The Impact of Smartphones on E-Participation

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Abstract

In the last years social media as well as mobile applications are of growing relevance for public political discussions and therefore for the approach of e-participation. However, studies show that there is still a low degree of involvement of politicians and citizens. Current research regularly focuses on how citizens can be enabled to more effectively share their ideas and opinions regarding political processes. However, the role of politicians themselves is rarely discussed within the academic discussion. In our study we attempt to better understand the impact of the growing diffusion of smartphones among politicians on e-participation. We conducted an online survey and asked members of the German federal parliament about their usage of mobile devices in order to interact with citizens. We show that smartphones lead to an increasing intensity of dialogue between politicians and citizens based on social media. Furthermore, we suggest that the level of e-participation grows by social media and mobile devices.

1. Introduction

In democratic countries, political parties feel responsible to regulate and participate in public political discussion. Traditionally, politicians and journalists bring up and moderate those political discourses. However, the traditional structure of mass communication in the political context has changed [7; 16; 35; 36]. Based on the rapid development of Web 2.0 technologies and associated social media, Internet users are now enabled to create content on their own. By using political blogs or discussion forums, people express their opinion, participate in discussions or find politically like-minded individuals.

Recently, more than 900 million people worldwide are members of the Facebook network [13; 34] while Twitter counts more than 500 million users in total [14]. Given this tremendous growth of social networks, it is argued that from the perspective of politicians and political parties it is important to actively join political communication based on the use of social media, in particular, during election campaigns. Already, U.S. politicians are said to have a leading role in this regard with the most prominent example of Barack Obama being able to successfully employ social media within his last election campaign [42; 35].

The success of Barack Obama’s election campaign can be distinguished as the breakthrough of social media shaping political debates around the world [1; 4; 41; 37].

Since then social media are increasingly used in political context recently. It is argued that from the perspective of political institutions (e.g., politicians, political parties, political foundations, think tanks etc.), it is important to actively participate in the political communication based on the use of social media. Social media thereby represents the ideal vehicle and information base to gauge public opinion on policies and political positions as well as to build community support for candidates running for public offices [36; 44].

According to a BITKOM-survey, 64% of all German Internet users from the age of 14 contemplate the Internet as an instrument for more democracy. In addition 44% hold the opinion that the Internet enables them to personally participate in politics [5]. Following this, politicians could use the Internet, e.g. social media, in order to motivate people to participate in political activities and to reduce the increasing distance between state and society. In this sense, and according to Kaplan and Haenlein (2010) social media are understood as „a group of Internet-based applications that build on the ideological and technological foundations of Web 2.0 and that allow the creation and exchange of User Generated Content“ [21; 37].

Within the academic discussion there already exists some research in this field. The term of “e-participation” is used to describe different approaches of political participation realized by the use of Internet applications by citizens and politicians. However, these
studies mainly focus on how to enable and motivate citizens to publish their opinions and thoughts. The behavior and influence of the politicians is rarely recognized and discussed.

Additionally, the accelerating diffusion of smartphones and tablets throughout the people causes an increased mobility and ubiquitous access to social media. Popular social media platforms (e.g. Twitter and Facebook) offer mobile applications, which enable individuals to easily publish their ideas or to follow contributions of other users. This is confirmed by numerous surveys [10; 25; 19; 26; 31]. According to a recent D21-survey (network for digital society) 24% of the German citizens own a smartphone [28]. A survey of Forrester Research predicts a global dissemination of 1 billion smartphones for the year 2016 [31]. There is no doubt that smartphones and mobile applications will become prevalent and consequently increase the use of social media and other online services.

This development may also affect the approach of e-participation because citizens as well as politicians now possess ubiquitous access to social media. Studies indicate that a lack of time and resources are reasons for politicians to limit their engagement in social media [37]. Mobile devices offer the potential to easily access social media even in formerly unproductive time spans (e.g. while travelling). Based on this insight we suggest that mobile devices enable politicians to share information and follow discussions in social media and therefore increase politician’s engagement in social media.

Despite the growing relevance for the field of e-participation there exists only very little research in this area until now. Therefore, in this article we address the following question: “What influence does the increasing trend towards mobile services have on the electronic participation of politicians?”

Following an explorative research approach, we developed a questionnaire and asked members of the German federal parliament (Bundestag) regarding their usage behavior of mobile devices for participation in social media.

The following section provides an overview of the current state of the related scientific literature (chapter 2). In chapter 3 we define the term e-participation and we discuss how mobile devices may support this approach. Subsequently, the research methodology and the results of the survey will be presented in chapter 4. The discussion of the results will follow in chapter 5. The article ends with a conclusion and a prospect with regard to future research in this field.

2 RELATED WORK

Besides studies on German Internet campaigns in the years 2002 and 2005 [32], there already exists a significant amount of literature about the social media usage within the presidential election campaign in the USA in the year 2008 [34; 35; 37]. Prevalently there is the attempt to draw analogy between the term “web 2.0” and terms like “politics 2.0”, “election campaign 2.0” or “democracy 2.0” or to raise the question whether the renewal of the web 2.0 significantly changes politics [9]. Furthermore, numerous authors are concerned with the use of social media by parties and politicians during time of elections [32; 35].

Based on a survey and several case studies Caddy (2003) analyzed the potential benefits of Information and Communication Technology (ICT) in order to enable citizens to participate in the political process [6]. In this research he draws the conclusion that the use of ICT is a prerequisite but not the sole solution for a successful electronic civic activism. Following him, barriers for increased commitment of citizens concerning the political process via the Internet are predominantly of cultural, organizational and constitutional, but not of technical nature.

Macintosh (2004) consolidated previous pilot projects and studies in the field of e-democracy and developed a framework, which identifies different levels of e-participation: e-enabling, e-engaging, and e-empowering [24]. This framework can be applied to characterize political projects and covers the dimensions “degree of participation”, “phase of decision-making process”, “actors”, “implemented technologies”, “operating rules”, “duration and sustainability”, “approachability”, “use of resources and application”, “evaluation and results”, and “critical factors of success”. Based on this model Macintosh (2004) compared different projects on e-participation in an extensive case study [24].

Effing et al. (2011) discussed why previous projects, which explicitly targeted e-participation, did not meet the expectations [12]. They found that an insufficient willingness of politicians as well as citizens to actively participate in these processes is a major obstacle. Furthermore, they suggest that the adoption of social media in the context of e-participation provides potentials to solve this problem. Based on field studies about the elections in the Netherlands in 2010 and 2011 they found best practices for an improvement of e-participation approaches by the adoption of social media [12].

Larsson and Moe (2010) conducted an analysis of Twitter communication about the Swedish election in 2010. In accordance with other researchers they found that Twitter clearly contributes to a broadening of
public debate [22, 36]. On the other hand they state that Twitter falls somewhat short of the expectations on behalf of the democratic and disruptive potential of new web tools. Following them, Twitter was used for information dissemination rather than for dialogues among citizens and politicians.

Traumüller (2011) addresses the problem of how mobile devices (smartphones and tablets) influence the use of social media for e-participation. He starts by describing the influence of smartphones on the use of social media. In his work, he attests that social media and mobile devices are mutually dependent. This results in a reciprocal increased utilization (co-evolution) [40]. With regard to the thesis of Effing et al. (2011) it can be assumed that the utilization of mobile devices positively affects e-participations of politicians [12]. Agreeing to this, De Reuver et al. (2010) described the development of a mobile application, which aims at facilitating e-participation for citizens [11]. The utilization of mobile technologies for the facilitation of e-participation is often described as m-participation [15; 3]. In this context the term m-participation (mobile participation) is used to describe the extension of the term e-participation by the aspects of mobile knowledge sharing and participation, e.g. via smartphones [15; 3].

To our knowledge there exists no research, which directly investigates the influence of mobile devices on the engagement of politicians regarding e-participation by using social media. Therefore, this paper aims at closing this research gap. In order to better understand the impact of mobile devices for e-participation we adopted the model of Macintosh (2004) and considered the remarks of Effing et al. (2011), whose main research exclusively focuses on politician’s behavior [24; 12].

3 E-PARTICIPATION

E-government can be classified as the superior term of e-democracy and describes the adaption of electronic media for public administrations with the goal of enhancing the communication between citizens and public administrations as well as improving processes [18]. The term e-democracy describes the utilization of information systems to support democracy decision processes [24].

Two subclasses of e-democracy can be identified: e-voting and e-participation. Accordingly to Macintosh (2004) “e-participation describes the utilization of information and communication technology in order to extend and deepen the political participation of citizens”. Hence e-participation focuses on the communication and collaboration between politics and electorate [24].

The Internet significantly facilitates dual channel communication: Politicians are not only enabled to allocate information to citizens, they can also identify opinions and views of citizens. Vice versa citizens may address their concerns to the politicians and receive responses [24].

In a study Grönlund (2009) examined six different models of e-participation [2; 20; 38; 27; 23; 24] and concluded that all models are rather simplified and base on vague assumptions such as distinct democratic ideal models [17]. He states that most of the examined models are incomplete, confusing or systematically biased. Following him, the model developed by Macintosh (2004) is the only one, which does not contain a methodical bias. The involvement of the citizens in political processes and therefore the level of e-participation can be classified as follows (fig. 1) [24]:

(1) E-enabling: The provision of an easy access to structured and selected information (e.g. election results, reports, decision statements) for citizens is the major approach on the level of e-enabling. This can be achieved e.g. by considering different technological and communicative skills of distinct demographic groups. The technology has to provide relevant information for the users in an intuitive and easy way [24].

(2) E-engaging: At this level citizens are understood as consultants on political questions. Therefore, this approach aims on encouraging debates between politicians and citizens. It is essential to provide appropriate technical platforms and concepts in order to motivate the participants to share their ideas. It is also crucial that individuals are enabled to participate by providing them with ubiquitous and intuitive access possibilities and interfaces [24].

(3) E-empowering: The third level, e-empowering, “is concerned with supporting active participation and facilitating bottom-up ideas to influence the political agenda” [24]. Hence, citizens should contribute ideas concerning political issues by their own. In contrast to e-engaging this level does not solely include the advisory of politicians and the
evaluation of their propositions. It also includes active production of political content by citizens [24].

Following Effing et al. (2011) social media have a significant impact on e-participation of citizens and politicians [12]. Especially new collaborative platforms such as Twitter and Facebook enable individuals to easily participate in political discussions by sharing their ideas and by getting involved into discussions. However, political institutions, which provide platforms for e-participation often face the problem of insufficient involvement of citizens as well as politicians [39]. It has become apparent that it is not merely enough to provide people with an Internet platform in order to increase their willingness to participate. Consequently the alternative approach is to create virtual spaces for e-participation in already existing platforms where many citizens are already active [8]. As a result social media such as Facebook and Twitter have become focal points for political institutions [29]. Mobile services (such as mobile applications) in this sense can be understood as a new way to access these networks easily. Ubiquitous and easy access can be understood as enabler for individuals to participate in political discussions. Therefore, they may more often share their ideas and generate relevant content.

By applying these aspects to the model of Macintosh (2004) we suggest that a higher degree of participation may be supported by the upcoming of social media and that there is a growing intensity of communication [24]. We base this assumption on the fact that the contemporary increase in the use of social media and mobile services (mobile internet, apps) enables citizens to share their ideas more easily and on low costs and therefore become increasingly engaged and empowered to participate in political debates.

4 EMPIRICAL INVESTIGATION

4.1 Methodology and Proceeding

In order to answer our research question we conducted a survey in November 2011 and asked 622 members of the German federal parliament about their usage behavior regarding smartphone and social media.

To make sure that the design of our survey is appropriate and addresses all relevant fields, we selected six politicians (e.g. spokesman on net politics of the parliament) and interviewed them by phone. Each interview was about one hour and it was based on a semi-structured interview-guide, including the fields of interest (e.g. usage of social media in general, usage of mobile devices) regarding the research questions and the assumed answers. Based on these insights we developed a questionnaire, which included 6-point Likert scale questions as well as open questions.

The model of Macintosh (2004) has been adopted as a foundation of the development of the questionnaire. The overall goal of the survey was to evaluate if mobile services influence the degree of e-participation of politicians [24]. In order to make the particular levels of the e-participation model measurable, single items from the questionnaire have been assigned to tangible levels of e-participation based on the model of Macintosh (c.f. Table 1).
Table 1: Influence factors for e-participation matching items from questionnaire

<table>
<thead>
<tr>
<th>Influence Factor</th>
<th>Items in Questionnaire</th>
<th>Reliability (cronbach’s α)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reaching a larger target group (grade e-enabling)</td>
<td>Do you use social media via smartphones e.g. Facebook, Twitter, Xing?</td>
<td>0.817</td>
</tr>
<tr>
<td></td>
<td>At which platforms do you have an official account, which is regularly used?</td>
<td></td>
</tr>
<tr>
<td></td>
<td>With whom and on which dimension do you communicate via social media?</td>
<td></td>
</tr>
<tr>
<td>Supporting several technologies (grade e-enabling)</td>
<td>What motivates you to use social media via smartphones?</td>
<td>0.844</td>
</tr>
<tr>
<td>Providing relevant information, which are easy to access and understand (grade e-enabling)</td>
<td>Do you use social media via smartphones for: (1) diffusion of political content, (2) self presentation, (3) explaining complex political topics</td>
<td>0.584</td>
</tr>
<tr>
<td>Encourage to enrich content of posts to support discussions (grade e-engaging)</td>
<td>Do you use social media via smartphones for: (1) catch up opinions of citizens, (2) activate discussion with citizens</td>
<td>0.837</td>
</tr>
<tr>
<td>Active production of political content from citizens (grade e-empowering)</td>
<td>Do citizens generate political content on their own?</td>
<td>N.A.</td>
</tr>
<tr>
<td>Openness and transparency (grade e-empowering)</td>
<td>Do you use social media via smartphones in order to increase the transparency of political processes for citizens?</td>
<td>N.A.</td>
</tr>
</tbody>
</table>

4.2 Results

Among the respondents, members of all five parties participated in our survey (approximately evenly shared). The distribution of the participants in our sample regarding age and gender was quite consistent with the distribution in the German parliament (e.g. age distribution in the “Bundestag” based on [33]: male 68%, female 32%; Sample: male 66%, female: 34%).

Based on the evaluation of two questions about the frequency of usage and the variety of used services, we identified 42 politicians as heavy smartphone users. This group can be characterized as predominantly young technophile male. Since we are mainly interested in the potentials of mobile services for e-participation we only considered this group in our further analysis and discussion. However, at this point it has to be revealed that the classification of being a “heavy smartphone user” is based on the self-assessment of the politicians. Furthermore, the context of technology-use (German politicians) limits the impact of our findings.

Smartphones

The majority of the participants state that smartphones have a positive impact on work-related productivity (31% very positive, 51% positive). 73% of the participants think that a smartphone helps them to effectively use formerly unproductive timespans (28% very much, 45% much). 12% don’t see this effect at all (6%) or only to a low degree (6%). 52% of those members of parliament, who see a positive (29%) or a very positive (23%) impact of smartphones on productivity, state to use time-savings for intensifying their interactions with citizens, while 26% state to not do that.

Social Media

73% of the smartphone users access social media via their smartphone. The majority of them (76%) uses social media both actively (writing statements) and passively (following other people’s statements). 22% of the mobile social media users solely retrieve information but do not contribute any. 32% of the mobile social media users access social media via a web page only. 84% of the participants access social media both via web browser and via specific applications. 72% of the surveyed users of smartphones state, that the intensity of social media usage increased by the adoption of a smartphone (13% much higher, 59% higher), while no one thinks that the productivity has decreased. 44% of the participants state, that the adoption of a smartphone enabled them to be more active in social media themselves. Nearly half of the participants agree that they are now less reliant on their assistants to be active in social media for them (7% strongly agree, 37% agree, while 27% do not agree with this statement, 13% strongly disagree, 13% disagree, and 30% adopt a neutral position).
E-Participation

In the next section of our survey we asked the politicians if smartphones support citizens to achieve a higher degree of participation in the democratic process. 8% of the smartphone owners answered “very much”, 33% “much”, 31% “medium”, 8% “little” and 16% “very little” or “not at all.”

Furthermore, we asked the politicians how usage of smartphones changed their perceived behavior regarding social media activity: 94% state that they obtain faster information (54% strongly agree, 40% agree) and 61% state that their involvement in debates and discussions via social media has increased due to the usage of their smartphone (15% strongly agree, 46% agree) (fig. 2).

Moreover, 75% of the heavy smartphone users state that they share information in social media often while being in meetings or at events (25% strongly agree, 50% agree), 66% agree with the statement that by smartphones they are enabled to participate into discussions faster and more often due to direct and fast reaction possibilities (14% strongly agree, 51% agree).

5 DISCUSSION

Based on our analysis of heavy smartphone users in the German federal parliament we can draw the following conclusions regarding the research question.

Findings show that the majority of politicians access social media actively via their smartphone. This happens predominantly via applications provided by popular platforms such as Twitter and Facebook. Furthermore, it can be stated that a majority of the participants perceive a positive impact of smartphones usage on their work productivity. One reason is that formerly unproductive times e.g. while traveling in public transportation, now can be utilized to be active in political discussions with citizens in public social media. Based on the results of our explorative study, we showed that the upcoming of smartphones indeed affect the adoption of social media by politicians. We could identify the following impacts:

- The use of smartphones generally has a positive influence on productivity (exploitation of formerly unproductive time spans). At this point we have to reveal that an extremely high smartphone usage, might also decrease the productivity.
- Politicians state to interact more frequently and more intensively with citizens because they can do it while travelling (resulting in time savings) or while meetings and events (supporting an ad-hoc communication and reporting). This helps the politicians to start to engage with citizens.
- Following the answers of the politicians, smartphones have influenced their behavior in social media. They now tend to create more contributions and therefore actively participate in discussions and actively spread information and opinions via smartphones.
- A further change in the usage behavior is that the upcoming of smartphones seems to reduce the need for politicians to ask their assistant to be active in social media instead of the politician.
- Mobile usage of social media makes it more ease to create interesting content, while using integrated technical devices like cameras or GPS.

Following Macintosh (2004), different levels of e-participation can be identified. Social media in general seem to have a big potential to support the stages of e-engaging and e-empowering [24]. We asserted that, through the use of smartphones, the degree of e-participation could be increased. Therefore, an intensive communication between citizens and politicians is necessary. Until now, politicians stated that they can not provide sufficient resources (e.g. time, better tools to get updated about current discussions in social media) to increase their activities in social media. The majority of the surveyed members of parliament state that smartphones help them to discuss more efficiently in social media. This supports the assumption that usage of smartphones, especially mobile applications, could increase the degree of e-participation by providing an easier and ubiquitous access (fig. 3). However, measuring the actual degree of the increased e-participation is a difficult task and has only been slightly discussed in this article. Based on our results we can state that the use of smartphones seems to change the politician’s behavior and that social media are adopted as platforms for e-engaging and e-empowering. In this sense, smartphones and mobile application provide a better access to social media and therefore increases the degree of e-participation especially in the stage of e-engaging for politicians. Further developments in the organization of political decision-making processes in democracies
may also result in a stronger e-empowering of citizens. Given this, social media and mobile applications may also support this change by being appropriate platforms to allow citizens to influence political decisions and by providing efficient ways to get access to political information and debates.

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Our findings are in line with the model of Macintosh (2004) who also states that improved technological platforms may support the approach of e-participation in all three stages [24]. Even though that our study focused on the perspective of politicians it can be assumed that the observed effects regarding the change in political use of social media do also affect citizens. Therefore, we conclude that the intensity of e-participation, especially e-engaging, grows further with an accelerating diffusion of mobile devices (smartphones, tablets) and mobile applications.

6 SUMMARY AND OUTLOOK

In this study we exhibit that the diffusion of smartphones among politicians has an impact on their usage behavior regarding social media. Politicians tend to use social media more frequently and more actively which results in the potential to achieve higher levels of e-participation. The heavy smartphone users (young, predominantly male, technophile) of our survey state that they use mobile applications provided by e.g. Facebook and Twitter to contribute to discussion while travelling or while being at event or in meetings. The effective usage of formerly unproductive time spans as well as the possibility to share ad-hoc information seem to be main drivers for the higher involvement in social media. This can lead to an increased degree of e-participation. In our survey we focus on the quantity of usage (time spent to interact with citizens, productivity). Another factor which has to be taken into account is the quality (content) of the communication. It can be assumed that e.g. the limited length of postings on Twitter influences the quality of the discussion. Moreover, the screen-size and the limited functionalities of mobile devices might influence the willingness of people to write comprehensive postings.

Restrictions regarding the validity of the results have to be made in the following respect: Our research design concentrates on a yet small group of “heavy smartphone users”, therefore the results can not be generalized for politician’s behavior in general. Furthermore, it has to be mentioned that we provided descriptive and explorative data based on self-assessment of the politicians. A next step to validate this research (statements of the politicians) might be to tackle the real practices of politicians by e.g. observations or analyzing their transmission data. Furthermore, the focus on German politicians limits the impact of the findings. By surveying politicians in different countries it might become possible to further generalize our findings.

Despite these limitations, our study makes a first important step to better understand the impact of mobile devices on e-participation. We clearly contribute to the academic discussion by gathering and providing empirical data in this specific field. Our work will serve as a foundation for other researchers to investigate how mobile services may support democratic decision-making processes. In addition to this, our study is of relevance for political institutions themselves. They can build on our work to elaborate concepts, which help politicians to contribute to public discussions more effectively (e.g. in social media). Furthermore, instruments should be provided to increase the transparency of political discussions in social media to make it easier for politicians to contribute to them.

For further research projects it might be interesting to consider the perspective of the citizens as well. A possible investigation could be the citizens’ acceptance of innovation. Therefore, it will be necessary to conduct interviews on a large scale to get deeper insights regarding the social media behavior of politicians. A problem that might not be solved by technical improvements is, accordingly to the members of parliament, a perceived lack of discussion-culture in social media. Following this, we suggest to investigate the published content of politicians as well as the reactions of citizens in social media in order to analyze what kind of content they share and what kind of discussions take place. According to Sæbø et al. (2009), this analysis should include popular social media sites as well as platforms which have been exclusively designed for political communication [29].
References


