

## Does VAA popularity pay off?

### Smartvote users preferred candidates and their results in the 2007 Swiss federal elections

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#### Abstract

Voting is fundamental for democracy, however, this decisive democratic act requires quite an effort. Decision making at elections depends largely on the interest to gather information about candidates and parties, the effort to process the information at hand and the motivation to reach a vote choice. Especially in electoral systems with highly fragmented party systems and hundreds of candidates running for office, the process of decision making in the pre-election sphere is highly demanding. In the age of information and communication technologies, new possibilities for gathering and processing such information are available. Voting Advice Applications (VAAs) provide guidance to voters prior to the act of voting and assist voters in choosing between different candidates and parties on the basis of issue congruence. Meanwhile widely used all over the world, scientific inquiry into the effect of such tools on electoral behavior is ongoing. This paper adds to the current debate by focusing on whether the popularity of candidates on the Swiss VAA smartvote eventually paid off at the 2007 Swiss federal elections and whether there is a direct link between the performance of a candidate on the tool and his or her electoral performance.

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## Introduction

At elections, decisions have to be reached and choices have to be made. Depending on the electoral system, the amount of choices to be made at elections and the complexity of the electoral process varies. Clearly, an American Presidential election with ultimately two candidates from two different parties represents a simpler task in terms of decision making than choosing from a variety of parties and hundreds of candidates. Moreover, having different options to express the choices made on the ballot further complicates the matter. Switzerland is a case in point for the latter scenario. The country consists of 26 cantons and 2596 municipalities, with not only national parties but cantonal parties and local parties, *en masse*. The federalist structure of Switzerland also affects the Swiss party system, with national parties partially outshined by the importance of the cantonal parties. The constituencies of national elections are the cantons, hence, national elections are mainly the playing field of the cantonal parties. Recently, however, trends toward a nationalization of politics and increased media attention are bringing national parties back on center stage (Ladner 2010). The federalist structure of the Swiss party system causes a situation of great complexity in small space when it comes to elections and making choices among a huge set of alternatives. Instead of talking about *the* Swiss party system, one has to acknowledge that in fact there are 26 party systems in Switzerland.

But not only is the Swiss party system quite complex, the allocation of seats depends on the size of the canton, the size of the electoral competition and the utilization of options the Swiss electoral system offers to voters. In national elections each constituency is allocated a number of seats in the lower house depending on the population size of the respective canton. Zurich, as the largest canton in Switzerland, has 34 seats in the National Council, whereas the smallest six cantons only have one seat. The seats are allocated through proportional representation and the number of candidates running for office increases with the number of seats available. In other words, electoral competition in Zurich is by far greater than in cantons with only one seat. A further specialty of the Swiss electoral system that adds to the complexity of decision making are the possibilities of split voting and cumulative voting. The former allows choosing candidates from different parties whereas the latter allows listing the same candidate twice. Inherent in these options is the deletion of candidates from given lists. The decisions to be reached and the choices to be made in Swiss elections are therefore highly complex and demanding, often mirrored in the lowest turnout rates in international comparisons.

It is often speculated whether the so called democratic dilemma (Lijphart 1997) of low participation could be overcome by a more informed electorate (Niemi and Weisberg 2001, Lutz 2006). Various studies (Delli Carpini and Keeter 1996, Dalton 2006) have indicated that citizens are ill informed about politics and for Switzerland specifically this condition has been identified as a reason

to abstain from voting (Bühlmann et al. 2003). If voters tend to have little information about parties and candidates, the process of how they arrive at a vote decision in a multifaceted electoral system seems questionable. Whether a better informed electorate would be advantageous for democracy will not be discussed here, we are rather focusing on whether lowering the costs of information acquisitions and processing may have an influence on the decisions made at elections.

In recent years, online Voting Advice Applications (VAAs) have emerged in the political campaign sphere and have offered voting recommendations to millions of users worldwide. The Swiss VAA smartvote was launched in 2003 before the federal elections and has been part of the Swiss political landscape ever since. In the last Swiss federal elections in 2007, approximately 16% of the Swiss electorate used the tool prior to voting (Ladner et al. 2010a, Ladner and Pianzola 2010). The functionality of the tool is quite simple. Voters and candidates answer a set of up to 73 questions on various policy issues and on the basis of an issue matching procedure, smartvote produces a voting recommendation that ranks all available candidates according to their issue congruence with the voter. With further visual aids, one's own political position can systematically be compared to that of potential legislators. Unique in their way of presenting detailed information about politicians in a condensed way, the service of such tools evokes the question whether users actually incorporate the voting recommendations in their decision making and if so in what way.

Several studies on VAAs have started to deal with the question in how far such tools affect political participation (Rusuvirta and Rosema 2009, Ladner and Pianzola 2010) and the electoral choice (Walgrave et al. 2008, Rosema and Rusuvirta 2009, Ladner et al. 2010) of its users. This paper will follow the line of trying to dissect the influence VAAs have on users, but with a different focus. We are interested to see whether popularity on smartvote pays off for candidates in the elections and whether there is a direct link between the performance of candidates on smartvote and their electoral performance. To address this question, we apply various measures for smartvote popularity and compare them to the actual election results of the candidates.

The following section gives a short introduction into the theoretical background, whereas the next section provides some necessary information about the Swiss electoral and party system as well as some further details on the Swiss VAA smartvote. We will then proceed to outline the operationalization of our measurements and present the results of our analysis. Finally, the results are discussed and critically evaluated, hinting at options for further research.

### **Theoretical background and considerations**

Voting Advice Applications have been around for a little more than a decade now, with the Dutch Stemwijzer as the first VAA that went online in 1998 (Walgrave 2008: 52). Since then, VAAs have been developed in most western democracies and the voting recommendations produced by these

tools meanwhile range in the millions. Although the design of VAAs differs from country to country, the basic principal of matching voters to parties or candidates remains the same. Hence, similar questions have been posed with regard to the impact of VAAs, mainly in the realm of democratic theory and electoral behavior. Do such tools increase political participation and turnout? Are voters influenced in the direction of their vote by the voting recommendation they receive? Will the advent of such tools increase the quality of participation and representation?

Walgrave et al. (2008) assessed the electoral impact of a popular VAA in the 2004 Belgian election campaign. They did conclude that users of the VAA were affected in their final vote decision by the tool, however, these effects were modest. The study finds that some parties might have gained some votes due to the VAA while others lost some, but they could not assess an overall impact on the election outcome. Most importantly for this study, the authors mentioned that the winners and losers of the VAA were not equivalent with the winners and losers from the actual election, suggesting a strong preference bias found among VAA users.

These findings do contradict to some extent the research of Kleinnijenhuis et al. (2007), who found that a Dutch VAA had a significant impact on the election campaign. Rusuuvirta and Rosema (2009) also analyzed the Dutch context and focused on electoral participation and the direction of the vote. According to their findings, the strongest effect was found among undecided voters, who tended to vote in line with the advice given by the VAA. In terms of increased electoral turnout, they find a modest effect and are conscious since their estimates might be biased.

Further trends are reported from countries such as Finland and Germany, where a substantive amount of voters report to have used a VAA prior to elections and reported that the tool had assisted them in making a vote choice (a third in Finland (Rusuuvirta and Rosema 2009), 40% in Germany (Marschall 2005)). In a survey conducted among Swiss VAA users, 67% stated that using the tool had affected their vote choice and 16% reported that the tool had motivated them to participate in the elections (Ladner et al. 2010a, Ladner and Pianzola 2010). As in other studies on VAAs, these numbers often stem from non-representative and self-selected samples and have therefore to be interpreted with outmost care. Nevertheless, the spread of these tools and the increasing number of hits on such websites do suggest that these services are highly welcomed and might be leaving its trace on users.

Especially since voters have become less loyal to traditional party ties (Dalton and Wattenberg 2000) and parties' issue positions more prominent for people's vote choice (e.g. Alvarez and Nagler 2000, Powell 2000, Kriesi and Scarini 2003, Dalton 2006), the services of VAAs have a high potential of guiding voters in their decision making prior to voting. Information is a crucial part in decision making and can affect choice (Lau and Redlawsk 2006), thus the voting behavior of VAA users is a particularly interesting research subject.

In Switzerland, the VAA smartvote generated approximately one million voting recommendations in the forefront of the 2007 Swiss federal election. The above mentioned survey among Swiss VAA users showed that among those who stated that smartvote had affected their vote decision, 61% (N=10'580) answered that they voted for candidates from different lists (split voting) (Ladner et al. 2010a). Respondents were also asked whether they copied the voting recommendation without any changes onto their voting list, which most of the users (85%, N= 10650) negated (Fivaz and Nadig 2010). Hence, it seems that users are not looking for an option of "instant" voting, but use smartvote to gather further information about candidates and parties that rank high on their voting recommendation.

With regard to information acquisition, such tools greatly simplify the process and reduce the costs of information management. From a normative democratic theory perspective, such a high level of control over the amount of information in a campaign is beneficial to the voter since it allows for better informed decisions. However, critics warn that the opportunities VAAs offer in a democratic environment are also met by great challenges. Depending on the design of the VAA, such tools may lead to strategic behavior of parties and candidates instead of promoting programmatic competition among politicians (Ramonaité 2010). A further challenge lies in selecting adequate statements that do represent the political context and allow for generating reliable voting recommendations (Walgrave et al. 2009). With regard to strategic behavior of politicians in answering the VAA questionnaire in Switzerland, a study of Schwarz et al. (2010) mitigates such concerns. The positional congruence of pre-election statements on smartvote and post-election behavior in parliament was found to be at 85%, indicating a rather honest demeanor among elected candidates. The second concern with regard to the decisiveness of statement selections is an aspect that has yet to be approached in the Swiss context. There is, however, a third challenge posed by VAAs that directly affect parties.

In the Swiss open ballot proportional representation (PR) electoral system, political parties present pre-assembled candidate lists to their electorate. In casting their ballot, Swiss voters chose a party and, at the same time, the candidates on that list. With the option of split voting or cumulative voting, these ready-made lists can be altered, but with the predetermined rank order of candidates by the parties the latter still exerts a great influence on the subsequent selection of candidates. As Lutz (2010) has presented for the Swiss case, the ballot position has a significant effect on the candidates' number of preference votes in the elections (the higher the better). With the use of smartvote, candidate choices have a tendency to be decoupled from party lists and the vote decision might increasingly be based on candidates than on partisanship. Hence, parties might easily lose their last monopoly of being able to influence via pre-selecting and rank ordering the potential electoral success of their chosen candidates. In other words, smartvote users might find that a candidate who

ranks high on their voting recommendation is more suitable to them than the candidates listed on the pre-printed party ballot.

A survey among candidates running for the 2007 Swiss federal elections revealed that about 70% of respondents viewed their participation on the VAA smartvote as advantageous for their election campaign, and this sentiment was even stronger for candidates who were not elected (Ladner et al. 2008, Ladner et al. 2010a). This might stem from the fact that such candidates had fewer opportunities to present themselves to the electorate in general, which made their presence on the VAA a welcoming opportunity. Moreover, almost one third of the candidates on smartvote received instructions from their parties in how to answer the questionnaire on the VAA but only 10% did adhere strongly to these instructions. Most candidates stated that they followed their own political positions in answering the questionnaire.

Given the results of other countries on the influence of VAAs on voting behavior and our own assessments, we are interested to see whether popular candidates on smartvote were successful in the elections. Before going into detail in how we want to assess this, we will give a short overview over the Swiss electoral system and the Swiss VAA smartvote. Both aspects are relevant since they lead to a better understanding of the research question and the strategy applied to measure the impact.

### **The Swiss Electoral System**

The functioning of VAAs, the intensity of their use, and their usefulness to voters depend to a great extent on the particular design of the electoral and the party systems in the different countries in which the VAAs are operating. As mentioned before, it makes a difference whether voters have to decide only between two candidates from two parties running for one seat or whether they can choose among a large number of candidates from several political parties.

Switzerland is despite its small size a very heterogeneous country. Its linguistic, economic, socio-cultural and political heterogeneity is reflected by a distinct federalism and a highly fragmented party system (Ladner 2002). It is characteristic for Swiss parties that they are organized in a very decentralized manner with cantonal and local sections disposing of far-reaching autonomy and independence. It is not unusual that on important national issues there are different political positions within the same national party. Switzerland is divided into 26 cantons. Every canton has its own party system depending on aspects like prevailing denomination, language, whether the canton is a rural or an urban one, or the structure of the cantonal economy. Regarding the number of parties or the degree of party competition these cantonal party systems differ widely (Ladner 2004a and 2004b). This aspect is essential with regard to the elections for the national parliament. The parties are running national campaigns, but an important part of campaigning takes place on the cantonal

level and takes into account the particular circumstances in the different cantons. It is often said that Switzerland has not one national election instead it has 26 cantonal elections held on the same day.

Additionally, for the national elections a system of pure proportional representation without any thresholds (like the 5%-threshold in Germany) is applied. This leads to a further fragmentation of the party system. Whereas there are five parties in the German parliament,<sup>1</sup> there are not less than twelve parties in the Swiss parliament – and only six of them have five seats or more.<sup>2</sup> Electoral districts for the national elections are the 26 cantons. The 200 seats of the first chamber – the National Council – are assigned to the cantons according to the number of their inhabitants. Thus the constituencies differ largely in their size. Whereas the six smallest cantons have only one seat, the canton of Zurich, as the largest canton, has 34 seats.

Furthermore, the open ballot proportional representation (PR) electoral system offers voters various possibilities to express their preferences. The electoral choice of Swiss voters is not only restricted to parties. Due to an applied open list system they also have the possibility to vote for single candidates. Every voter has as many votes as there are seats in his constituency (e.g. in the small canton of Uri with one seat, voters have only one vote, and in the much larger canton of Zurich with 34 seats they have 34 votes). Voters can split their votes between candidates from different parties (e.g. in the canton of Zurich a voter can give four votes to candidates from party A, ten to candidates from party B and 20 to candidates from party C). In order to allow voters to support particularly those candidates they like most, voters can support their favourite candidates by giving them two votes instead of one (so-called cumulative voting; e.g. in the canton of Zurich a voter could vote for 17 candidates with two votes for each). These rules allow voters to compose a customized ballot according to their personal political preferences.<sup>3</sup>

One effect of this electoral system is that voting in Switzerland is particularly complex business. For example in the 2007 elections in the canton of Zurich a voter had to choose among not less than 29 party lists and 804 candidates. For voters who intend to base their electoral choice on political positions it is obviously a lot more demanding to gather all the necessary information in Switzerland than in a country with a two-party system. VAAs and their preference matching systems thus offer a useful service, as long as they take the special needs of the electoral system into account. A VAA for the Swiss national elections has to offer two things: First, it should deliver voting recommendations for both whole parties and single candidates. And second, it has to offer voting specific voting recommendations for each constituency and – due to the lack of intra-party

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<sup>1</sup> <http://www.bundestag.de/bundestag/plenum/sitzverteilung.html>.

<sup>2</sup> <http://www.parlament.ch/d/dokumentation/statistiken/Seiten/zusammensetzung-nr-nach-wahlen.aspx>.

<sup>3</sup> Swiss voters seem to appreciate these possibilities increasingly. Not only has the share of swing voters increased in the last years, but also the share of those using the possibilities offered by the electoral system to compose their customized ballots (vote splitting and cumulative voting) according to their individual preferences (Burger 2001).

coherence – allow different answers by several cantonal sections of the same party to one question. In the following section, the Swiss VAA smartvote is shortly introduced.

### **Smartvote**

*smartvote* was developed by the Swiss non-profit organization Politools and first offered in 2003 for the Swiss federal elections. The core of *smartvote* is like in all VAAs the issue-matching module. But unlike the other VAAs it collects data not only from the party but also from the candidate level. A couple of month before the elections, all candidates receive the *smartvote* questionnaire, either by e-mail or by postal mail and they are asked to answer the questionnaire completely and to return it. The questionnaire consisted in 2007 of more than 70 questions on the most important political issues (like e.g., “Do you think that nuclear power plants should be shut down?”). Possible answers are “yes”, “rather yes”, “rather no” and “no”. Candidates do not have an opting-out possibility. They have to answer all questions and confirm their answers before they are saved in the *smartvote* database.

About two months before the elections the *smartvote* website is made accessible to voters and leads them in three steps to their individual voting recommendation. First, voters have to specify their political profile. They are asked to answer the same questionnaire as the candidates but they can choose between a “deluxe version” consisting of all questions and a “rapid version” consisting of 36 questions only. Unlike the candidates the voters have also a “no answer” option if they wish to leave out a number of questions, and they can weigh the answers according to the importance the issues have for them. The website provides voters with additional background information including pros and cons for each question. Second, voters have to select the constituency for which they want to receive a voting recommendation, and they have also to decide whether they wish to receive a voting recommendation on the level of parties or on the level of individual candidates. Third, *smartvote* compares the voters’ answers with the answers of parties or candidates including the voters’ weighing factors. As result the voters receive voting recommendations in the form of individualized “matching-lists” with a decreasing ranking of parties or candidates according to their matching with the voters’ answers.

The website provides also visualizations for political profiles: the so-called *smartspider* and *smartmap* charts. Both analytical graphs are based on the candidates’ answers to the *smartvote* questionnaire. The *smartspider* shows the agreement or disagreement on eight major policy dimensions formulated as political goals (e.g. more law and order, more environmental protection, or a strong welfare state) in a spider net graph. The *smartmap* is based on a system of coordinates with two major ideological cleavages serving as axes – the “north-south axis” for the cleavage between liberal and conservative standpoints and the “west-east axis” for the left-right cleavage.



For the first Swiss federal elections in 2003, slightly more than 50% of the candidates running for office participated and answered the smartvote questionnaire. In the following years *smartvote* offered its services also at several dozens of cantonal and local elections. With every election covered the website could increase its popularity and gain more and more media partners. This made it possible that in 2007 *smartvote* was regarded as ordinary part of the electoral campaign. More than 30 media partners (print media as well as TV and radio broadcasters) supported *smartvote* and integrated the tool and its analyses (e.g. the *smartspider*-graphs of important candidates) into their own news coverage. Due to the cooperation with media partners *smartvote* was not only present online, it was also present in offline media. With regard to this broad coverage it is not surprising that in the 2007 elections the number of participating candidates increased considerably: out of the 3'100 candidates 85% revealed their political preferences by answering the *smartvote*-questionnaire. Moreover, the number of voting recommendations grew from 255'000 in 2003 to almost one million in 2007. According to the Swiss electoral studies, approximately 10% of voters consulted smartvote prior to voting (Fivaz and Nadig 2010).

## Empirics

### Data

The data in our analysis stem from several sources: the smartvote data server, which is operated by the NGO Politools<sup>4</sup>, a survey conducted among smartvote users<sup>5</sup> and from the Swiss Federal Statistical Office<sup>6</sup>. The smartvote data server stores all voting recommendations generated by the VAA. For the 2007 Swiss federal elections, almost a million voting recommendations were generated, which yields an estimation<sup>7</sup> of about 375'000 voters using smartvote prior to the elections (Fivaz 2008). The voting recommendation produced by smartvote lists all candidates running for office in the user's constituency according to the degree of issue congruence with the user. The higher the congruence of the answers between a voter and a candidate, the more "matching points" (expressed in percentage points) are allocated. The candidates are ranked in decreasing order with respect to their total matching score. In addition to the voting recommendations for candidates, users also receive a voting recommendation for party lists. The procedure is similar; the matching scores for parties are calculated based on the mean value of all answering candidates from that party. Since we are interested in how candidates profit from the tool, we restrict ourselves to voting recommendations for candidates.

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<sup>4</sup> <http://www.politools.net/index.html>

<sup>5</sup> NCCR project IP16 "smart-voting 2.0" [http://www.nccr-democracy.uzh.ch/research/module5/smart-voting/smart-voting?set\\_language=en](http://www.nccr-democracy.uzh.ch/research/module5/smart-voting/smart-voting?set_language=en).

<sup>6</sup> <http://www.bfs.admin.ch/bfs/portal/de/index/themen/17/02/blank/data/04/04.html>

<sup>7</sup> Taken users who generated multiple voting recommendations into account.

Furthermore, we have data from 27'000 self-selected smartvote users who participated in a pre- and post-election survey on the webpage. Linking the survey data with the smartvote server data allows us to identify party voters and their individual voting recommendations. The data from the Swiss Federal Statistical Office include, among other things, the total number of votes a candidate received in his or her constituency, the total number of votes from altered ballots, the list rank of the candidate and whether the candidate was on a main list or side list.

## **Measures and Method**

To assess the popularity of candidates on smartvote, we created several measures from the data. We distinguish between measures that were taken from all smartvote users and measures that are linked to specific party voters among smartvote users.

### *Popularity Indicators given all users*

The first popularity indicator we extracted consists of the average issue congruence of each candidate with all users in his or her constituency. In other words, each user has a specific matching score with every candidate. The average over all users in that constituency for candidate X then constitutes that candidate's average issue congruence with its electorate. A second indicator was created which accounts for the proportion of eligible positions on the generated voting recommendations. For example, in the canton of Zurich, 34 seats were available for 806 candidates. A user from the constituency of Zurich would get a voting recommendation from smartvote with all 806 candidates listed on it. The first 34 ranks would, if the voting recommendation was adopted as it stands, indicate eligible candidates. Hence, for each candidate the number of eligible positions on all voting recommendations was retrieved and divided by the number of voting recommendations that were generated in the candidate's constituency with his or her name on it. The higher the resulting ratio, the more popular a candidate is perceived.

### *Popularity indicator given party voters*

Through the survey conducted among smartvote users, we know the party preference of a subsample of smartvote users. Thus, we calculated an average issue congruence for each candidate according to the party preferences of users. A candidate from the Social Democrats has an average issue congruence with users who voted for the Social Democrats, as well as with users who voted for the Liberals etc. This indicator allows for examining how popular a candidate was among voters from his or her own party compared to voters who voted for another party. We expect that candidates who were not only popular among their party voters but also among voters from other parties also received more preference votes in the elections.

### *Indicator for electoral success*

The smartvote popularity indicators are then compared to the actual election results. Since the Swiss electoral system allows for split voting and cumulative voting, the total number of votes received is split up into votes from modified ballots and votes from unmodified ballots. The number of votes from modified ballots is an indicator for the cross-party popularity of candidates in elections and will be compared to the popularity of candidates on smartvote. We will not use the total number of votes a candidate received since the incorporation of votes from unaltered ballots makes it indistinguishable to separate votes expressed for candidates from votes expressed for parties.

The analysis is restricted to the five biggest parties in Switzerland (Social Democrats (SP), the Greens (GPS), Christian Democrats (CVP), The Liberals (FDP) and the Swiss People's Party (SVP)) and also to the Green Liberals (GLP). The GLP ran for the first time for national office in 2007 and was able to win seats in the National Council. Furthermore, we will focus on the two biggest cantons in Switzerland, namely Zurich and Bern, since these two cantons have the highest number of seats in parliament and the highest number of competing candidates per seat. The analysis will be conducted separately for each constituency and party, which ensures that inter-party differences with regard to the election outcome is accounted for. In other words, the comparison is restricted to intra-party variation, comparing e.g. among Social Democrats and Christian Democrats separately in each constituency.

In examining the association between the above mentioned indicators, a further refinement is undertaken. We will distinguish between candidates that were on a main list and candidates that were on a side list. Candidates on so called main lists tend to have a higher success rate in getting elected, thus we take this advantage into account. Furthermore, we will take a closer look at those who were eventually elected compared to the candidates who did not gain a seat in parliament. We are well aware that our analyses are limited when it comes to claims of causality since candidates might have been successful in the elections due to other reasons. However, attractive political positions can be reflected in their performance on smartvote and we keep in mind that a great extent of users stated that they have been affected by smartvote in their voting intentions.

## **Results**

### ***Analysis based on all users***

#### *Switzerland in general*

To gain an overall picture over the general association between the average issue congruence of candidates per party and their electoral success, we calculated the Pearson product-moment

correlation between indicators for the popularity of candidates on smartvote and their respective electoral success. Using the popularity indicator of candidates on smartvote which measures the average issue congruence with all users, a clear left-right distinction appears. The correlation coefficient is negative for the two center parties CVP and FDP as well as for the SVP on the right, and positive for the parties on the left, namely SP, Greens and Green Liberals (see Table 1). The correlation coefficients are significant for the right wing party SVP and the three parties on the left. These results seem to point towards general positive implications for candidates on the left; those with more votes from altered ballots also were more popular on smartvote.

**Table 1.** Relationship between average issue congruence of candidates and their electoral success on the national level per party

National Party	Correlation coefficient average issue congruence and votes from altered ballots
Swiss People’s Party (SVP)	-.30*** N= 334
Liberals (FDP)	-.06 N= 402
Christian Democrats (CVP)	-.07 N= 314
Greens (GPS)	.16** N= 368
Green Liberals (GLP)	.42** N= 43
Social Democrats (SP)	.28*** N= 388

Pearson product-moment correlation coefficient, N= Number of observations.  
 \*\*\*p<0.001; \*\*p<0.01; \*p<0.05.

The left-right pattern holds when we distinguish between candidates that were on a main list versus those that were not on a main list. Candidates from parties positioned on the right side of the political spectrum which were popular on smartvote received significantly less votes from altered ballots. On the contrary, candidates from parties positioned on the left side of the political spectrum which were popular on smartvote also recorded more votes from altered ballots.

These results do not take into account the different electoral settings in different cantons, which vary in terms of number of seats to be allocated and thus in the extent of electoral competition. Moreover, parties are not homogenous with regard to issue stances on a national level, thus the analysis needs to be broken down to the local level. In the following, we will have a closer look at the canton of Zurich and the canton of Bern.

## Zurich

In Zurich, we find the same pattern as in Switzerland in general when we focus on the association between popularity on smartvote and popularity at the election polls (see Table 2). The average issue congruence of candidates with voters on smartvote correlates significantly with votes from altered ballots for the SP candidates and the SVP candidates. SVP candidates with higher average issue congruence received less votes from altered ballots ( $r = -.48$ ,  $p(2\text{-tailed}) < 0.001$ ,  $N = 88$ ) while for candidates of the SP average issue congruence was positively and significantly correlated with the amount of votes they received from altered ballots ( $r = .43$ ,  $p(2\text{-tailed}) < 0.001$ ,  $N = 64$ ). When restricting the analysis to those candidates who were on a main list, we only find a significantly positive association between average issue congruence and votes from altered ballots for the candidates from the Christian Democrats (CVP) ( $r = .45$ ,  $p(2\text{-tailed}) < 0.05$ ,  $N = 30$ ) and a negative association for candidates from the Swiss People's Party (SVP) ( $r = -.44$ ,  $p(2\text{-tailed}) < 0.05$ ,  $N = 27$ ).

**Table 2.** Relationship between average issue congruence of candidates and their electoral success in Zurich

National Party	Correlation coefficient average issue congruence and votes from altered ballots
Swiss People's Party (SVP)	-.48*** N= 88
Liberals (FDP)	.10 N= 68
Christian Democrats (CVP)	.18 N=42
Greens (GPS)	0.05 N= 106
Green Liberals (GLP)	.16 N= 31
Social Democrats (SP)	.43*** N= 64

Pearson product-moment correlation coefficient, N= Number of observations.

\*\*\* $p < 0.001$ ; \*\* $p < 0.01$ ; \* $p < 0.05$ .

The indicator measuring the ratio of eligible positions a candidate scored on all generated voting recommendations in the constituency shows a significant positive association for the Social Democrats (SP). SP-candidates that were more frequently positioned on the first 34 ranks on the voting recommendation of smartvote also received more votes from altered ballots in the elections ( $r = .54$ ,  $p(2\text{-tailed}) < 0.001$ ,  $N = 64$ ). Interestingly, when we look at candidates who were not on a main list and thus also had a smaller chance of being elected, strong associations can be found in 4 out of 6 parties (see Table 3). This suggests that for some candidates ranking high on the smartvote recommendations might have brought them some additional votes, independent from their rank status within their party. Among those candidates on a main list, a significant positive correlation can be found for the Christian Democrats ( $r = .40$ ,  $p(2\text{-tailed}) < 0.05$ ,  $N = 30$ ).

**Table 3.** Proportion of eligible ranks on voting recommendations and votes from altered ballots for candidates in Zurich (all versus not on main lists)

National Party	Association between proportion of eligible ranks on voting recommendations and votes from altered ballots	Association between proportion of eligible ranks on voting recommendations and votes from altered ballots for candidates <i>not on main lists</i>
SVP	-.17 N=88	.10 N= 61
FDP	-.09 N=68	.37* N= 36
CVP	.12 N=42	.66* N= 12
GPS	.06 N=106	.25* N= 81
GLP	-.01 N=31	-.01 N= 31
SP	.54*** N=64	.57*** N= 32

Pearson product-moment correlation coefficient, N= Number of observations.

\*\*\*p<0.001; \*\*p<0.01; \*p<0.05.

In order to assess whether there is a relationship between popular candidates on smartvote and their electoral success, we ranked the popularity indicators and conducted rank correlations. Eventually we were interested to see whether we find an association between those who were elected and those who were not with respect to how well they did on the VAA. The measurement for average issue congruence per candidate was ranked, with the highest congruence on first position, the second highest congruence on second position etc. The same was done to the number of votes from altered ballots: the higher the number of votes received, the better the ranking of the candidate. The rank correlations yield a positive relationship among all analysed parties except the SVP. A significant positive correlation was evident for two parties on the left; the SP and the GLP (see Table 4).

**Table 4.** Relationship between ranking orders on the voting recommendation based on issue congruence and the election result in Zurich

Correlation between ranks on smartvote and ranks in elections	
National Party	
SVP	-.30** N= 88
FDP	.13 N= 68
CVP	.06 N= 42
GLP	.48** N= 31
GPS	.11 N= 106
SP	.53*** N= 64

Spearman's correlation coefficient, N= Number of observations.

\*\*\*p<0.001; \*\*p<0.01; \*p<0.05.

Distinguishing the rank correlations between those who were elected and those who were not, the analysis indicates that the ranking order of the winning candidates from the CVP and the GLP was identical on the smartvote voting recommendation. Note that the sequence was the same, not the rank in itself. Among those not elected, a significant positive correlation was evident for candidates from the SP ( $r_s = .57$ ,  $p(2\text{-tailed}) < 0.001$ ) and the GLP ( $r_s = .55$ ,  $p(2\text{-tailed}) < 0.01$ ).

#### *Berne*

In the canton of Berne, the analysis is restricted to the five biggest parties of Switzerland. The GLP did not have any candidates running for national office in that constituency. Similar to the canton of Zurich is that the correlations among the indicators are pointed in the same directions, however, significant correlations can only be found when we compare the ratio of eligible positions on the voting recommendation with the number of votes from altered ballots. As in Zurich, the SVP candidates with higher ratios on eligible positions had less votes from altered ballots ( $r = -.25$ ,  $p(2\text{-tailed}) < .05$ ), whereas SP candidates with higher ratios on eligible positions also received more votes from altered ballots ( $r = .24$ ,  $p(2\text{-tailed}) < 0.1$ ).

If we split candidates on the criterion of being on a main list or not, the following associations can be found: popular candidates from the SP and the Greens that were on a main list are significantly associated with better results in the elections. Among those not on a main list candidates from the middle parties CVP and FDP as well as candidates from the Greens do get higher scores (see Table 5).

**Table 5.** Relationship between proportion of eligible ranks on voting recommendations and number of votes from altered ballots for candidates in Berne on main and on side lists

National Party	Association between proportion of eligible ranks on voting recommendations and votes from altered ballots – SIDE LIST	Association between proportion of eligible ranks on voting recommendations and votes from altered ballots – MAIN LIST
SVP	.14 N= 23	-.12 N= 37
FDP	.49* N=25	.13 N=47
CVP	.46* N=23	-.16 N=23
GPS	.35* N=24	.36* N=34
SP	-	.24* N=53

Pearson product-moment correlation coefficient, N= Number of observations.

\*\*\*p<0.001; \*\*p<0.01; \*p<0.05.

The test for rank correlations yields similar results. The six candidates that were elected from the SP had almost the same average ranking order on smartvote whereas the three candidates that were elected from the Green party had exactly the same ranking order on smartvote as in the final election results. Note that we are referring to the sequence and not the rank in itself. In terms of the left-right distinction, the canton of Berne clearly supports the findings for the canton of Zurich.

### ***Analysis based on party voters***

Until now the calculations for the indicators for smartvote popularity of candidates were based on all users. For the following analysis we are using a popularity indicator that is based on the average issue congruence with specific party voters. In other words, we have calculated several issue congruence values for each candidate given the party preference of the users. Each candidate thus has an average issue congruence with Social Democrats voters, Greens voters, etc. Again, we split the analysis to party levels and compare the candidates within each party. For simplification, this analysis is restricted to the canton of Zurich. The following table 6 lists all elected candidates according to their electoral success in the canton of Zurich (total votes and votes from modified ballots), ordered by their party affiliation. The next six columns list the specific average issue congruence of the candidate with the electorate, based on party voters. The last two columns indicate whether the elected candidate was popular on smartvote among its own party voters and whether the elected candidate was popular among all smartvote users. Zurich has 34 seats in the Swiss National Council, thus we calculated whether those elected per party were among the first 34 ranks given the average issue congruence. The row “Popular on smartvote among party voters” aligned the average issue



congruence based on the voters of that specific party whereas the row “Popular on smartvote among all users” aligned the average issue congruence based on all smartvote users.

Every party group has an extra row at the end which shows the average issue congruence per party voters for all candidates that were on the pre-assembled list. For example, the SP party list row shows that, on average, the 34 SP candidates had an issue congruence with SP voters of 76.65%. This average declines the further the parties are positioned on the right, as we would expect. If the average party list congruence value is higher than the elected candidate’s congruence with those party voters this indicates that there were other candidates who were not elected that were more popular on smartvote.

**Table 6.** Elected candidates in Zurich, their average issue congruence with voters from the five biggest parties in Switzerland and their popularity on smartvote

Zürich													
Party	Last Name	First Name	Total votes	Votes altered ballots	Φ accordance with voters from						Popular on smartvote among party voters	Popular on smartvote among all users	
					SP	Greens	GLP	CVP	FDP	SVP			
SP elected	Galladé	Chantal	120205	78190	77.36	75.78	66.70	64.35	52.48	42.47	Green	Green	
	Fehr	Jacqueline	111554	69539	78.74	77.63	66.04	62.73	48.99	36.78	Green	Green	
	Fehr	Mario	108136	66121	77.79	77.08	68.06	64.90	52.59	39.79	Green	Green	
	Thanei	Anita	98392	56377	76.26	75.56	64.66	61.55	49.02	36.97	Green	Red	
	Gross	Andreas	96378	54363	78.12	77.73	67.71	63.25	51.47	37.55	Green	Red	
	Goll	Christine	94280	52265	75.71	75.19	63.94	60.95	48.31	36.93	Red	Red	
	Jositsch	Daniel	92465	50450	76.17	75.13	66.26	63.30	51.58	40.31	Red	Green	
Φ SP party list					76.65	75.98	66.47	63.33	51.31	39.87			
Greens elected	Genner	Ruth	88684	70734	77.98	78.16	67.06	64.10	50.78	40.38	Green	Green	
	Vischer	Daniel	77418	59468	74.11	74.48	65.25	61.50	50.44	39.39	Red	Red	
	Girod	Bastien	53961	36011	67.74	69.73	65.39	61.28	55.14	44.63	Red	Red	
	Bänziger	Marlies	46813	28863	74.82	75.31	64.92	61.68	49.57	38.20	Green	Red	
Φ Greens party list					72.60	73.12	64.86	61.73	51.23	41.55			
GLP <sup>8</sup> elected	Bäumle	Martin	77566	62792	65.85	66.89	67.39	62.46	59.02	47.16	Green	Green	
	Moser	Tiana Angelina	42907	28133	68.45	69.49	68.71	64.55	59.65	47.89	Green	Green	
	Diener	Verena	38169	23395	67.34	68.20	67.76	63.15	58.17	46.01	Green	Green	
Φ GLP party list					64.97	65.8	66.1	62.74	58.61	48.56			
CVP elected	Riklin	Kathy	63649	47651	69.31	69.45	67.38	66.70	58.89	48.72	Green	Green	
	Hany	Urs	42077	26079	64.46	64.05	66.65	68.95	64.76	55.18	Green	Green	
	Schmid-Federer	Barbara	36150	20152	65.68	65.70	63.10	62.07	54.84	41.69	Green	Green	
Φ CVP party list					60.96	61.07	61.28	62.17	57.11	50.55			
FDP elected	Gutzwiller	Felix	83847	61564	52.38	51.10	57.96	58.33	63.06	53.72	Green	Green	
	Noser	Ruedi	72386	50103	55.54	53.62	60.31	58.42	63.17	50.77	Green	Green	

<sup>8</sup> Note: The GLP in Zurich had a total of 34 candidates running for office. Thus we adapted the popularity measure in that we checked whether elected candidates were above average on smartvote.

Φ FDP party list	Fiala	Doris	66859	44576	42.80	41.91	52.18	53.93	62.47	58.76		
	Leutenegger	Filippo	66284	44001								
					49.82	49.19	56.74	57.39	62.17	56.55		
SVP elected	Maurer	Ueli	162673	78216	28.90	29.71	38.91	42.23	52.45	65.01		
	Mörgeli	Christoph	151468	67011								
	Bortoluzzi	Toni	150320	65863	31.66	32.68	41.24	46.15	53.51	64.24		
	Binder	Max	150078	65621								
	Fehr	Hans	148719	64262	27.39	28.14	38.00	41.91	52.49	66.27		
	Rickli	Natalie Simone	146742	62285	28.55	28.73	39.52	42.42	54.37	66.19		
	Zuppiger	Bruno	142953	58496	30.59	31.63	40.78	43.08	51.69	58.75		
	Heer	Alfred	142878	58421	31.61	32.69	41.58	43.98	52.73	61.37		
	Stahl	Jürg	142817	58360	35.36	36.60	44.76	48.66	56.00	64.89		
	Kaufmann	Hans	141404	56947	27.99	28.99	40.09	43.67	54.54	65.34		
Φ SVP party list	Rutschmann	Hans	139512	55055	27.81	28.89	39.79	42.89	54.75	65.49		
	Schibli	Ernst	138799	54342	26.30	27.21	34.85	39.27	48.24	61.58		
					31.93	32.63	42.37	45.27	54.95	64.21		

Source: Swiss Federal Statistical Office and calculations from the smartvote database

A majority of elected candidates were also popular on smartvote, to the extent that they were among the highest 34 ranks given their average issue congruence with their party voters. Those candidates with a red segment scored significantly lower among their own party voters compared to those with a green segment and also *tended* to get a smaller score from different party voters. Interesting to see is that for example those not popular on smartvote among the elected Greens and Liberals tended to score particularly high with voters from the SVP – a party whose successful candidates were in general not popular on smartvote. This is also evident when we look at the elected SVP candidates in this table, of whom no one was popular among the, on average, more left leaning smartvote users.

An easy way to understand this table is to focus on the popularity colors; the more red segments per party, the more not elected candidates were more popular on smartvote. Hence, among all users the popular candidates of the SVP did not get elected. If we only look at users who voted for the SVP, about half of the elected candidates were also among the more popular on the voting recommendation. The candidates from the GLP and the CVP, in Zurich, were popular on smartvote and also successful in the elections. For the Greens and the SP, the final score is about half-and-half – some elected candidates were also popular on smartvote while others were not.

## **Discussion**

The results indicate that high average issue congruence on smartvote is reflected to some extent in the actual election results for parties on the left side of the political spectrum, mainly the SP and the Greens. The average congruence and the proportion of eligible ranks per candidate are calculated over all voters, and since the majority of smartvote users are left voters, the negative tendencies for candidates on the right are not surprising. As a comparison, the mean average issue congruence in the canton of Zurich for the Social Democrats is 61% while the mean average issue congruence for the Swiss People's party is at 48%. In general, a left-right distinction in the association of the popularity indicators can be made out; candidates from parties to the left of the political spectrum tend to have positive scores while candidates to the right of the political spectrum have negative scores on the popularity association.

In Zurich, the left-right distinction is maintained, although substantive associations are mainly found for candidates who were not on a main list. A simple explanation could be that for candidates on main lists other criteria were essential for getting elected. The smartvote rankings could, however, have been favourable for candidates on the backstage. Left versus right is also a general pattern in Berne, however, significant correlations surfaced for left candidates on main lists. The rank correlations also yield positive correlations of the popularity indicators for parties on the left and negative correlations for the right wing party SVP. Among those elected a significant relationship

between the popularity on smartvote and the actual election results could be made out for the CVP and the Greens in Zurich and the SP and the Greens in Berne.

Looking at the popularity of elected candidates in Zurich based on their average issue congruence with their party voters resulted in different findings for different parties. Similar to the ranking order analysis the elected CVP and the GLP candidates were also popular on smartvote while elected candidates from the right wing party SVP were less so. The majority of elected candidates also scored above average compared to their overall party list and those not popular on smartvote tended to have lower scores among voters from different parties.

The comparison of the popularity on smartvote with electoral success has several drawbacks. First of all, it could be that smartvote users did in fact vote for the most popular candidates on the website. However, since the percentage of smartvote users was approximately 16% in the 2007 Swiss federal elections (Ladner and Pianzola 2010), the effect could be mitigated by differing choices among remaining voters. Another scenario could be that the most popular candidates on smartvote, which usually ended up not being elected, did in fact receive votes from smartvote users – but these votes were not enough to help them to make it to the top. For the SP in Zurich we analyzed whether those who improved their list place were also more popular on smartvote. The verdict was about half-and-half again; 11 candidates who held their list position or improved it were popular on smartvote while 10 candidates who fell behind on their list ranking were also popular on smartvote. Moreover, working with average measures caused the differences between candidates to be marginal. Thus, decimals were decisive for determining whether a candidate made it among the most popular. Most likely, some important factors were not considered in this analysis and several other reasons were crucial for a candidate's electoral success. Hence, our analysis is limited and the results depend highly on the method and measurements applied.

## **Conclusion**

This paper set out to analyze whether VAA popularity eventually paid off for candidates running in the 2007 Swiss federal elections. According to our results, we do find a relationship between candidates that did perform well on the VAA and their electoral success, mainly so for parties on the left. In Zurich, candidates from the left side of the political spectrum had positive associations if they were not on a main list, whereas Green and CVP candidates who were elected also scored high on the voting recommendations. Popular candidates from the SVP on smartvote were less successful in the election. In Berne, the left-right tendencies are the same, but the conditions are slightly different. SP candidates on main lists that were popular on smartvote also gained more votes from altered ballots, whereas the same was true for CVP candidates who were not on a main list. As in Zurich, we find positive associations for the Greens.

In general, we can say that successful candidates also tended to be among the popular candidates on smartvote, however, they were not among the most popular candidates. Often, not elected candidates scored higher on the website but they could not ensure electoral success. Since smartvote users constitute about 16% of the electorate, assessing whether their votes could have made a difference in the general election outcome is ambiguous. The only conclusion we can draw from this analysis is that, on average, candidates with a high matching score on smartvote were also preferred among the electorate with party dispositions similar to smartvote users.

Taken all together, our results support the likelihood that the performance on smartvote is linked to electoral performance, at least for some candidates. The data does, however, not allow for any causal claims although there might be direct influence on some occasions. The reasons for the lack of clearer results seem obvious. The performance on the website is only one – and actually a minor – variable explaining electoral success. Being an incumbent, campaigning and media appearance are still much more important. For candidates with a bad performance on the website the likelihood for getting elected is nevertheless still high, but there are also reasons to believe that a good performance is helpful to get elected.

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