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'Show me the money and the party!' – variation in Facebook and Twitter adoption by politicians

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ABSTRACT

Our study explores the adoption of Facebook and Twitter by candidates in the 2013 German Federal elections. Utilizing data from the German Longitudinal Election Study candidate survey fused with data gathered on the Twitter and Facebook use of candidates, we draw a clear distinction between Facebook and Twitter. We show that adoption of both channels is primarily driven by two factors: party and money. But the impact of each plays out differently for Facebook and Twitter. While the influence of money is homogenous for Facebook and Twitter with the more resources candidates have, the more likely they are to adopt, the effect is stronger for Facebook. Conversely, a party's impact on adoption is heterogeneous across channels, a pattern we suggest is driven by the different audiences Facebook and Twitter attract. We also find candidates' personality traits only correlate with Twitter adoption, but their impact is minimal. Our findings demonstrate that social media adoption by politicians is far from homogenous, and that there is a need to differentiate social media channels from one another when exploring motivations for their use.

1. Introduction

Given the penetration of social media among citizens, it comes as no surprise that politicians are turning to these channels as a means of engaging with the electorate. Barack Obama's campaign for the U.S. Presidency in 2008 showed their special potential to mobilize supporters, spread a narrative, and raise money (Bimber, 2014; Harfoush, 2009). Now, a necessary ingredient of any modern political campaign is a social media presence with a recent survey of political consultants showing it ranks as the third most popular medium to campaign, after television and face-to-face canvassing (Štětka, Lilleker, Tenscher, & Jalali, 2014).

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Research exploring which politicians are likely to adopt social media has found consistent patterns including that adoption is far from uniform (e.g., Conway, Kenski, & Wang, 2013; Vergeer, Hermans, & Sams, 2011), that younger politicians are more likely to adopt (e.g., Larsson & Moe, 2012; Lassen & Brown, 2010), and that these channels have contributed to the growing personalization of election campaigns (Enli & Skogerbo, 2013; Skovsgaard & Van Dalen, 2013; Vergeer et al., 2011). Yet key questions remain.

First, most studies have focused on one social media channel at a time, usually Facebook or Twitter. Accordingly, there has been a tendency to treat social media as 'one' with few studies exploring different channels simultaneously (an exception is Dolezal, 2015). Considering that Facebook and Twitter are different mediums, with varying degrees of appeal, communication modes, and networks, we contend that failure to recognize these differences and their impact on adoption is misguided. Second, there has been little research on the influence of candidates' personality, an important gap considering the array of literature that suggests adoption of innovations is swayed by individual characteristics (e.g., Rogers, 1995; Wood & Swait, 2002). Third, existing analyses of a party's impact on adoption has centred on the equalization-normalization debate. The equalization hypothesis supposes that social media are more likely to be taken up by smaller and fringe candidates and thus offers them a gateway to gain attention that they otherwise might not receive. The normalization argument assumes that the main parties eventually adopt social media, thus ensuring maintenence of the status quo. We suggest that this model overlooks a key dynamic, namely target audience. We propose that candidates' adoption of social media largely depends on where the audience that candidates wish to appeal to reside, and hence candidates will gravitate to suitable channels on this basis. Thus, the distinction that we highlight between Facebook and Twitter is especially crucial.

Our study relies on data from the 2013 German Longitudinal Election Study (GLES) candidate survey (Rattinger, Roßteutscher, Schmitt-Beck, Weßels, & Wolf, 2014) fused with unique data on the Facebook and Twitter accounts of all candidates standing (Kaczmirek et al., 2014). Germany provides an interesting case to test our assumptions. On the one hand it boasts many of the political hallmarks of other democratic states – for example, a proportional voting system, multiparty competition, and modern political campaigning techniques. Conversely, while social media use is growing in Germany (vor dem Esche & Henning-Thurau, 2014), use of these channels among Germans lags behind other countries (Poushter, 2016). Meanwhile, traditional campaigning continues to dominate (Hasebrink & Hölig, 2013), and the political use of social media is still in its infancy (Gscheidle & Gerhard, 2013), with engagement by politicians thought to be largely symbolic (Neuernbergk, Wladarsch, Neubarth, & Neuberger, 2016). Therefore, the idiosyncratic nature of adoption in Germany offers the prospect of exciting new observations emerging.

The study of adoption of social media by candidates is important as election outcomes can be influenced by campaigns (e.g., Farrell & Schmitt-Beck, 2002). Campaigns provide the best opportunity for voters to engage with elected representatives and, therefore, seeing how politicians are using social media tools to engage the public is valuable. Some argue (e.g., Baumgartner & Morris, 2010) that social media have the ability to involve the young and the politically uninterested, groups of citizens who are usually disengaged from the electoral process.[1] Meanwhile, social media's increasing agenda-setting capacity (Skogerbo, Bruns, Quodling, & Ingebretsen, 2016) and the growing number of citizens gaining

political information from these channels (Gottfried & Shearer, 2016) also make a focus on adopters worthwhile.

Using Rogers' (1995) diffusion of innovation framework, our results show that while Facebook is widely used by candidates, a selective subgroup embraces Twitter, suggesting heterogeneity across channels. We explain that adoption is primarily driven by two factors: money and party. But the impact of each plays out differently for Facebook and Twitter. While the influence of money is homogenous with the more resources candidates have, the more likely they are to adopt, the effect is stronger for Facebook. Conversely, the impact of party on adoption is heterogeneous across channels, a pattern we suggest is driven by the different audiences each medium attracts. Further, our analysis shows that personality traits correlate with the likelihood of adopting Twitter only, but that it is secondary to money and party.

Our paper advances as follows: The next section outlines the key differences between Facebook and Twitter. We then detail our theoretical framework before honing our analysis to three potential determinants: money, personality, and party. In Section 4, we describe our research strategy before presenting our empirical analysis in Section 5. Section 6 concludes.

2. Facebook and Twitter: two distinct social media

While plenty of research has explored how Facebook (e.g., Gulati & Williams, 2013; Larsson, 2014; Shephard & Quinlan, 2016) or Twitter (e.g., Enli & Naper, 2016; Vergeer et al., 2011; Vergeer & Hermans, 2013) influences politics, there has been a tendency to treat all social media as 'one', with few studies making a distinction between the two (an exception is Dolezal, 2015). However, Twitter and Facebook are diverse channels in their objectives, communication processes, cultivated networks, and audience reach.

Facebook, founded in 2004, is a social networking site where individuals create personal profiles and connect with 'friends'. Users can engage in a wide variety of activities ranging from photo sharing, commenting on friends' profiles, joining in discussions, and, importantly from a political perspective, 'liking' brands. Twitter on the other hand is a microblogging service, established in 2006. It allows its users to publish short messages ('tweets') which can include various information such as the comments of the individual or URL links to news stories and blogs, or pictures. These then appear in the streams of accounts following the poster. From a political perspective, Twitter has strong agenda-setting potential given its use by the mainstream media (Broersma & Graham, 2016; Skogerbo et al., 2016).

While Facebook networks people and is centred on social interaction, allowing social capital to develop among individuals, Twitter networks topics and is more issue driven. The communication modes of each are different. Facebook interactions are passive, tend to be less frequent and not as time sensitive, and come in the form of posts and are longer than tweets, which are mostly limited to 140 characters. As such, there is a strong time component to Twitter, as it is an active form of communication, with interactions centred on topics in the here and now.

Both channels have varying appeals: Facebook has significantly more subscribers, with 864 million daily active users (Facebook, 2014), and a recent Pew Survey suggesting that 72% of Internet users engage with Facebook (Duggan, 2015). This pattern is replicated in

Germany where Facebook's appeal is much greater than Twitter's (vor dem Esche & Henning-Thurau, 2014). Facebook attracts a broader demographic, with middle-aged people gravitating more towards this medium in recent years (Duggan, Ellison, Lampe, Lenhart, & Madden, 2015). Meanwhile, Twitter has a much smaller audience, boasting 302 million monthly users (Twitter, 2015), an estimated 23% share of Internet users overall (Duggan, 2015), many of whom are journalists and mainstream media (Broersma & Graham, 2016). Its appeal is more niche and is especially popular with the younger, college educated, and higher income demographic (Duggan et al., 2015). Moreover, in Germany, not only does the use of Twitter lag significantly behind that of Facebook (vor dem Esche & Henning-Thurau, 2014) but the intensity of Twitter use was much lower compared with Facebook, with most Twitter users remaining passive and consuming information, rather than sending their own content, a different pattern to that of Facebook (Busemann, 2013, pp. 397-399).

3. Candidate motivations for adoption of social media

We assume that candidates are rational actors and that their goal in elections is to maximize the number of votes they receive (Aldrich, 1995; Downs, 1957). Communicating with the electorate is an important ingredient in achieving prominence and in turn victory and hence politicians foray into the social media world. Rogers' (1995) seminal work on diffusion of innovations provides a theoretical basis to understand adoption. He identifies four reasons that influence the spread of an innovation. The first, the channels by which the innovation spreads, is relatively moot in understanding adoption of social media by politicians given that social media is an established part of life for many people and are easily accessible (e.g., signing up is free, and Internet access, at least in advanced democracies, is widely available). But Rogers' other three dimensions, namely the benefits and costs of an innovation, the personal characteristics of the adopters, and the social system in which adopters operate are relevant.

3.1. Benefits and costs of innovation: the role of resources

Innovations offering clear advantages are more likely to be taken up, hence our consideration of advantages and disadvantages. The benefits of adopting social media from a politician's perspective include their capacity to disseminate information quickly, their agenda-setting power (e.g., Skogerbo et al., 2016), recruitment of supporters and financial contributions (Bimber, 2014), and the opportunity of directly communicating with the electorate (Enli & Skogerbo, 2013), thus bypassing traditional party channels (Dolezal, 2015). The costs of social media adoption are more complex. At face value, outlays appear to be nil given that social media is free to join and needs little skill to operate. Little wonder therefore that they have gained a reputation as an inexpensive means of communicating with the elec-torate and a potential means of equalizing the resource gap between different candidates. However, studies of the link between resources and social media tell a different story. The trailblazers in testing this have been Williams and Gulati (2007, 2009, 2013 and Gulati and Williams 2013). In their analysis of Facebook adoption by U.S. House of Representatives candidates, they have consistently found that the candidates with the greatest financial resources are the most likely to have employed Facebook. The positive effect of resources also extends to Twitter and beyond the United States with evidence from Australia (Gibson

& McAllister, 2015), Austria (Dolezal, 2015), Germany (Zittel, 2009), and Switzerland (Klinger, 2013) confirming the positive relationship. Thus, we might infer that with such overwhelming evidence we could classify this as an established pattern.

However, a puzzle confronts us – what process underpins the positive relationship between resources and adoption among politicians? Two plausible indirect mechanisms are possible. The first is that candidates that have more resources are more likely to come from bigger parties. Therefore, these candidates are more likely to have greater resources and staff to call on to fulfil a social media campaign. In these circumstances, party size would be the real driver of the relationship between resources and adoption. The second possible explanation is candidates who are thought most likely to win have more resources at their disposal. If this is the case, the likelihood of victory underlies the relationship between adoption and resources. In sum, if both of these mechanisms are omnipresent, resources would be a mediating factor.

While we do not dispute these indirect linkages can occur, we propose that the relationship between adoption and resources is direct. Thus, we expect that by controlling for the potential indirect effects of winning and party size, the impact of resources should still be strong and positive. Research shows that limited resources obstruct the adoption of innovations (Strüker & Gille, 2010). Our expectation is that in deciding how to earmark resources, candidates will first divert them to the tried and trusted campaign techniques (such as face-to-face contact, leaflets, etc.) Campaigns that have more resources will then use their financial advantage to go beyond these conventional means and thus will invest in social media. Not only that, the more money a campaign has, the more likely they will be in a position to hire sophisticated professionals to implement social media.

We also suspect the positive relationship will vary by channel for two reasons. First are the notable differences in maintenance costs between Facebook and Twitter, with Facebook more demanding, given that it relies on more information and there are more tools to make use of (e.g., Facebook has apps, games, discussion forums, and the communication type is two way and passive). Twitter on the other hand demands much less from its users, with tweets being short, although more time sensitive. Second is the benefit or cost likely to be received from adopting. We expect candidates to go where most voters are given that this is where the greatest payoff can be expected to accrue. Consequently, the audience reach of each channel is relevant and we might expect that given its strong advantage in terms of audience reach (see Section 2 for more), it is axiomatic that the positive relationship between resources and adoption will be stronger for Facebook compared with Twitter. Accordingly, we hypothesize that:

> H1: Candidates who have greater financial resources at their disposal will be more likely to adopt Facebook and Twitter.

> H2: The effect of greater financial resources on adoption will be stronger for Facebook compared with Twitter.

3.2. Personal characteristics of adopters

For an innovation to be adopted, it must be seen as compatible with the values and norms of its adopter. Yet aside from knowing that younger politicians are more likely to adopt social media (e.g., Larsson & Moe, 2012; Lassen & Brown, 2010), much about personal

motivations for politicians remains unknown. We suggest that personality traits might condition adoption as strong evidence exists from various other adoption processes that personality influences the likelihood of adoption (e.g., Wood & Swait, 2002). To assess their impact, we turn to the 'Big 5' (e.g., McCrae & Costa, 1997), namely the extent to which individuals display agreeableness, neuroticism, conscientiousness, extraversion, and openness. Recent research has shown that these traits can contribute to our understanding of how people behave politically (e.g., Alford & Hibbing, 2007; Gerber, Huber, Doherty, Dowling, & Ha, 2010). Of these five characteristics, extraversion and openness have been found to correlate with use of Facebook and Twitter (e.g., Correa, Willard-Hinsley, & Zuniga, 2010; Ross et al., 2009). However, Hughes, Rowe, Batey, and Lee's (2012) influential article on adoption is one of few that draw distinctions between Facebook and Twitter (also see Panek, Nardis, & Konrath, 2013). They note introversion is associated with Twitter because it is less about social interaction and allows users greater anonymity compared with Facebook. Conversely, extroverted individuals are usually highly visible, adventurous, and social people who like interacting with others so the premise is that Twitter is likely to be less appealing to them compared to Facebook, which is the forum best suited to strong open interpersonal engagement.

We might also expect that adoption of social media by politicians will be influenced by their openness. Individuals who score high on openness conventionally embrace novelty whereas those who score low usually prefer convention and the status quo. Given that it can be legitimately argued that Facebook and Twitter are at different stages of the adoption cycle (as illustrated by their varying appeals and use), this implies that Twitter might be considered more novel vis-à-vis Facebook.

> H3: Candidates who are extrovert will be less likely to adopt Twitter compared with Facebook.

> H4: Candidates who are open will be more likely to adopt Twitter compared with Facebook.

3.3 Social context of adopters: the role of party

Rogers' (1995) third reason underlying adoptions refers to the context, culture, and environment in which individuals operate. For politicians, the key determinant of their social context is their party. The role of party in explaining technological adoption has been primarily viewed through the normalization-equalization prism. With the dawn of the Internet, online campaigning was thought to offer an 'opening to outsiders' – the less established and fringe parties, to bypass the traditional media, who tended not to pay much attention to them. Thus, it was assumed these online tools had the potential to 'equalize' the field of play between smaller and bigger parties, allowing the smaller ones to reach wider audiences than they otherwise might have, uninhibited by their size (the equalization thesis). The early evidence seemed promising (e.g., Gibson & Ward, 1998) but later research suggested established parties were incorporating online components to their election campaigns, and thus existing patterns of behaviour offline were simply being replicated online (the normalization thesis). Social media's evolution heralded renewed promise of equalization, and while some evidence suggests that less established parties are more likely to adopt Facebook and Twitter (e.g., Gibson & McAllister, 2011, 2015; Larsson & Moe, 2014), other research points to patterns of normalization (e.g., Klinger, 2013; Larsson, 2015; Vergeer & Hermans, 2013).

Our analysis of a party's influence on adoption departs from this normalization-equalization paradigm. We assume that the influence of party manifests itself in the drive of candidates to maximize their vote. Therefore, we expect candidates to gravitate towards social media that offers them the best pay-off in this endeavour. Underlying this choice is the audience reached via each social media. Rogers (1995) noted that adoption is not a uniform process and that people adopt innovations at different times. Larsson and Moe (2014) and Gibson and McAllister (2015) developed this logic for parties, arguing that there is a cyclical dimension to implementation, with larger parties adopting social media later only when they see it adds value to their campaigns. For us, the added value is in part also determined by the audience reach the channel has and not by the size of the party. We propose that candidates will adopt social media that are more popular among the public compared with those less popular. The observable implication is that with Facebook's audience reach being substantially larger than Twitter's both globally and in Germany (see Busemann, 2013; vor dem Esche & Henning-Thurau, 2014), we should see (a) more German candidates adopt Facebook compared with Twitter, (b) more German candidates valuing Facebook as a more important campaign tool than Twitter, and (c) the likelihood of adoption of Facebook being greater for more parties.

We also expect candidates to act even more strategically and adopt social media where they believe audiences favourable to their party congregate. For example, we assume that candidates of certain parties will be more likely to settle on a channel that the party is comfortable using and has experience of. In Germany our expectation would be that candidates of the Pirate Party (Piraten) will be more likely to use Twitter, given that it has produced much of its publicity via this channel (Jungherr, Jürgens, & Schoen, 2012), is closely associated with promoting the cause of Internet freedom, and is used by party members to communicate with one another. Conversely, we expect candidates to also be aware of the demographic differences of each channel's audience with Facebook users being more middle aged but also garnering a wider cross-section of society (see Section 2). Therefore, we might expect candidates of parties that have a cross-sectional appeal such as the Christian Democrats (CDU) and the Social Democrats (SPD) to be more likely to congregate on Facebook, where more voters are. And so, we hypothesize that:

> H5a: More candidates will adopt Facebook than Twitter given its larger audience reach.

> H5b: More candidates will value Facebook than Twitter as a campaign tool given its larger audience reach.

> H6a: Candidates from the CDU, CSU, and SPD will be more likely to adopt Facebook compared with Twitter because of its larger audience.

> H6b: Candidates from the Pirate Party will be more likely to adopt Twitter compared with Facebook because of its audience.

4. Research strategy

4.1. Data

Our data come from a unique combination of two datasets: first, data on the social media use of candidates in the 2013 German Federal Election (Kaczmirek et al., 2014), and second, data from the GLES 2013 candidate survey (Rattinger et al., 2014). The GESIS

Leibniz Institute for the Social Sciences collected the data on the social media use by candidates. Having directly contacted each party contesting, a list of candidates for each of the main parties was compiled.[2] Based on this list, a manual search identified if candidates had a Facebook account, a Twitter account, or both. Included were accounts that could be clearly identified as being 'political' (i.e., accounts that displayed a party logo, included political content, or stated a candidate's political affiliation). In total, 71.5% of candidates had a Facebook and/or Twitter account.

Our second data component comes from the GLES candidate survey where candidates contesting the election were surveyed. The questionnaire probed candidates' political attitudes, campaign behaviours, as well as providing data on socio-demographic and personality traits. Of the 2776 candidates standing, 41.8% took part in the survey which was fielded from 16 October 2013 until 10 January 2014 via mail or online. Many of our independent variables of interest, namely candidates' personality traits, the extent of resources, as well as a wealth of covariates come from these data. Based on a correspondence list linking respondent IDs and accounts, the two datasets were merged. This merged dataset was supplemented with publicly available data about whether the candidate was an incumbent or not. The Appendix includes full details of the summary statistics of our variables.

4.2. Modelling strategy

As our dependent variables are whether a candidate had or did not have a Facebook and/or Twitter account, we employ bivariate probit regression (e.g., Cameron & Trivedi, 2005). This method enables us to jointly model two distinct outcomes and explicitly allow the error components of both equations to be correlated. By doing so, we are able to control for unobserved effects that affect both decisions. A likelihood-ratio test confirms the correlation of both error components is significantly different from zero (H_0: $\rho = 0$; $p > .25$), supporting our modelling strategy.

Due to unit nonresponse, we tested for selection bias in this subsample by estimating a logit model on survey participation (see Table A2 in Appendix). Despite the fact that the model relied on a broad set of information, its overall explanatory power is low (McFadden's $R^2 = 0.047$) and we conclude that selectivity is not problematic and simply reduces the sample size for analysis. However, our N reduces to 927 due to item nonresponse.[3]

Our first independent variable of interest is resources. We measure resources by candidates' self-reported spending in the campaign in Euro. The reference category is those candidates who spent €1000 or less. Our second independent variable measures candidates personality traits. We capture these by candidates' answers to a shortened version of the 'Big 5' scale by Rammstedt and Johns (2007). Our final primary independent variable is the party of the candidate, with the CDU/CSU combined acting as the reference category.

We also control for a number of covariates that we expect to influence adoption of Facebook and/or Twitter: candidates' age and gender, their place of residence, whether they were an incumbent MP or not, individual policy stances on the welfare state and immigration, and, finally, whether they engaged in broader online/social media

campaigning. Full details of the operationalization of our variables are available in the Appendix.

5. Empirical analysis

In our bivariate probit regression we simultaneously explored the likelihoods of adopting Facebook and Twitter. Table 1 details our results providing the average marginal effects that each independent variable has on the likelihood of adopting Facebook or Twitter. The marginal effects represent the average influence of the independent variables.

We first test our resources hypotheses: the effect is positive and statistically significant for both Facebook and Twitter, providing empirical support for H1 that the more resources politicians have at their disposal, the greater the likelihood of them adopting some form of social media. Figure 1 teases out these effects in greater detail by displaying the average predicted probabilities of Facebook and Twitter adoption dependent on resources. The diamond dots illustrate the average predicted probability of Facebook adoption while the square dots do likewise for Twitter, with the vertical lines around these dots representing 95% confidence intervals based on the standard errors. We see that the likelihood of adopting Facebook steadily increases the more money a candidate spends, rising from a likelihood of approximately 51% among those who spend under

Table 1. Average marginal effects based on bivariate probit models examining motivations for adoption of Facebook & Twitter by candidates in the 2013 German Federal elections.

Dependent variable: Candidate adoption of Facebook or Twitter				
	Facebook		Twitter	
	AME	SE	AME	SE
Budget (Reference: 0—1k Euro)				
1-5k Euro	0.122**	0.040	0.069[+]	0.037
5-15kEuro	0.217***	0.048	0.105*	0.044
>15k Euro	0.296***	0.050	0.172***	0.047
Personality: Extraversion	0.003	0.057	0.025	0.056
Personality: Openness	0.060	0.069	0.143*	0.067
Attitudes: Pro-welfare state	0.088	0.082	0.057	0.082
Attitudes: Contra-Immigration	0.095	0.070	-0.049	0.070
Party (Reference: CDU/CSU)				
SPD	0.099	0.062	-0.051	0.069
FDP	-0.041	0.061	0.011	0.067
GREEN party	-0.084	0.069	0.110	0.076
LEFT party	-0.128	0.081	-0.080	0.081
PIRATES	-0.252***	0.073	0.369***	0.075
AfD	-0.190**	0.067	-0.135*	0.064
Place of residence (Reference: Rural area)				
Small or medium-sized city	0.005	0.035	0.029	0.034
Suburban area	-0.001	0.055	0.059	0.055
Big city	0.055	0.039	0.084*	0.038
Female	0.069*	0.033	-0.041	0.032
Age (in decades)	-0.061***	0.012	-0.077***	0.012
Incumbent	0.098	0.063	0.168***	0.048
Campaign: Interviews/press releases	0.059	0.055	0.095[+]	0.056
Campaign: Campaign stand	0.053	0.065	0.051	0.066
Campaign: Blog/Youtube	0.284***	0.055	0.213***	0.050
N	927		927	

Note: AME = Average marginal effect, SE = standard error.
Source of data: Kaczmirek et al. (2014); Rattinger et al., (2014). [+]p<.10, *p<.05, **p<.01, ***p<.001.
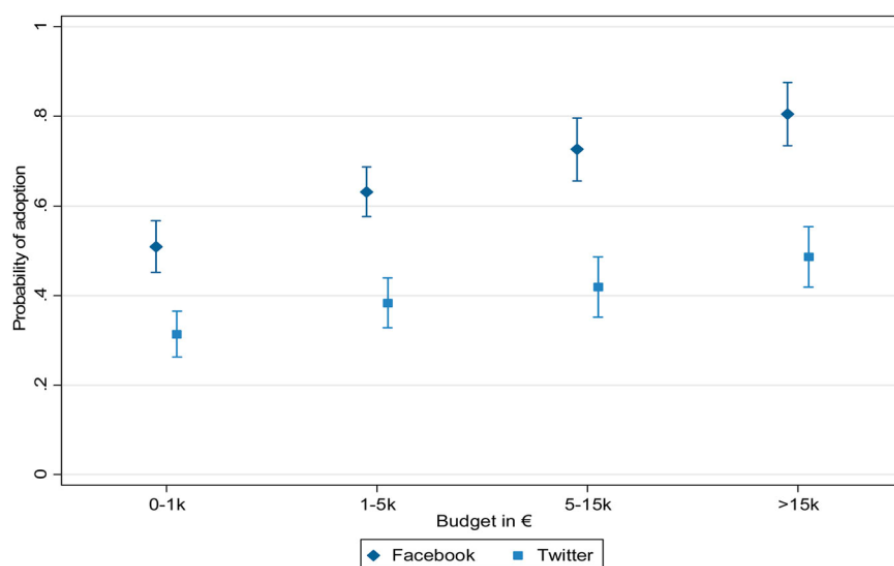
Figure 1. Average predicted effects of resources on Facebook and Twitter adoption by candidates in the 2013 German Federal Elections. Source of data: Kaczmirek et al. (2014); Rattinger et al. (2014).

€1000, to a probability of 81% among candidates who spend in excess of €15,000. The picture for Twitter is similar, with the likelihood of adoption rising from 31% among those who spend less than €1000 to an average probability of 49% adoption among those who spend more than of €15,000. However, as Figure 1 clearly shows, the slope is much less pronounced for Twitter vis-à-vis Facebook, offering support for H2: we expected that resources would have a greater impact on Facebook adoption than Twitter adoption because of the greater maintainence costs involved with Facebook and its larger audience reach. In sum, resources strongly influence adoption of social media among politicians, and thus our findings support the strong relationship identified by others. Thus, there is little support that either of these channels is a tool which will level the political playing field by offering an opening for less resourced candidates to get a foothold in election campaigns. However, what our research does show is that the impact of resources differs for each channel, with more resources increasing the likelihood of adopting Facebook, strong evidence that there is hetereogeneity when it comes to adoption among politicians.

Our regression models illustrate that personality had no impact on the probability of candidates adopting Facebook. Contrary to our expectations and the assortment of literature suggesting introversion matters for Twitter adoption, we detected no significant effect and therefore reject H3. However, candidates who display high levels of openness have a greater probability of adopting Twitter compared with those who have low levels. Table 1 details how candidates who are more open were 14 percentage points more likely to have adopted Twitter than those who were not, a reasonably potent effect, although it does lag behind the effect of party and resources to an extent. Thus there is support for H4. Our results indicate two things: (1) again we see there is a clear difference between the impact of personality on likelihood of Facebook adoption vis-à-vis Twitter adoption – personality matters only for Twitter, more evidence of hetereogeneity and (2) while personality affects
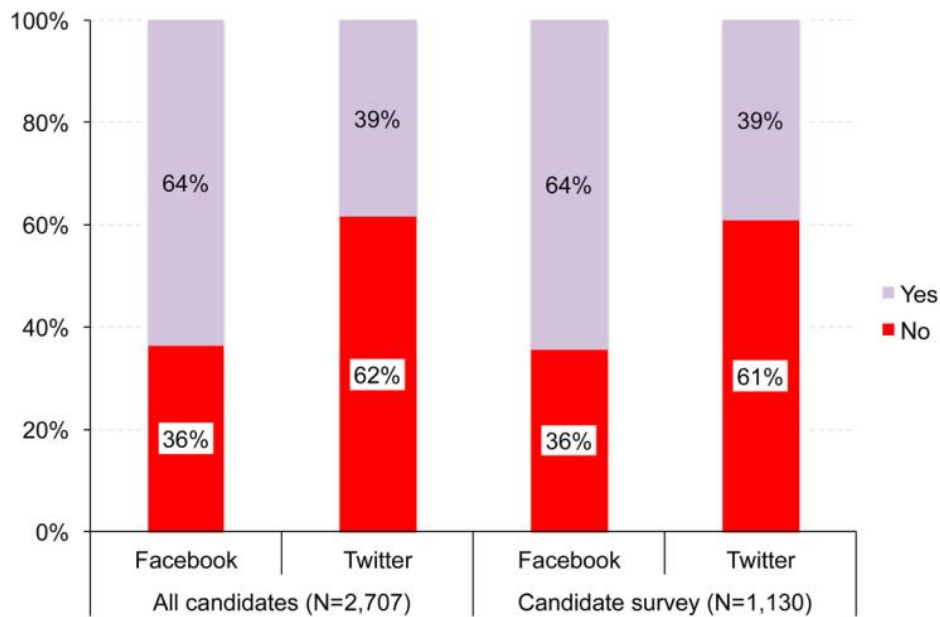
Figure 2. Use of Facebook and Twitter by candidates in the 2013 German Federal Elections (%).
Source of data: Kaczmirek et al. (2014); Rattinger et al. (2014). Note: Data above may sum to 100+
because of rounding.

the likelihood of adopting Twitter, it is a secondary factor to the more potent variables of money and
party.

Turning to the role of party, Figure 2 shows the distribution of candidate adoption of both Facebook
and Twitter. It shows that Facebook was the more commonly used social media tool of the two, with
nearly two-thirds of candidates (64%) having a Facebook account while only 39% of candidates had a
Twitter account. This is what we expected: Facebook more likely to be adopted by candidates
compared to Twitter because of its greater audience share, thus illustrating support for H5a.
Meanwhile, Figure 3 details that 44% of candidates cited Facebook as either the 'most important' or a
'very important' tool for campaigning, ranking Facebook alongside more
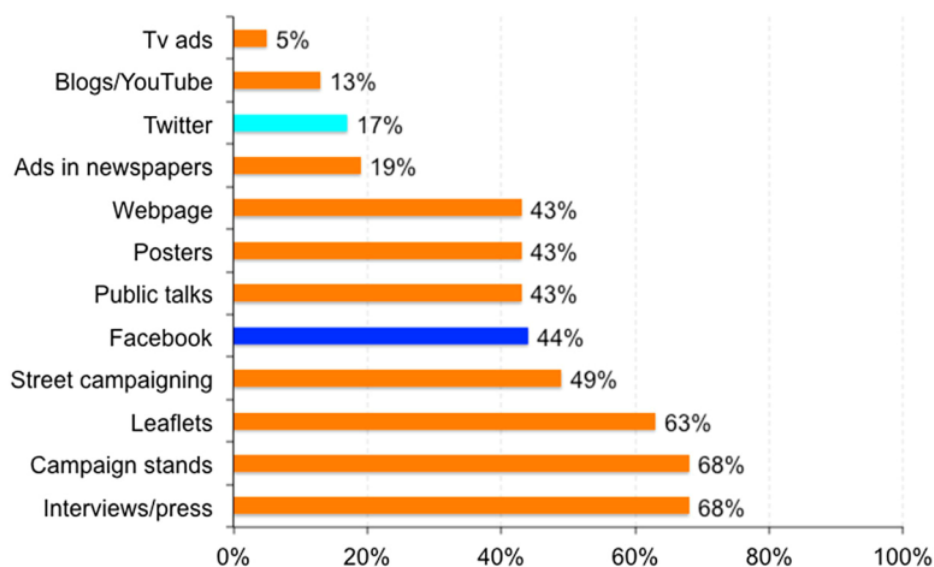

Figure 3. Perceived importance of campaign tools by candidates in the 2013 German Federal
Elections (%). Source of data: Rattinger et al. (2014).

traditional campaign methods such as public talks and election posters. Twitter on the other hand is ranked much lower in importance, with only 17% citing it as an important means of campaigning. Again, this is in line with our expectations – we assumed Facebook would be considered as more important by candidates compared with Twitter given its substantial audience reach advantage and thus there is support for H5b. What is once again clear is hetereogeneity: Facebook and Twitter have distinctive pulls among politicians.

Our regression shows that party influences the likelihood of a candidate adopting both Facebook and Twitter. As we hypothesized, the effect of party is not uniform for each channel. Figure 4 shows that candidates from the AfD and the Pirate Party are less likely to adopt Facebook. Instead, it is the dominant two German parties, the CDU/CSU and the SPD, whose candidates are most likely to take up these media, offering support to H6a. This is line with our expectations – we assumed, given that Facebook has a larger audience reach and attracts a great segment of the electorate, that candidates of parties that have a cross-sectional appeal would be more likely to adopt Facebook. Other parties like the FDP, the Greens, and the Left Party show a propensity to being less likely to adopt Facebook vis-à-vis the CDU/SCU and the SPD, but more likely than either the AfD or the Pirates.

Figure 4 shows a very different pattern for Twitter. We see that Pirate Party candidates were substantially more likely to adopt Twitter than candidates of other parties, and by a significant margin. Whereas the likelihood of Pirate Party candidates adopting Twitter for the campaign was around 69%, the next nearest were candidates of the Green Party, who had a 44% probability of doing likewise. This is line with our expectation that given that the Pirates use Twitter for internal communication and made their name on this medium in the first place (Jungherr et al., 2012; Larsson & Moe, 2012), its candidates are more likely to gravitate towards it. We thus have strong support for H6b. Further, it is not surprising
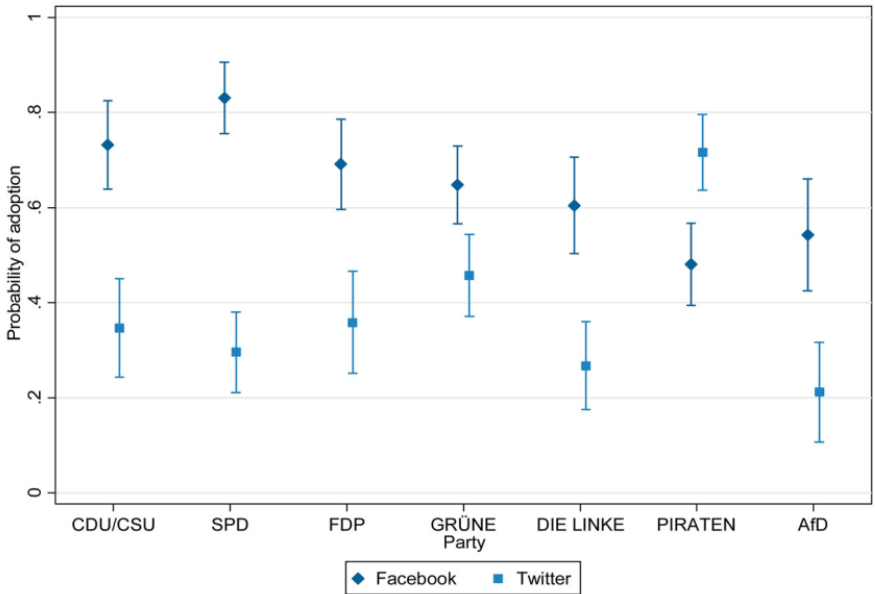
Figure 4. Average predicted effects of party on Facebook and Twitter adoption by candidates in the 2013 German Federal Elections. Source of data: Kaczmirek et al. (2014); Rattinger et al. (2014).

that candidates of the Green Party are the next most likely to adopt Twitter given the audience it attracts – middle class, younger people which would correspond with the target audience of the Green Party. Meanwhile the AfD stood out, with candidates of this party least likely to have either a Facebook or Twitter account, speaking to the fact that its target audience are less likely to use these channels in the first instance. The fact that candidates of the AfD, a new party, were much less likely of all to take up either Facebook or Twitter also offers support for our assumption that the established versus new parties discussion, framed in the normalization versus equalization paradigm, is misplaced. Instead, we suggest that target audience is the key driver of the impact of party.

We wish to briefly note the effects of our control variables. Age has a negative impact on adoption of both Facebook and Twitter, suggesting younger candidates are more probable to adopt both. We observe a strong cluster effect: adopting one form of social media is significant and positively associated with adopting another. Incumbency also mattered, but only for Twitter, with serving MPs more likely to have embraced Twitter than non-incumbents. Finally, neither candidates' attitudes to the welfare state nor their views on immigration had any significant impact on the likelihood of adopting.

In sum, our results suggest that adoption of social media by German candidates is driven primarily by two motivations: party and money. Personality traits mattered to a lesser extent, but only for Twitter. The key result to emerge is the hetereogeneity regarding Facebook and Twitter – thus our findings illustrate that the distinct nature of both Facebook and Twitter must be recognized.

6. Discussion and conclusion

Despite the wide collection of research on politicians' adoption of social media, our contribution has sought to address the gaps in our knowledge by examining Facebook and Twitter simultaneously, and drawing a clear distinction between the two. Using Rogers' (1995) framework, our results show that money and party are the strongest determinants of adoption among German politicians. On money, the more resources candidates have at their disposal, the more likely they are to have adopted Facebook and/or Twitter. The effect is stronger for Facebook, a pattern we contend is driven by the higher maintainence costs of this channel and the greater audience it attracts.

Meanwhile, party is also a potent force but its impact differs depending on the channel with candidates of different parties gravitating towards the channel dependent on the audience. More politicians use Facebook because of its larger audience and thus it is seen by far more politicians as an important means of campaigning. Considering this and the audience that congregates on Facebook, candidates of the mainstream parties (in the German case the CDU/CSU and the SPD) are more likely to adopt Facebook as this is the audience they are more likely to appeal to. Conversely, Twitter is the domain of a party like the Pirate Party, which has long association with the tool, and who use it for intra-party communication. Candidates of the Greens are also more likely to use Twitter compared with other parties, not surprising considering the Twitter audience is made up of middle class and younger people, voters who the Greens would normally appeal to. Moreover, we found that the impact of personality on adoption mattered but only for Twitter with more open candidates having a greater likelihood of adopting Twitter than not.

Our results imply the following. First, we have clearly shown strong levels of heteroegenity between adoption of Facebook and Twitter among politicians. Money, personality, and party all play a role in adoption but their influences play out in different ways depending on the channel being explored. Thus, we should be cautious in considering social media as 'one' and future research needs to recognize the heteroegeneity of Facebook and Twitter. Second is how our findings relate to the normalization-equalization debate, which has dominated studies of politicians' adoption of social media. Our analysis suggests with resources having a positive effect on adoption, there is little evidence to sustain the idea that social media offer some sort of panacea to poorly resourced candidates to get a foothold in election campaigns. Our analysis also shows that framing the impact of party in terms of established versus newer parties is misspecified. Instead, adoption is driven more by strategic concerns – parties appealing to audiences most likely to yield them votes. Accordingly, we propose that studies need to move beyond the normalization-equalization paradigm to fully understand adoption.

As social media become more established features of the twenty-first century political campaigns, interesting avenues of research remain. Aside from Larsson and Kalsnes (2014), we continue to lack comparative research in this field. This not only prevents us from exploring the impact of context but also means that we cannot be sure if our findings are country specific or apply more generally. Moreover, while we have looked at Facebook and Twitter, other social media channels deserve consideration, not least YouTube, which has a huge global reach. Further, future studies need to go beyond mere adoption but also explore how intensively politicians use social media: are they simply signing up and having a presence or are they using it more intensely to engage with the electorate? With these channels seemingly on the grow, ours is not likely to be the last word on the subject.

Notes

1. However, we admit that this positive view about the benefits of social media on political participation is not without challenge.
2. Previous studies have found that the specification of 'main parties' can influence our understanding of usage patterns of social media (e.g., Jungherr et al., 2012; Tumasjan, Sprenger, Sandner, & Welpe, 2010). We define main parties here as (a) those parties that were represented in the Bundestag prior to the 2013 elections and (b) parties that were polling at least 2.5% of the national vote on average according to opinion polls conducted by Infratest Dimap in the nine months prior to the election.
3. The majority of missing values are a consequence of non-response to the resource question. This is hardly surprising. Budgetary resources are a sensitive topic and is equivalent to a respondent in population surveys being asked about their income, also known to be associated with non-response (e.g., Tourangeau, Lance, & Rasinski, 2000, p. 263). We performed robustness checks to establish if this non-response was associated with party and did discover that CDU/CSU candidates were less likely to have responded to this question. We need to factor this into our interpretation of our results but we are confident it does not alter in any particular way our overall argument, especially as we are controlling for party in our models.

Disclosure statement

No potential conflict of interest was reported by the authors.

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References

Aldrich, J. H. (1995). Why parties? The origins and transformation of party politics in America. Chicago, IL: University of Chicago Press.

Alford, J. R., & Hibbing, J. R. (2007). Personal, interpersonal, and political temperaments. Annals of American Academic, Political, and Social Sciences, 614, 196-212.

Baumgartner, J. C., & Morris, J. S. (2010). My FaceTube politics: Social networking websites and political engagement of young adults. Social Science Computer Review, 28(1), 24-44.

Bimber, B. (2014). Digital media in the Obama campaigns of 2008 and 2012: Adaptation to the personalized political communication environment. Journal of Information, Technology & Politics, 11(2), 130-150.

Broersma, M., & Graham, T. (2016). Tipping the balance of power: Social media and the transformation of political journalism. In A. Bruns, G. S. Enli, & E. Skogerbo (Eds.), The Routledge companion to social media and politics (pp. 89-103). New York, NY: Routledge.

Busemann, K. (2013). Wer nutzt was im social web? Media Perspektiven, 7-8, 391-398.

Cameron, A. C., & Trivedi, P. K. (2005). Microeconometrics: Methods and applications. Cambridge, MA: Cambridge University Press.

Conway, B. A., Kenski, K., & Wang, D. (2013). Twitter use by presidential primary candidates during the 2012 campaign. American Behavioural Scientist, 57(11), 1596-1610.

Correa, T., Willard-Hinsley, A., & Zuniga, H.G. (2010). Who interacts on the web? The intersection of users' personality and social media use. Computers in Human Behaviour, 26, 247-253.

Dolezal, M. (2015). Online campaigning by Austrian political candidates: Determinants of using personal websites, Facebook, and Twitter. Policy and Internet, 7(1), 103-119.

Downs, A. (1957). An economic theory of democracy. New York, NY: Harper & Rowe.

Duggan, M. (2015). Mobile messaging and social media 2015. Washington, DC: Pew Research Centre. Retrieved August 6, 2015, from http://www.pewinternet.org/2015/08/19/mobile-messaging-and-social-media-2015/

Duggan, M., Ellison, N., Lampe, C., Lenhart, A., & Madden, M. (2015). Social media update 2014. Washington, DC: Pew Research Centre. Retrieved from http://www.pewinternet.org/2015/01/09/social-media-update-2014/

Enli, G. S., & Naper, A. A. (2016). Social media incumbent advantage: Barack Obama's and Mitt Romney's Tweets in the 2012 U.S. Presidential election campaign. In A. Bruns, G. S. Enli, E. Skogerbo, A. O. Larsson, & C. Christensen (Eds.), The Routledge companion to social media and politics (pp. 364-377). New York, NY: Routledge.

Enli, G. S., & Skogerbo, E. (2013). Personalized campaigns in party-centered politics. Information, Communication & Society, 16(5), 757-774.

vor dem Esche, J., & Henning-Thurau, T. (2014). German digitalization consumer report 2014 (No. 2). Munster, DE: Digitalization Think Lab: Roland Berger Strategy Consultants. Retrieved June 20, 2015, from http://www.rolandberger.de/media/pdf/Roland_Berger_German_Digitalization_Consumer_Report_20140718.pdf

Facebook. (2014, September 30). Company mission. Retrieved January 21, 2015, from http://http://newsroom.fb.com/company-info/

Farrell, D., & Schmitt-Beck, R. (Eds.). (2002). Do political campaigns matter? Campaign effects in elections & referendums. London: Routledge.

Gerber, A. S., Huber, G. A., Doherty, D., Dowling, C. M., & Ha, S. (2010). Personality and political attitudes: Relationships across issue domains and political contexts. American Political Science Review, 104, 111-133.

Gibson, R., & McAllister, I. (2011). Do online election campaigns win votes? The 2007 Australian 'YouTube' election. Political Communication, 28(2), 227-244.

Gibson, R., & McAllister, I. (2015). Normalising and equalising party competition? Assessing the impact of the web on election campaigning. Political Studies, 63(3), 111-133.

Gibson, R., & Ward, S. (1998). UK political parties and the Internet: Politics as usual in the new media? International Journal of Press/Politics, 3(3), 14-38.

Gottfried, J., & Shearer, E. (2016). News use across social media platforms 2016. Washington, DC: Pew Research Centre. Retrieved from http://www.journalism.org/2016/05/26/news-use-across-social-media-platforms-2016/

Gscheidle, C., & Gerhard, H. (2013). Berichterstattung zur Bundestagswahl 2013 aus Sicht der Zuschauer. Media Perspektiven, 12, 558-573.

Gulati, G. J., & Williams, C. B. (2013). Social media and campaign 2012: Developments and trends for Facebook adoption. Social Science Computer Review, 31(5), 577-588.

Harfoush, R. (2009). Yes we did: An inside look at how social media built the Obama brand. Berkeley, CA: New Riders.

Hasebrink, U., & Hölig, S. (2013). Lagging behind or choosing a different path: Information behavior in Germany. In D. Levy & N. Newman (Eds.), Reuters institute digital news report 2013 (pp. 81-83). Oxford: University of Oxford.

Hughes, D., Rowe, J., Batey, M., & Lee, A. (2012). A tale of two sites: Twitter vs Facebook and the personality predictors of social media usage. Computers in Human Behaviour, 28(2), 561-569.

Jungherr, A., Jürgens, P., & Schoen, H. (2012). Why the pirate party won the German election of 2009 or the trouble with predictions: A response to Tumasjan, A. et al. Social Science Computer Review, 30(2), 229-234.

Kaczmirek, L., Mayr, P., Vatrapu, R., Bleier, A., Blumenberg, M., Gummer, T., & Wolf, C. (2014). Social Media monitoring of the campaigns for the 2013 German Bundestag elections on Facebook and Twitter. GESIS Working Paper 31. Köln, DE. Retrieved from http://www.ssoar.info/ssoar/handle/document/38195

Klinger, U. (2013). Mastering the art of social media. Information, Communication & Society, 16(5), 717-736.

Larsson, A. O. (2015). Going viral? Comparing parties on social media during the 2014 Swedish election. Convergence: The International Journal of Research Into New Media Technologies, 12, 1-16.

Larsson, A. O. (2016). Online, all the time? A quantitative assessment of the permanent campaign on Facebook. New Media and Society, 18(2), 274-292.

Larsson, A. O., & Kalsnes, B. (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), 653-667, OnlineFirst.

Larsson, A. O., & Moe, H. (2012). Studying political microblogging: Twitter users in the 2010 Swedish election campaign. New Media and Society, 14(5), 729-747.

Larsson, A. O., & Moe, H. (2014). Triumph of the Underdogs? Comparing Twitter use by political actors during two Norwegian election campaigns. SAGE Open.

Lassen, D. S., & Brown, A. R. (2010). Twitter: The electoral connection. Social Science Computer Review, 23, 1-18.

McCrae, R. R., & Costa, P.T., Jr. (1997). Personality trait structure as a human universal. American Psychologist, 52, 509-516.

Neuernbergk, C., Wladarsch, J., Neubarth, J., & Neuberger, C. (2016). Social media use in the German election campaign 2013. In A. Bruns, G. S. Enli, E. Skogerbo, A. O. Larsson, & C. Christensen, (Eds.), The Routledge companion to social media and politics (pp. 419-433). New York, NY: Routledge.

Panek, E. T., Nardis, Y., & Konrath, S. (2013). Mirror or Megaphone? How relationships between narcissism and social networking site use differ on Facebook and Twitter. Computers in Human Behaviour, 29, 2004-2012.

Poushter, J. (2016). Smartphone ownership and internet usage continues to climb in emerging economies. Pew Research Centre. Retrieved October 17, 2016, from www.pewglobal.org/files/2016/02/pew_research_center_global_technology_report_final_february_22__2016.pdf

Rammstedt, B., & John, O. P. (2007). Measuring personality in one minute or less: A 10-item short version of the big five inventory in English and German. Journal of Research in Personality, 41, 203-212.

Rattinger, H., Roteutscher, S., Schmitt-Beck, R., Weßels, B., & Wolf, C. (2014). Candidate campaign survey 2013 (GLES) data file version 3.0. Retrieved 16 March 2015, from http://www.gesis.org/en/elections-home/gles/data-and-documents/data/

Rogers, E. M. (1995). Diffusion of innovations (4th ed.). New York, NY: Free Press.

Ross, C., Orr, E., Sisic, M., Arseneault, J., Simmering, M. G., & Orr, R. R. (2009). Personality and motivations associated with Facebook use. Computers in Human Behaviour, 25(2), 578-586.

Shephard, M., & Quinlan, S. (2016). Social media and the Scottish independence referendum 2014: Events and the generation of enthusiasm for yes. In A. Bruns, G. S. Enli, E. Skogerbo, A. O. Larsson, & C. Christensen (Eds.), The Routledge companion to social media and politics (pp. 488-502). New York, NY: Routledge.

Skogerbo, E., Bruns, A., Quodling, A., & Ingebretsen, T. (2016). Agenda-setting revisited: Social media and sourcing in mainstream journalism. In A. Bruns, G. S. Enli, E. Skogerbo, A. O. Larsson, & C. Christensen (Eds.), The Routledge companion to social media and politics (pp. 104-120). New York, NY: Routledge.

Skovsgaard, M., & Van Dalen, A. (2013). Social media in the campaign mix during the 2011 Danish elections. Information, Communication & Society, 16(5), 737-756.

Štětka, V., Lilleker, D., Tenscher, J., & Jalali, C. (2014). Professional campaigning online: The role of new media as campaign platforms. Presented at the ECPR General Conference, Glasgow, UK. Retrieved June 16, 2015, from http://ecpr.eu/filestore/paperproposal/0efb0c25-1e10-469c-ac50-2898eccc2848.pdf.

Strüker, J., & Gille, D. (2010). RFID adoption and the role of organisational size. Business Process Management Journal, 16(6), 972-990.

Tourangeau, R., Lance, J. R., & Rasinski, K. (2000). The psychology of survey response. Cambridge: Cambridge University Press.

Tumasjan, A., Sprenger, T. O., Sandner, P. G., & Welpe, I. M. (2010). Predicting elections with Twitter. In Proceedings of the fourth international AAAI conference on weblogs and social media. Retrieved from http://www.aaai.org/ocs/index.php/ICWSM/ICWSM10/paper/viewFile/1441/1852

Twitter. (2015). Twitter – about. Retrieved June 22, 2015, from https://about.twitter.com/company

Vergeer, M., & Hermans, L. (2013). Campaigning on Twitter: Microblogging and online social networking as campaign tools in the 2010 general elections in the Netherlands. Journal of Computer Mediated Communication, 18, 399-419.

Vergeer, M., Hermans, L., & Sams, S. (2011). Online social networks and micro-blogging in political campaigning: The exploration of a new campaign tool and a new campaign style. Party Politics, 19(3), 477-501.

Williams, C. B., & Gulati, G. J. (2007). Social networks in political campaigns: Facebook and the 2006 midterm elections. Presented at the Annual Meeting of the American Political Science Association, Chicago, IL.

Williams, C. B., & Gulati, G. J. (2009). Social networks in political campaigns: Facebook and congressional elections 2006, 2008. Presented at the Annual Meeting of the American Political Science Association, Toronto, CA.

Williams, C. B., & Gulati, G. J. (2013). Social networks in political campaigns: Facebook and congressional elections of2006 and 2008. New Media and Society, 15(1), 52-71.

Wood, S. L., & Swait, J. (2002). Psychological indicators of innovation adoption: Cross-classification based on need for cognition and need for change. Journal of Consumer Psychology, 12,1-13.

Zittel, T. (2009). Lost in technology? Political parties and the online campaigns of constituency candidates in Germany's mixed member electoral system. Journal of Information, Technology & Politics, 6(3-4), 298-311.

Appendix

Table A1. Descriptive statistics for variables included in models examining the motivations for adoption of Facebook and Twitter by candidates in the 2013 German Federal elections.

Dependent variables					
Facebook use	1130	0.64	0.48	0	1
Twitter use	1130	0.39	0.49	0	1
Independent variables					
Female	1130	0.29	0.45	0	1
Age (in decades)	1130	4.59	1.20	1.8	7.9
Place of residence: Rural area	1110	Ref.			
Small or medium-sized city	1110	0.36	0.48	0	1
Suburban area	1110	0.08	0.27	0	1
Big city	1110	0.26	0.44	0	1
Party: CDU/CSU	1130	Ref.			
SPD	1130	0.16	0.37	0	1
FDP	1130	0.12	0.33	0	1
GRÜNE	1130	0.15	0.35	0	1
DIE LINKE	1130	0.14	0.35	0	1
PIRATEN	1130	0.16	0.36	0	1
AfD	1130	0.12	0.32	0	1
Candidature: List	1130	Ref.			
District	1130	0.23	0.42	0	1
District & list	1130	0.52	0.50	0	1
Incumbent	1130	0.11	0.31	0	1
Budget: 0-1k Euro	986	Ref.			
1-5k Euro	986	0.29	0.45	0	1
5-15kEuro	986	0.17	0.37	0	1
>15k Euro	986	0.23	0.42	0	1
Campaign: Interviews/press releases	1105	0.68	0.28	0	1
Campaign: Campaign stand	1111	0.70	0.22	0	1
Campaign: Web page	1100	0.46	0.36	0	1
Campaign: Blog/Youtube	1096	0.20	0.29	0	1
Attitudes: Pro-welfare state	1105	0.60	0.31	0	1
Attitudes: Contra-immigration	1103	0.30	0.27	0	1
Personality: Extraversion	1103	0.37	0.25	0	1
Personality: Openness	1103	0.77	0.21	0	1

Source of data: Kaczmirek et al. (2014); Rattinger et al. (2014).

Table A2. Model for participation in candidate survey.

	Participation in candidate survey	
	AME	SE
Party: CDU/CSU (Ref.)		
Party: SPD	0.048	0.033
Party: FDP	-0.044	0.034
Party: GREEN party	0.038	0.035
Party: LEFT party	0.063[+]	0.036
Party: PIRATES	0.031	0.036
Party: AfD	-0.052	0.034
Gender: Woman	-0.004	0.021
Age	0.000	0.001
Candidature: List (Ref.)		
Candidature: District	0.091***	0.028
Candidature: District & list	0.174***	0.023
Incumbent	-0.302***	0.027
N	2706	
McFadden's R^2	0.047	

Note: AME = average marginal effect; SE = standard error.

+p < .10, *p<.05, **p < .01, ***p <0.