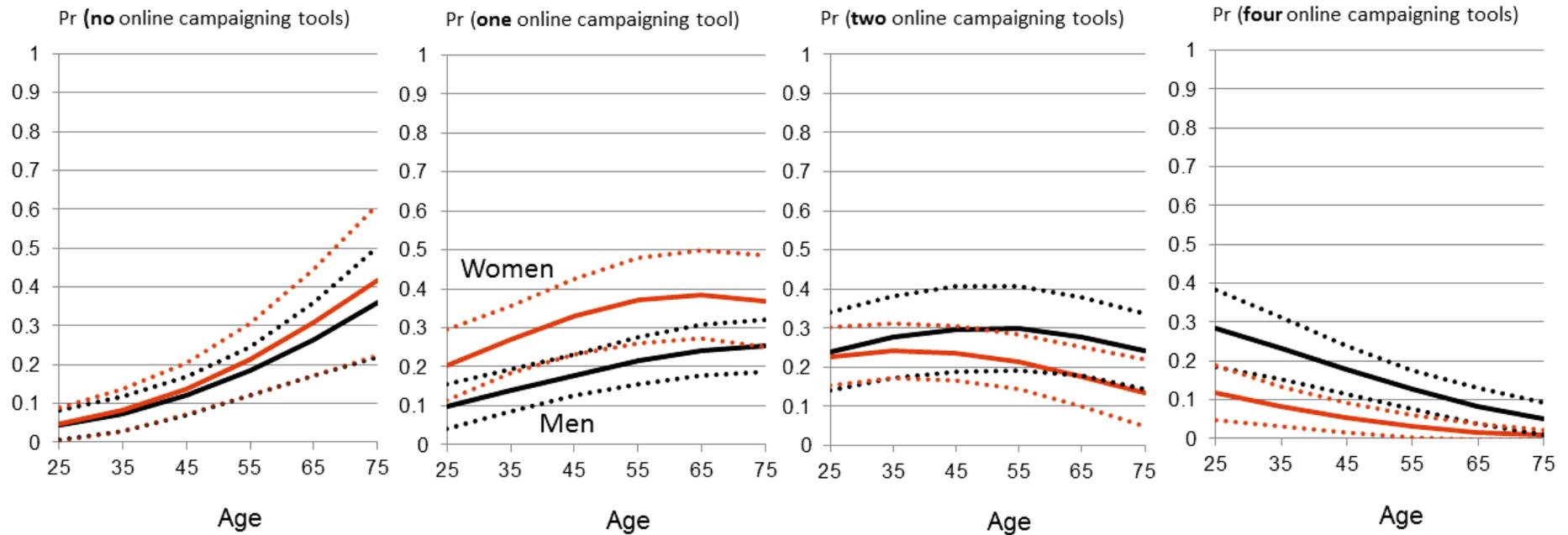
	Use of digital campaign tools			
	Female candidates		Male candidates	
	Coef.	S.E.	Coef.	S.E.
Use of traditional campaign tools	0.20	** (0.08)	0.14	* (0.07)
Age	-0.03	** (0.01)	-0.03	** (0.01)
Viability: safe candidate	-0.16	(0.51)	0.27	(0.30)
Viability: doubtful candidate	0.03	(0.27)	0.38	(0.26)
Incumbency	1.82	** (0.36)	0.18	(0.27)
Party viability (>10% votes)	-0.19	(0.18)	-0.06	(0.19)
Ordered list system	0.08	(0.23)	0.15	(0.17)
Open list system	2.43	* (1.04)	1.32	** (0.44)
Women's use of internet for political information	0.02	(0.03)		
Men's use of internet for political information			0.03	(0.05)
/cut1	-1.33	(0.74)	-0.93	(1.85)
/cut2	-0.33	(0.73)	-0.28	(1.86)
/cut3	0.29	(0.74)	0.49	(1.86)
/cut4	1.15	(0.75)	0.99	(1.86)
/cut5	1.68	(0.75)	1.89	(1.87)
Wald chi2	861.29		172.31	
Prob > chi2	0.00		0.00	
Pseudo R2	0.16		0.12	
N	420		835	

**p<0.01; *p<0.05

Robust standard errors in parentheses; all models control for country fixed effects.

Source: European Election Study 2009 Candidate Study.

Figure 5: Estimated probabilities of using digital campaigning tools during the 2009 European Parliament elections



Note: Estimates represent the probability of using three / four / five different digital campaigning tools. Estimates are derived from the ordered probit models (Table 3) with country fixed effects and robust standard errors; broken line represents 95% confidence intervals.

