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# From e-voting to smart-voting

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## e-Tools in and for elections and direct democracy in Switzerland

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ABSTRACT

To what extent do and could e-tools contribute to a democracy like Switzerland? This paper puts forward experiences and visions concerning the application of e-tools for the most traditional democratic processes – elections and, of special importance in Switzerland, direct-democratic votes. Having the particular voting behaviour of the Swiss electorate in mind (low voter turnout – especially among the youngest age group, low political knowledge, etc.) we believe that e-tools which provide information in the forefront of elections or direct-democratic votes offer an enormous service to the voter. As soon as e-voting will be possible in Switzerland (as planned by the government), those e-tools for gathering information online will become indispensable and will gain power enormously. Therefore political scientists should not only focus on potential effects of e-voting itself but rather on the combination of (connected) e-tools of the pre-voting and the voting sphere. In the case of Switzerland, we argue in this paper, the offer of VAAs such as *smartvote* for elections and direct-democratic votes can provide the voter with more balanced and qualitatively higher information and thereby make a valuable contribution to the Swiss democracy.

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## 1. Introduction

Democracy is being more and more influenced by the use of electronic communication technologies such as the Internet. Political parties and their leaders have found a new platform for presenting themselves, candidates use the far reaching new possibilities in their campaigns and citizens enjoy new and more powerful ways of gathering information needed to take part in politics. In many Western countries voters dispose of so called voting assistance applications (VAAs) which help them to choose the appropriate candidate or party. Similar tools are also imaginable for direct-democratic votes. Here they might help potential voters to ponder different arguments and to come to a final decision.

The next, and in our eyes decisive, step in the course of e-democracy will be the introduction of electronic voting. There are realistic chances that within one or two decades e-voting will be offered to citizens in a large number of countries. We will argue in this paper that it is not electronic voting in itself which will change democracy. However e-voting linked to the pre-voting sphere - if it develops its full potential – will probably have a large impact on democracy. Taking the case of Switzerland – where citizens are often called to the polls either to vote for parties and candidates or, even more often, to decide on direct-democratic votes on the three different political levels[1] – we will show to what extent e-tools can help citizens in their decision making processes.

Once citizens have come to a decision they will want to cast their vote. It seems very obvious – and perhaps even inevitable – that the same tools which help in selecting candidates or making a decision in a direct-democratic vote, should also offer the possibility of casting a vote electronically. Most of the people looking for a holiday destination on the Internet also book online. Only very few of them go to the travel agency afterwards. It is the linking of the decision making process to the act of voting which will make electronic voting very popular but perhaps also more problematic.

In the next section of this paper we will first look at elections and direct democracy in Switzerland in order to give the reader a general overview on this topic. This is useful to understand the close link between the requirements of a helpful VAA and the particular political system. Then we will briefly present the efforts of the Federal Government to introduce e-voting in this country. Section three introduces Switzerland's most popular VAA

[1] In Switzerland these are the federal, cantonal (state) and municipal level.

called *smartvote*. Based on empirical data for the 2007 elections to the Federal Parliament we will show to what extent *smartvote* has been used by voters and whether the tool has influenced their decisions. The next section deals with the setting up of a similar tool for direct-democratic votes. There we will try to show that some of the shortcomings associated with direct democracy could be diminished by such a tool. Finally, this paper will be concluded with a short outlook.

## 2. Voting in Switzerland and 'le vote électronique'

In Switzerland citizens are called to the polls very frequently. It is the complexity of the electoral system and the far-reaching means of direct democracy which make the use of e-tools particularly attractive for this country. The federal government itself believes that e-voting is an attractive solution for organizing voting more efficiently and perhaps even for increasing political participation, especially among younger people.

### 2.1. Elections and the electoral system

The Swiss parliament consists of two chambers comparable to the U.S. Congress: the National Council (*Nationalrat*) as the representative of the citizens and the Council of States (*Ständerat*) as the representative of the cantons. The National Council has 200 seats and its members are elected by a system of proportional representation (PR)[2], whereas the Council of States consists of 46 members which are elected by a plurality voting system[3]. Thus, elections for the National Council are generally considered as party-oriented and the elections for the Council of States as candidate-oriented.

Politics in Switzerland takes place in a very fragmented social and political context. The country is divided into 26 cantons which are the national electoral constituencies. The seats for the National Council are assigned to the cantons according to their population size: the six smallest cantons have only one seat, whereas the canton of Zurich – the largest canton – has 34 seats. Accordingly, the number of candidates running for office varies from not more than one candidate in the canton of Uri to 804 in the canton of Zurich (Fivaz 2007, Federal Office of Statistics 2007). The cantons also differ in other aspects: language, religion, and economic

[2] Obviously this rule only applies to those cantons which have more than one seat in the National Council. In all other cantons the PR system is used.
[3] As the only exception the canton of Jura elects its members of the Council of States by proportional representation.

structure. As a consequence, cantonal party systems differ widely, for example, in regard to the number of parties and the degree of party competition (Ladner 2004a and 2004b).

A further aspect of the political heterogeneity of Switzerland is the fragmentation of the political parties (Ladner 2002). Switzerland has many small and decentralised parties and the cantonal and local sections dispose of far-reaching autonomy. Furthermore, it is not uncommon that different political positions exist within one party. Even single candidates sometimes take positions autonomously and resist the dictate of their party leaders.

Electing their members of parliament Swiss voters have the possibility to express their specific preferences for parties as well as for single candidates. First, every voter ^has as many votes as his or her constituency has seats (e.g. in the canton of Uri with 1 seat, voters have 1 vote and in the canton of Zurich with 34 seats they have 34 votes). Second, voters can split their votes between different parties (e.g. in the canton of Zurich a voter can give 4 votes to party A, 10 to party B, and 20 to party C). Third, 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). In the sum these rules allow customising the ballot according to one's personal political preferences.

Due to the fragmentation of the political and the party system, Swiss voters can choose among a high number of parties and political positions, and quite often it is rather difficult to know the positions of all parties and candidates (particularly in a canton like Zurich with over 800 candidates). Compared to a two-party-system it is definitely more costly to gather the necessary information about parties and candidates. Nevertheless, Swiss voters seem to appreciate these possibilities of composing customised ballots increasingly (Burger 2001).

### 2.2. The Direct Democratic System in Switzerland

The number of countries which use direct-democratic processes, just as the number of direct-democratic votes taking place around the world, is constantly increasing (Kaufmann et al. 2007). According to Lupia et al. (2004) there are ten Western European countries, six post-Soviet states and the United States that allow initiatives and most Western countries use referendums at least from time to time. However, Switzerland undoubtedly remains the

"uncontested world leader of direct democracy"[4] in which direct democracy is used more frequently than in any other country (Morel 2001).

Swiss citizens enjoy a wide range of direct-democratic rights. On the one hand, they are regularly called to the ballot box to give their opinion on parliamentary decisions concerning modifications of federal laws or the Constitution (*compulsory* or *optional referendum*). On the other hand, a predefined number of Swiss citizens can demand a federal popular vote on the (partial) revision of the Swiss Constitution (*popular initiative)* (Linder 2006: 104f). Contrary to other countries, in Switzerland the term 'referendum' is only used for the above mentioned compulsory and optional referendum whereas the popular initiative is not considered a referendum. We will therefore use the term 'popular votes' or 'direct-democratic votes' in order to refer to all forms of direct-democratic processes in Switzerland.

Federal referendums can be divided into two categories: (1) *Compulsory referendums*, i.e. referendums required by the Swiss Constitution (amendments to the Swiss constitution as well as all treaties concerning the accession to supranational organisations)[5]. (2) *Optional referendums*, i.e. referendums required for federal statutes, federal decrees and certain international treaties. In that case a federal popular vote on a law already passed by the parliament can be demanded by 50'000 citizens or eight Swiss cantons. The *popular initiative*, largely unknown outside Switzerland, is a direct democratic instrument which allows a group of people to propose a total or partial revision of the Federal Constitution by collecting 100'000 signatures of Swiss citizens. This proposal will then be submitted to the vote of the people and the cantons – requiring once again a double majority of the people and the cantons (Linder 2006: 105-107, Federal Constitution of the Swiss Confederation of April 18, 1999). Before referendums and popular initiatives are submitted to the vote of the people they are debated by both the Federal Council (government) and the National Assembly (parliament) which will give a so-called 'voting recommendation' to the electorate. Decisions subsequently taken by the people in a popular vote are in any case binding, contrary to other countries where they serve merely as recommendations to the representative organs (Lutz 2006: 4, 6). These aforementioned direct-democratic rights apply in similar ways to all levels of the federal state (confederacy, cantons, municipalities). Cantons apply even more expanded people's rights, e.g. the legislative initiative (Linder 2006: 108).

[4] See Programme of the International Conference "Direct Democracy in and around Europe: Integration, Innovation, Illusion, and Ideology", Aarau, 2-4 October 2008.
[5] In addition to a majority of the People, compulsory referendums also demand a majority of the cantons.

Table 1 gives an overview on the frequency of direct-democratic votes since the first federal vote in 1848. The most frequent instrument of direct democracy used in Switzerland is the compulsory referendum, with a success rate of 74 per cent. Popular initiatives on the other hand enjoy an approval rate of only 9 per cent.

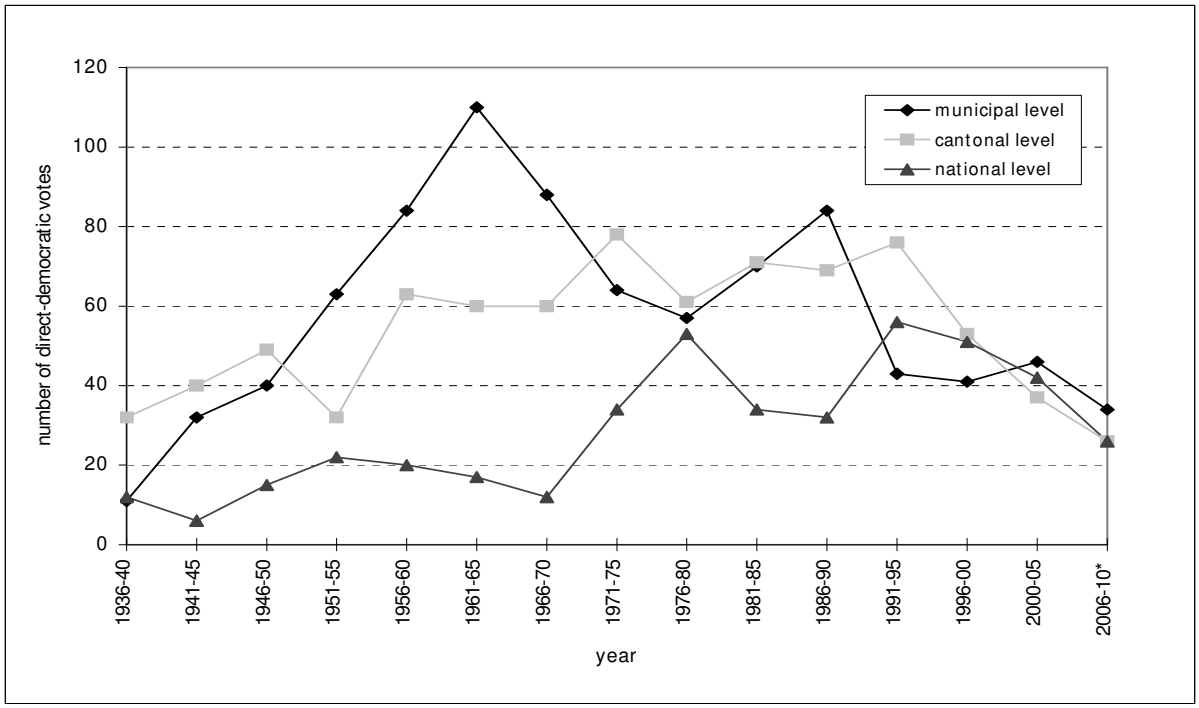
**Table 1: The use of direct democracy in Switzerland on the federal level (1848- June 2008)**

| | Total | Approved | Rejected | Approval rate |
|---|---|---|---|---|
| Compulsory Referendums | 207 | 153 | 54 | 74% |
| Optional Referendums | 162 | 89 | 73 | 55% |
| Popular Initiative | 165 | 15 | 150 | 9% |
| Overall | 534 | 263 | 286 | 49% |

Source: Federal Office of Statistics

All three levels of the federal state taken together, the number of direct-democratic votes is very large. To give an illustrative example, an 80-year-old Swiss man, having lived his entire life in Zurich, has been asked to decide on about 1800 issues over the last 60 years (own calculation based on the Statistical Offices of the Canton and City of Zurich) The following figure 1 shows the number of popular votes (on all three political levels) a voter in the canton of Zurich had to decide upon since 1936.

**Figure 1: Number of direct-democratic votes on all three political levels in the canton of Zurich**




* Value for the period 2006-2010 is calculated on the basis of the votes 2006 – June 2008
Source: own calculation based on the Statistical Offices of the Canton and City of Zurich

### 2.3. 'Le vote électronique'

While Switzerland's role as the leader in direct democracy is uncontested the same cannot be said for e-voting, called 'vote électronique' in Switzerland. In 2002 the Swiss Federal Council announced: "With the introduction of the vote électronique Switzerland could take a leading role in the field of electronic democracy" (BBl 2002 656, own translation). In 2006, based on the experiences of a first trial phase with pilot projects in the three cantons of Geneva, Neuchâtel and Zurich, the Federal Council proposed a gradual implementation of the *vote électronique* on the federal level (BBl 2006 5459). Some of the measures proposed aim at reducing the distrust against e-voting. For instance, a provision requires that during the next legislative period no more than ten per cent of all eligible voters are to be included in any pilot project, in order to reduce the risk of manipulation of the overall voting result. However, none of the stages scheduled in 2002 for the introduction of the *vote électronique* in Switzerland have so far been implemented and nobody dares to name a date on which electronic voting will have been launched nationwide, not to mention talks of a leading role of Switzerland in this matter. We can assume, however, that one day electronic voting will also be a reality in Switzerland.

## 3. E-Tools for Elections

One of the first VAA was the so-called 'Stemwijzer'[6] which was introduced during the campaign to the 1998 parliamentary elections in the Netherlands and offered support to undecided voters. In a first step, Stemwijzer users had to reveal their political preferences by answering a number of questions on political issues. In a second step the Stemwijzer system compared their answers with the positions of the political parties on the same issues and generated a list ranking parties in decreasing order according to the degree of congruence with the user's answers. Since 1998 a steadily growing number of such issue-matching systems have been implemented in many major elections in Western Europe, among them the Swiss VAA *smartvote*.[7]

[6] See http://www.stemwijzer.nl.

[7] The 'Stemwijzer' was also implemented in Switzerland (http://www.politarena.ch) and Germany (http://www.wahlomat.de). In Austria a similar website was developed (http://www.wahlkabine.at) as well as in the United Kingdom (http://www.whodoivotefor.co.uk), the United States (http://www.project-vote-smart.org; http://www.ontheissues.org). There also is also a similar website for non-electoral comparisons where users can compare themselvex with historical political figures from Stalin to Nelson Mandela (http://www.politicalcompass.org). A research project at the University of Antwerp is currently working on an overview of such websites (http://webhost.ua.ac.be/m2p/vaa/).

### 3.1. E-tools in the decision making process: the Swiss VAA *smartvote*

The Swiss VAA *smartvote* was developed for the 2003 elections in Switzerland and can be described as one of the most sophisticated voting assistance tools.[8] The *smartvote* website consists of three main elements: the *smartvote* module with the issue-matching system, a comprehensive database providing information on all candidates running for office, and an analysis module with elaborated analytical tools for the visualisation of political positions of voters, candidates and/or party lists.

The core of the *smartvote* website is the *smartvote* module. In a first phase, a couple of month before election day, all candidates receive a *smartvote* questionnaire. They are asked to answer this questionnaire consisting of up to 70 questions on the most important political issues (e.g., "Do you think that nuclear power plants should be shut down?"), each with 4 answer options ('yes', 'rather yes', 'rather no' and 'no'). Candidates neither have an opting-out nor a weighting option. Thus, a comprehensive political profile is generated. Once given the demanded confirmation, a candidate can no longer change his or her positions in the database.

About six weeks before election day the second, the operational, phase is launched. The *smartvote* website is now accessible to the public and leads users to their individual voting recommendation in three steps:

1. Creation of the political profile: Users answer the same questionnaire as the candidates. Unlike the candidates, voters have a 'no answer' option and they can weight all answers according to their personal political relevance.
2. Customizing the voting recommendation: Users specify the constituency they want to receive a recommendation for and whether the recommendation is to be given for entire party lists or candidates.
3. Calculation and presentation of the voting recommendation: *smartvote* compares the answers of the voter with those of a candidate, including the weighting factors of the voters' answers. This process is repeated for all questions and for every candidate in the selected constituency. *smartvote* then generates the voting recommendation in the form of a list of all participating candidates in descending order according to their total congruence score.

[8] In a green paper on the future of democracy in Europe the whole group of these voting assistance tools was labelled 'smart voting' tools (Schmitter and Trechsel 2004).

### 3.1.1 Use of *smartvote* by candidates and voters and its impact

Before we are able to focus on the question whether *smartvote* has an impact on the voters' decision, we first suggest looking at the participation rates of both candidates and voters. The participation by candidates is an essential precondition for a high service value of a VAA and provides a first evidence for its perceived seriousness. Thus, to what extent do the candidates answer the *smartvote* questionnaire?

*Participation*

In the forefront of the National Council elections 2007[9] around 85 per cent of the 3100 candidates running for office had a *smartvote* profile. Compared to 50 per cent in 2003 this was a high percentage rate and allowed to calculate meaningful voting recommendations for the Swiss electorate. Thanks to media partnerships with a wide variety of Swiss media (e.g. *Swiss TV*, *Radio DRS1*, *NZZ Online*, *20Minuten*) *smartvote* enlarged its reach far beyond the internet community itself. Media and candidates create a circle of dependence. On the one hand, candidates have a greater motivation to publish their political preferences in the VAA knowing that important media partners will spread their political profiles in the print press as well and on the other hand, the media themselves are interested in having a well-populated database at their disposal.

To what extent did voters turn their attention towards *smartvote*? At first sight the absolute figures in table 2 are not very impressive. The fact that the electorate of Switzerland counts only around 4.9 million voters (2007) changes this impression. The index which relates *smartvote* users to the number of people effectively voting, amounts to almost 40 per cent in 2007. Thus, the use of *smartvote* by voters on the national level has thus almost quadrupled between 2003 and 2007. This evolution can partly be ascribed to the repeated use on other levels (cantonal or local) and to the intense media coverage in 2007 already mentioned.

**Table 2: *smartvote* participation by number of users: Swiss parliament elections 2003 and 2007**

| Election | *smartvote* use (absolute) | *smartvote* use index (per cent)[1] |
|---|---|---|
| Swiss Parliament 2003 | 255'000 | 11.7 |
| Swiss Parliament 2007 | 938'403 | 39.5 |

[1] *smartvote* use in absolute number relative to the according voter turnout

Source: *smartvote* (www.smartvote.ch)

[9] *smartvote* was offered for the second time on national level since 2003.

On the occasion of different local city elections (e.g. Bern 2004, Geneva 2005, Zurich 2006) the average participation rate of users amounted to 25 per cent. We consider this a rather high rate as local elections have generally smaller numbers of candidates and the value added by a VAA could be assumed to be smaller.

The remarkable participation of both candidates and voters as well as the high interest of the media to publish contributions based on *smartvote* are first indications that *smartvote* has gained a certain level of significance in the pre-voting sphere. What do candidates and users (potential voters) really think about *smartvote* and how serious do they take it? Since parts of the post-electoral survey among Swiss candidates[10] running for election for the National Council in 2007 as well as a comprehensive survey among *smartvote* users were dedicated to the perception of *smartvote* we will have a look at the results of this survey in order to find more evidence for answering that question.

*Candidates' perception of smartvote*

A clear majority (around 70 per cent) of the candidates insisted on the usefulness of *smartvote* for their election campaign. Nearly one fourth believed *smartvote* even being explicitly advantageous. Almost nobody perceived the VAA as damaging for the personal election outcome.

**Table 3: Impact of *smartvote* for candidates**

| **Candidates' estimation of *smartvote's* impact** | **Responses by candidates (per cent)** |
|---|---|
| Explicitly advantageous | 23.7 |
| Rather advantageous | 45.8 |
| Neither nor | 28.9 |
| Rather damaging | 1.4 |
| Explicitly damaging | 0.2 |
| N = 1579 | 100.0 |

Source: NCCR Democracy, post-electoral survey of candidates 2007.

Particularly interesting is the fact that the use of *smartvote* was even considered as more advantageous among the non-elected. Presumably these candidates were less prominent and had fewer possibilities to reveal their political positions otherwise. In any case they seem to blame other factors than the VAA for their electoral failure.

[10] Of the 1700 survey respondents around 95 per cent (1'660) did participate on *smartvote*. This survey has been realised in cooperation between the Universities of Berne, Geneva, Zurich and the IDHEAP in Lausanne.

*smartvote* was probably not decisive for finally being elected but at least perceived as meaningful. On a scale from 0 ('no importance') to 10 ('great importance') the average importance for the candidates amounts to 5.8 (see table 4 in appendix). Surprisingly there are no remarkable differences between the candidates of different parties. The differences become somewhat more salient when the answers are split up along the language regions. In German-speaking Switzerland candidates ascribe a greater importance to *smartvote* (party average from 6.2 to 6.4) than in French-speaking Switzerland (party average from 3.8 to 5.8). Hence in the former language region the VAA seems to be perceived as being more serious at a first glance. But maybe this lower importance could also be based on the fact that *smartvote* is still less established in the French-speaking part (Ladner et al. 2008).

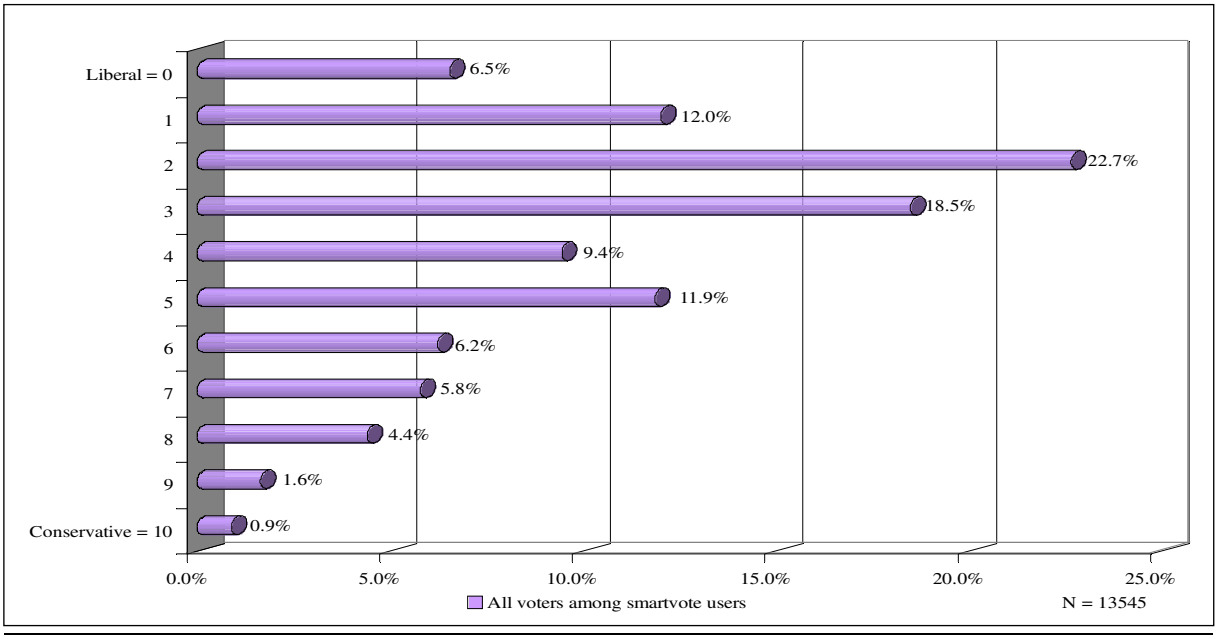
*Voters' perception of smartvote*

Before looking at the perception on the 'demand' side of the tool, we will present the users of *smartvote* concerning their socio-demographical data as well as their political orientation.

Do we find some sort of digital divide among the users of the VAA *smartvote*? With around 37 per cent, the largest age group represented among *smartvote* users is below the age of 30, two-thirds are male and almost 50 per cent have an academic background (see table 5 appendix). Thus, we might say that a digital divide exists indeed. As a consequence, we have to be aware of the fact that the user data at this stage of analysis is not representative of the average Swiss electorate. The same applies to the distribution of *smartvote* users among the parties, i.e. the distribution of parties elected by the user survey respondents. The left-wing parties (Greens and Social Democrats) amounting to 50 per cent among the *smartvote* users – compared with 29 per cent[11] in the parliament – are therefore overrepresented. On the other hand, s*martvote* users declaring themselves as voters of the right-wing Swiss People's Party are with only nine per cent – as compared to 29 per cent in reality – clearly underrepresented (see table 6 in appendix). Therefore – and not surprisingly – the *smartvote* users are on the average quite liberal (see figure 2).

[11] Social Democratic Party: 19.5 per cent, Green Party: 9.6 per cent.

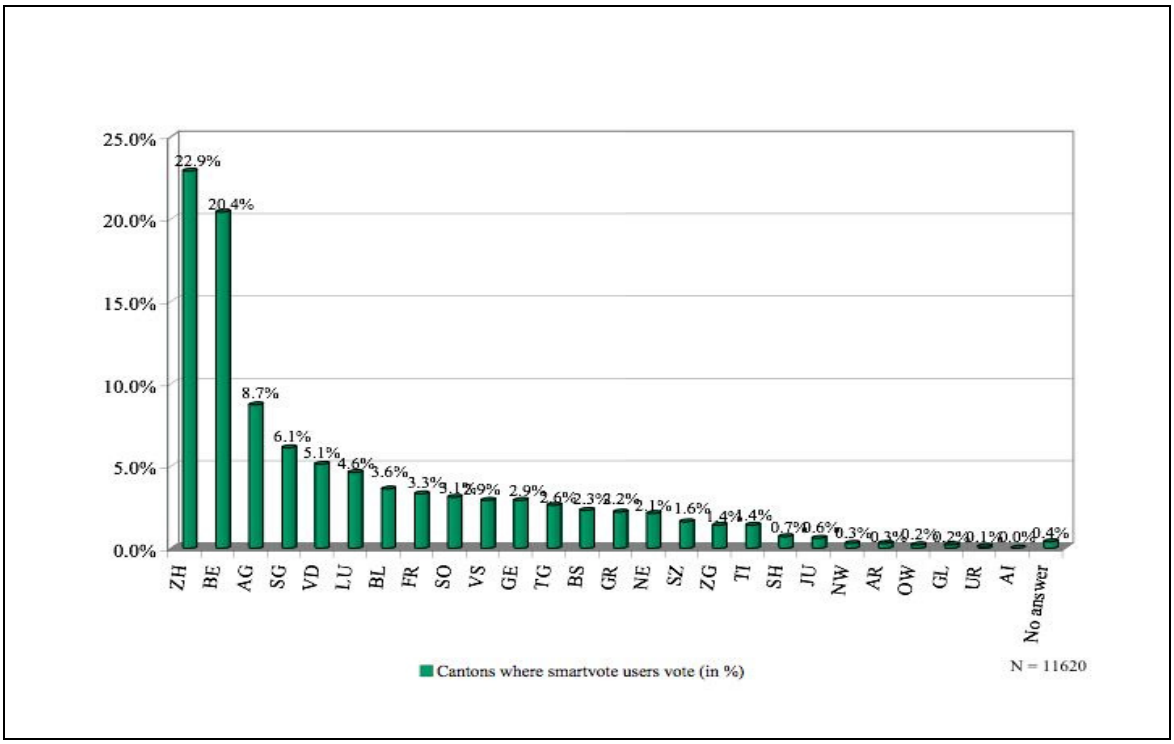
**Figure 2: Liberal-conservative orientation of *smartvote* users**




Source: NCCR Democracy, post electoral survey of *smartvote* users 2007.

Having a look at the distribution of voters using the VAA we see that mainly people from the largest cantons like Zurich and Bern have consulted the website (see figure 3). This could confirm our hypothesis of a greater service value in larger constituencies, as the number of candidates and therefore the possibility to know the candidates' positions is smaller in large constituencies without such a tool.

**Figure 3: Residency of *smartvote* users**

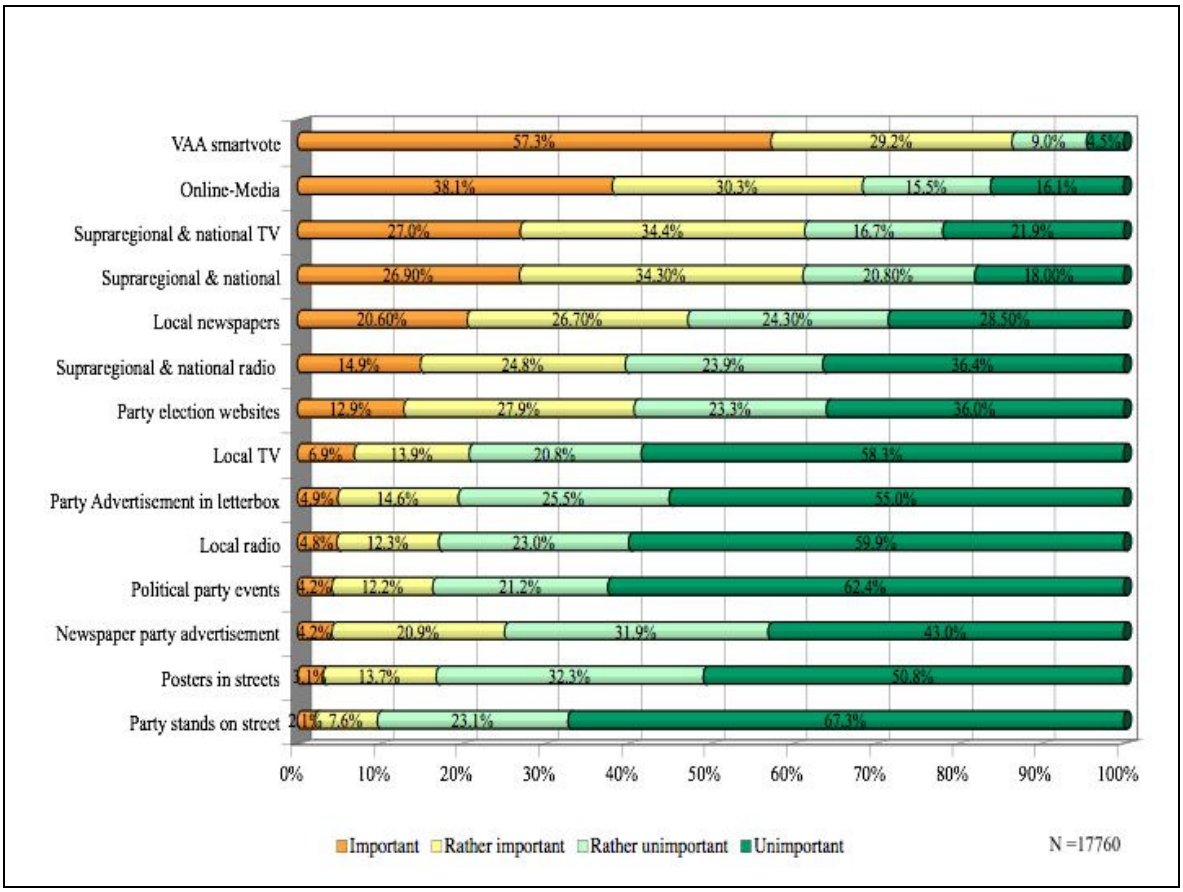



Source: NCCR Democracy, post electoral survey of *smartvote* users 2007.

We shall now focus on the perception of *smartvote* among the user. Did they ascribe the VAA any influencing potential on their voting behaviour or did they rather regard it as no more than a toy?

When asked about the importance of several information sources during the election campaign the VAA receives the first rank. Around 58 per cent mentioned it as an important source of information. Among the VAA users, *smartvote* seems to be considered rather as a valuable information source than a toy (see figure 4).

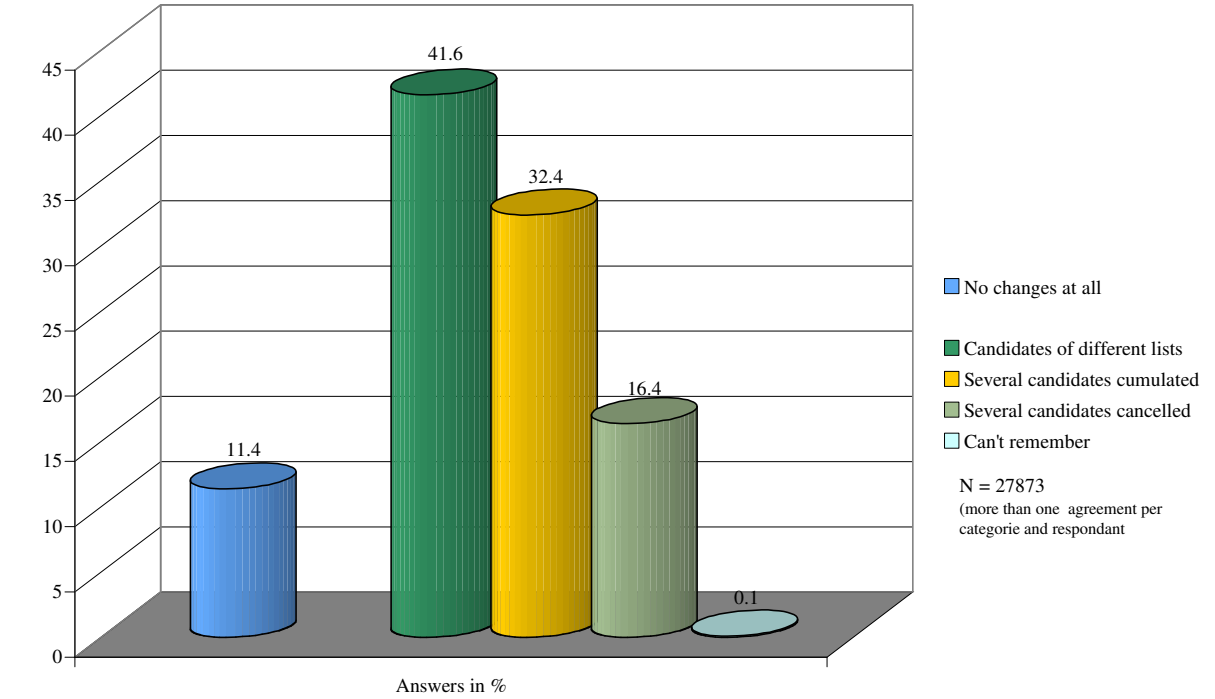
**Figure 4: Importance of election campaign instruments for information**




Source: NCCR Democracy, post electoral survey of *smartvote* users 2007.

In chapter 2.1 we have learned that in the last years the share of split votes, cumulative votes and cancelling candidates have increased. We assume that this tendency is further encouraged by candidate-based VAAs like *smartvote.* They step in and offer the badly needed information for choosing appropriate parties and candidates which this might boost the already existing trend. Figure 5 shows an outstanding 41 per cent share (around 11'000) of split voting among the user respondents and a mere 11 per cent (3100) answers stating that their ballot was left completely unchanged. These findings seem to confirm our hypothesis.

**Figure 5: Split vote and cumulative vote on the ballot paper for the National Council election**




Source: NCCR Democracy, post electoral survey of *smartvote* users 2007.

Taking the socio-demographical context of the respondents into account, we see that among the different age groups the youngest ascribe a most distinct influence of *smartvote* on their voting behaviour (some 39 per cent, see table 6). Having in mind the results of post-election studies in Switzerland showing that voter turnout is lowest for the age group of 18 to 34 years (Lutz 2008: 7f., Kriesi 2005: 122-125), we see a great potential of a VAA to eventually increase their electoral participation.

Furthermore, VAAs such as *smartvote* might also contribute to a reduction of their so-called lack of political competence – which will be discussed more in detail in chapter 4.2.2. Younger voter might orient themselves more on political issues (which are presented in the VAA) in making a voting decision than older age groups. Comparing the user group – sorted by different education levels – saying the VAA had an influence on their voting decision, we find an amazing high share of admittance to an impact of *smartvote* of about two-thirds – in the vocational, the higher vocational as well as in the tertiary sector. We can therefore conclude that no significant difference between lower or higher educated users seems to exist (see table 7).

Based on these first results of the VAA user survey of the elections to the Federal Parliament 2007 in Switzerland we come to the conclusion that *smartvote* can be considered as a valuable

source of information. Considering the ascribed effects on the voting behaviour of the survey respondents it is more than a toy. Yet, this does not mean that a general change in voting behaviour all over Switzerland can be observed, as the most favoured party by *smartvote* users, the Social Democrats, in reality lost some four per cent in the National Council election in 2007. However, VAAs seem to have an influence in Switzerland and their potential should not be underestimated.

### 3.2. In the very act of voting: *smartvote* & e-voting

Given the increasing popularity of *smartvote* it is very likely that in a few years this – and probably other – VAAs will play an important role in the pre-electoral sphere. Voters will first consult such websites to find out which candidates or parties are closest to their own political position, before they fill in their ballot papers. *smartvote* will develop further and offer their users more powerful and more efficient possibilities to learn more about the parties and the candidates running for office.

A further developed VAA could relocate the whole process of decision-making to the Internet by offering users entering this website all the material they receive up to now in print. Beginning with an online overview of the different party lists (including open lists for customising) and necessary instructions the potential voter will have to decide whether to use one of the party lists or the open list in a first step. Corresponding to the electoral law the system would allow a certain range of modification options (including the traditional voting options such as split voting). Beforehand for example, an issue-matching procedure similar to *smartvote* could be provided and instead of, or in addition to, such an issue-matching procedure, a screening of the candidates according to different characteristics (party membership, office holder, sex, age, etc.) could be offered to the users. The results of either the issue matching or the screening process could finally be entered in the previously selected list. At this point the voters, of course, will still have the choice to cumulate and/or to split vote. In this way a completely customised list of candidates could be generated online.

Due to the Swiss electoral law, allowing handwritten (adapted) lists only, up to now, such a list could only be sent to the municipality by traditional mail. However, if e-voting is introduced, this will have to be changed. The vital question then will be, whether the list of candidates generated with the support of *smartvote* can be copied and pasted into an official (electronic) environment or whether it has to be printed and written down again. In the case of

the canton of Zurich, where citizens vote for 34 candidates, this would be a rather tedious and unnecessary task. It would, of course, be much easier to send the list created by *smartvote* directly to the polls.

On the one hand, we believe that the possibility of sending a selection of candidates produced by *smartvote* and similar tools directly to polls would make VAAs both more attractive and important. On the other hand, this would also make e-voting more attractive since 'smart-voting' is more than sending a list to the polls electronically. The challenge to face is, thus the linkage of the pre-voting to the voting sphere. To ignore the possibilities offered by such tools is no advisable strategy.

## 4. What about E-tools for direct democratic processes

Whereas so-called VAAs for elections are becoming increasingly popular in several Western European countries (Walgrave et al. 2008: 50), so far there has been no comparable tool which helps citizens make a choice in direct-democratic votes. However, the association Politools – Political Research Network[12] – is currently working on elaborating and programming such an e-tool that is aimed at helping voters make a more informed choice in Swiss popular votes.

Direct democracy in Switzerland and elsewhere is associated with a range of different problems. In this paper we would like to focus on three different aspects which are considered as problematic by different authors[13]: low participation, low competence and biased information campaigns by the government. We will then show how the e-tool which is currently being developed aims at reducing these problems. In doing so, our aim is not to give a general overview on the shortcomings of direct democracy but rather to focus on certain central aspects for the subsequent description of the new VAA for direct-democratic votes.

### 4.1 Shortcomings associated with direct democracy (in Switzerland)

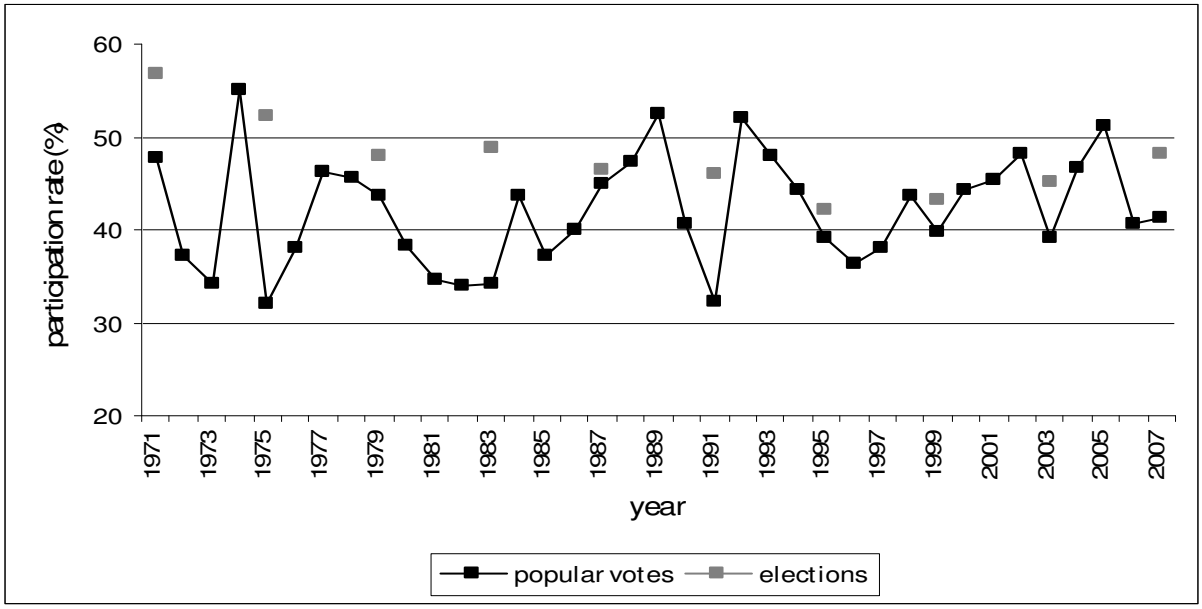
4.1.1. Low voter turnout

Compared to other countries voter turnout in Swiss elections is very low (average in Switzerland since 2000 lies at around 43 per cent) – together with the United States it

[12] A politically neutral and interdisciplinary association which developed and owns www.smartvote.ch and other e-tools (www.politools.net).
[13] See for example Kriesi 2005.

occupies the bottom position of Western democracies (Freitag 1996: 5f.). One of the reasons often cited is that Swiss elections are so-called 'low salience votes' (Klöti et al. 1998: 304)[14]. Since the topic of this chapter is direct-democratic votes and not elections we will not linger on this issue any longer however. With regard to popular votes it is interesting to note that participation is even lower there. As can be seen in figure 6 the mean annual participation rate in direct-democratic votes amounts to between 32 and 55 per cent since 1971, whereas for elections participation ranges between around 42 and 57 per cent.

**Figure 6: Mean annual participation rates in Swiss direct-democratic votes and elections 1971-2006**




Source: Swiss Federal Statistical Office

This low participation need, however, not in itself be a problem. Kriesi (2005: 111) notes that for the *realist theory* participation does not necessarily need to be high. "(…) [L]ack of participation is especially desirable if the incompetent and the ignorant do not participate." By contrast, for representatives of the *participatory theory of democracy* the maximization of participation is highly desirable. For Lijphart (1997: 1) for instance, low voter turnout constitutes a "serious democratic problem" which to him constitutes "democracy's unresolved dilemma". We do not want to decide on either one of these approaches in this article. However, we do believe that an increase in turnout of well-informed voters is highly desirable

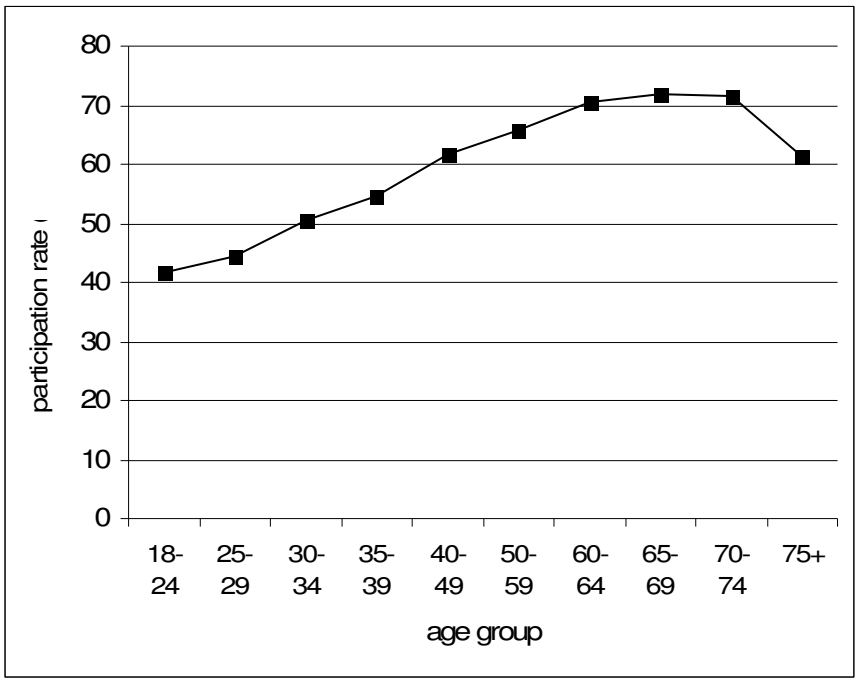
[14] On the one hand, because Swiss citizens are regularly called to the polls in order to directly give their opinion on different issues in direct-democratic votes they do not consider elections very important. On the other hand, Swiss citizens' motivation to vote is understandably low since it does not have much impact on the composition of the government. (The Swiss government's composition remained unchanged between 1959 and 2003, allocating two seats each to the Free Democratic Party (FDP), the Christian Democratic People's Party (CVP) and the Social Democratic Party (SP), and one seat to the Swiss People's Party (SVP, formerly known as the Farmers', Traders' and Citizens' Party (BGB)).

for (direct-) democratic processes. We will focus on two groups of non-voters in the following section for which there seems to be a potential of increasing the participation rate: Young citizens and incompetent citizens.

*Young citizens*

As we have shown in chapter 3.1 in the context of elections participation is lowest among the youngest citizens. The same applies to participation in direct-democratic votes as our analysis of post-vote surveys (VOX) of the years 1981-2006 shows. As can be seen from figure 7 participation is lowest among the youngest cohorts. It then increases until the age of 70 after which it drops to a level of about 60 per cent. It should however be noted that the participation rate in the used survey sample is far too high. It amounts to about 59 per cent while the real participation rate amounts to only 42 per cent on average (Federal Office of Statistics). According to Kriesi (2005: 119) this is "likely to be a result of selective participation in the surveys themselves" since the refusal rate to participate in these surveys is likely to be much higher among non-voters. Nevertheless, the general trend of a distinctive increase in participation with age is obvious even if the sample might not be representative.

**Figure 7: Participation rates in direct-democratic votes by age group (average 1981-2006)**




Source: own calculation based on VOX surveys.

In his study of nearly twenty years of post-direct-democratic votes surveys (1981-1999) Kriesi (ibid.: 122) mentions several reasons for the increasing participation with age, among them the fact that "younger people concentrate their time and energy on their families and their professional careers". Moreover younger people were not "(...) socialized politically in a period when voting was still compulsory (...)." Kriesi also shows that this effect remains stable when controlling for political interest and awareness. He suspects that this is due to a "sense of obligation" felt by the older cohorts (ibid.: 124). Furthermore, age seems to be the only social and demographic characteristic with a strong impact on individual participation (ibid.: 126).

*Incompetent citizens*

Bühlmann et al. (2003) conducted a comprehensive analysis of non-voters in Switzerland. Although the authors focussed on national elections we will apply their typology of non-voters and the reasons they identified for the non-voters' lack of participation to direct-democratic votes. The six categories they identify are the following: (1) politically uninterested citizens (33%), (2) alternatively participating citizens (19%), (3) protesting citizens (17%), (4) incompetent citizens (14%), (5) socially isolated citizens (10%) and (6) alienated citizens (7%). The category of the incompetent citizens is particularly interesting for our analysis. It is interesting to note that according to the analysis these citizens have a very low level of competence in political matters but are nevertheless rather interested in politics and election campaigns and are of the opinion that elections are important. It is this group that probably has the largest – and possibly most desirable – potential for increasing voter turnout.
Kriesi (2005: 133) uses his findings that the least competent citizens typically also participate least in direct-democratic decisions to disprove sceptics of direct democracy who fear that many voters are not competent enough to make reasonable decisions. In line with the participatory theory of democracy it is questionable however whether these incompetent non-voters should merely be ignored. This leads us to our next section where will have a closer look at the often-feared incompetence of citizens.

### 4.1.2. Incompetence of voters

As noted above, in a "mechanism of self-selection" most incompetent citizens do not participate in direct-democratic votes. However, there is a not to be underestimated part of the electorate actually taking part in direct-democratic votes with an insufficient level of

knowledge concerning the subject of the vote. Our own analysis of the post-vote VOX-surveys between 1981 and 2006 reveals that on average around 13 per cent of all respondents taking part in the popular vote did not have any knowledge of the subject voted upon (compared to 23 per cent of all respondents, including those that did not participate). While this percentage might seem small it should be kept in mind that the participation of voters in the analysed survey is selective – as could already be noted in what concerns the overall participation rate. It is very likely that voters with little or no knowledge on the subject of the vote refused to take part in the survey. We therefore expect the actual rate of incompetent voters to be higher. Apart from this it is also clear that even 13 per cent of voters can in many cases be decisive for the outcome of a popular vote, i.e. whenever the difference between yes- and no-votes amounts to less then 13 per cent. As Lutz (2007: 626f.) shows in his analysis of 144 post-vote surveys in 41 per cent of the examined votes there is a significant information effect, i.e. policy preference differences exist between well- and poorly informed citizens. He also shows that in 69 per cent of the cases the same turnout but full information of the voters would have led to a result that differed at least 5 per cent from the actual outcome. Therefore the incompetence of a – although not enormously large – part of the electorate should, in our opinion, no be underestimated. It should also be noted that political incompetence is quite high among younger people. An IEA (International Association for the Evaluation of Educational Achievement) study on knowledge about democracy and politics ranked Swiss teenage pupils near the end of the 27 countries included in the study[15] (Oser/Biedermann 2003).

#### 4.1.3. Biased official information campaigns

Another aspect associated with direct democracy in Switzerland that is considered problematic by different actors is the information policy of the Federal Council (Swiss government). As described above, the government and the parliament give a voting recommendation to the citizens prior to the vote and publish a voter information guide which is sent to all eligible voters enclosed with their ballot papers. This practice has caused criticism on different occasions from political actors who have complained about biased or tendentious information.

[15] Only pupils in the following countries performed worse: Portugal, Belgium (Wallonia), Estonia, Lithuania, Romania, Latvia, Chile, Columbia.

## 4.2 In the decision-making process: *smartvote* for direct-democratic votes

As already mentioned above there is a new e-tool in the stage of development which aims at providing comprehensive information about Swiss popular votes to citizens. In a first step the intended features of '*smartvote* for direct-democratic votes' (hereafter called *smartvote-dd*) will be described whereas in the second part, we will argue that the new tool has the potential of reducing some of the shortcomings associated with direct democracy described in the previous chapter.

### 4.2.1 Features of *smartvote* for direct-democratic votes

*smartvote-dd* is conceptualized as an extension to *smartvote* for elections (see chapter 3.1.). Some of the basic features it will include, are an easily comprehensible summary of the official proposal with helpful graphics, a comprehensive overview of the slogans of political actors (e.g. political parties and associations) and a balanced presentation of the most important arguments on both sides. There will also be available very detailed information on the voting behaviour of members of parliament when the subject submitted to a popular vote was voted upon in parliament[16]. In addition to this basic information *smartvote-dd* will also include a voting recommendation. Voters will have the possibility to choose a certain number of parliamentarians and will then get a recommendation based on the voting behaviour of these selected parliamentarians. This voting recommendation module can take different forms. One possibility is to combine *smartvote-elections* and *smartvote-dd* by calculating a voting recommendation for direct-democratic votes based on the matching result of parliamentarians in *smartvote-elections*. In that case voters would use those parliamentarians that were considered to best match their preferences for a voting recommendation. Yet another – much more sophisticated – possibility of a matching module would be to have voters respond to a questionnaire in which they are asked to give their opinion on different aspects of the subject of that particular vote. The voting recommendation is then calculated on the basis of these answers. Finally, *smartvote-dd* will offer an additional interactive 'campaigning' module in which voters can interact with each other as well as with political actors. This module could for instance be used in the process of signature collection (or even before) in order to find fellow campaigners.

[16] Before a popular initiative (or a referendum) is submitted to the citizens in a federal vote the Swiss parliament holds a debate on the subject. At the end of the debate – in the final vote (*Schlussabstimmung*) – parliamentarians of both chambers are asked to vote on the initiative. In the official information on the federal popular vote that each citizen receives it is only indicated how many of the parliamentarians were in favour of the proposal. It is not specified, however, how each parliamentarian voted.

4.2.2 *smartvote* for direct-democratic votes and shortcomings associated with direct democracy

As outlined in chapter 4.1 there are primarily three shortcomings associated with direct democracy that are of interest to us concerning the advantage of the projected VAA for direct-democratic votes. In this section we will briefly show how *smartvote-dd* is expected to reduce the three above mentioned shortcomings.

*1) Low voter turnout*

*a) Young citizens*

As the above-mentioned *smartvote* user survey for the National Elections 2007 and other *smartvote* surveys have shown, young people seem to be over-proportionally attracted to such new electronic forms of information gathering in politics. People under the age of 30 constituted almost 40 per cent of all *smartvote* users in the 2007 elections (see table 5 appendix). In our opinion, this shows an enormous potential lying in qualitatively well-designed VAAs for increasing the participation rate of this age group which is also known for their low political competence. The case of direct-democratic votes poses no exception to this and a tool like *smartvote-dd* – or other applications dedicated to the same ends –certainly has the potential of increasing turnout among young voters.

*b) Incompetent citizens*

The primary aim of any serious VAA – be it for elections of direct-democratic votes – is to provide information to the voter. Issues voted upon in popular votes are often very complex and require a lot of effort and time from citizens who want to be sufficiently informed. By providing a platform with all necessary and neutral information on an issue, presented in an appealing manner, an increase in participation of citizens who consider themselves incompetent but would all the same like to take part in a popular vote, is hoped for. It is clear that there is already a large amount of information provided to the potential voter by various actors, e.g. the government and the media. This information, however, is by many citizens considered as too complicated or not easily accessible. A VAA like *smartvote-dd* offers the users all necessary information in one place without having to waste time by searching for information in different places. Another precious advantage of *smartvote-dd* is the presentation of the slogans of all important political actors as well as the voting behaviour of

parliamentarians on the respective vote on the issue in parliament. This provides voters with the well-known 'information shortcuts' which are widely recognized for being important in the decision making process.

*2) Incompetence of voters*

The same arguments listed for the case of incompetent non-voters wishing to participate, can be applied to the problem of incompetent voters in general. It is hoped that by providing easily accessible and easily comprehensible information on voting issues, the overall competence of voters will be increased, thereby making possible a better informed choice of each voter.

*3) Biased official information campaigns*

A VAA like *smartvote* (operated by an association without party affiliation) enjoys a high degree of acceptance among voters (see chapter 3.1) with different political backgrounds. Official information on popular votes – just like media information – is in contrast often perceived as biased and therefore not trustworthy. Presenting well-balanced and neutral information on direct-democratic votes on an electronic platform therefore seems to meet a high demand.

## 5. Outlook

Once we vote electronically in Switzerland – so we argue in this paper – e-tools helping voters to come to a decision will become indispensable for elections as well as for direct-democratic votes. They will therefore have a considerable influence on politics. This, of course, leads to new problems and challenges. We do not believe that it will be possible to agree on 'politically correct' website accepted by all parties, or that a governmental office should be responsible for the information and the wording of the content offered in a VAA. We rather think that voters should have a choice between different tools. It will then be up to the voters to decide which tool is trustworthy and which voting advice they want to follow. We do believe, however, that transparency and equal access of candidates/parties and voters to such tools are required. Only those tools meeting such minimal standards should be directly linked to the electronic ballot station. As a consequence, political scientists are badly needed to research and investigate the functioning of such tools. Their findings will help to improve

the quality of the tools and to shed light on the possibilities of manipulating with such tools. Scientists, however, cannot take responsibility for the results of elections and direct-democratic decisions. Who knows for sure what is best for society in the long run?

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# 7. Appendix

**Table 4: Ascribed importance of *smartvote* by parties (aggregated candidate answers)**

| | | Estimation of importance of *smartvote* for: | | | |
|---|---|---|---|---|---|
| | | **You personally?** | **Your party?** | **Media?** | **The voter?** |
| Christian Democrats | Mean | 5.68 | 5.55 | 6.59 | 5.83 |
| | *N* | *181* | *179* | *180* | *181* |
| Radicals | Mean | 5.76 | 5.49 | 6.26 | 5.77 |
| | *N* | *197* | *189* | *192* | *193* |
| Swiss People's Party | Mean | 5.79 | 5.55 | 6.53 | 6.37 |
| | *N* | *178* | *177* | *179* | *176* |
| Social Democrats | Mean | 6.08 | 6.02 | 6.02 | 6.17 |
| | *N* | *226* | *221* | *224* | *223* |
| Green Party | Mean | 5.71 | 5.99 | 6.30 | 6.22 |
| | *N* | *234* | *220* | *225* | *229* |
| **Total** | **Mean** | **5.77** | **5.77** | **6.25** | **6.02** |
| | *N* | *1453* | *1412* | *1416* | *1423* |

Source: NCCR Democracy, post electoral survey of candidates 2007.

**Table 5: Sociodemographic data of smartvote users**

| **Age groups** | **N** |
|---|---|
| -17 | 2.5% |
| 18-29 | 37.3% |
| 30-39 | 24.4% |
| 40-49 | 16.6% |
| 50-59 | 10.9% |
| 60-69 | 6.6% |
| 70- | 1.5% |
| Missing | 0.2% |
| Total | 100.0%<br>13900 |
| **Sex** | **N** |
| Male | 68.60% |
| Female | 31.10% |
| No answer | 0.30% |
| Total | 100.00%<br>13377 |

| Educational level | N |
|---|---|
| No education | 0.0% |
| Elementary school | 3.1% |
| Vocational/general education | 15.7% |
| Higher vocational/general education | 33.4% |
| Tertiary education | 45.8% |
| Others | 1.2% |
| No answer | 0.8% |
| Total | 100.0%<br>13377 |

Source: NCCR Democracy, post-electoral survey of *smartvote* users 2007.

**Table 6: *smartvote* influence according to political orientation and elected candidates/party**

| | Influence by *smartvote* voting recommendation on your choice to select candidates / parties | | | |
|---|---|---|---|---|
| **Left-right self-positioning** | **Yes** | **No** | **No Answer** | **Total** |
| Left = 0 | 3.7% | 6.4% | 4.4% | 4.6% |
| 1 | 9.2% | 8.6% | 6.7% | 8.9% |
| 2 | 18.8% | 15.9% | 16.7% | 17.8% |
| 3 | 17.0% | 13.8% | 13.1% | 15.9% |
| 4 | 11.8% | 8.5% | 10.3% | 10.7% |
| 5 | 10.2% | 9.7% | 10.7% | 10.1% |
| 6 | 9.4% | 8.8% | 9.9% | 9.2% |
| 7 | 9.3% | 10.9% | 11.1% | 9.9% |
| 8 | 7.4% | 10.7% | 10.7% | 8.5% |
| 9 | 2.2% | 3.5% | 4.0% | 2.6% |
| Right | 0.9% | 3.1% | 2.4% | 1.7% |
| Total | 100%<br>10648 | 100%<br>5372 | 100%<br>252 | 100%<br>16272 |
| **Liberal-conservative positioning** | | | | |
| Liberal = 0 | 6.5% | 7.1% | 6.3% | 6.7% |
| 1 | 13.1% | 10.6% | 6.7% | 12.2% |
| 2 | 24.6% | 20.3% | 21.2% | 23.1% |
| 3 | 19.4% | 18.0% | 16.9% | 18.9% |
| 4 | 10.0% | 8.9% | 11.0% | 9.7% |
| 5 | 10.4% | 12.9% | 18.0% | 11.3% |
| 6 | 5.8% | 6.6% | 7.5% | 6.1% |
| 7 | 5.1% | 6.4% | 4.3% | 5.5% |
| 8 | 3.4% | 5.8% | 4.7% | 4.2% |
| 9 | 1.2% | 2.0% | 1.2% | 1.5% |
| Conservative | 0.6% | 1.4% | 2.4% | 0.8% |
| Total | 100%<br>10626 | 100%<br>5327 | 100%<br>255 | 100%<br>16208 |

| **Elected party (most candidates on the ballot)** | | | | |
|---|---|---|---|---|
| CVP | 9.7% | 10.9% | 8.2% | 10.1% |
| FDP | 13.9% | 15.3% | 14.9% | 14.4% |
| SVP | 6.9% | 14.1% | 12.3% | 9.4% |
| SP | 28.3% | 29.5% | 23.8% | 28.7% |
| Green | 19.1% | 15.4% | 14.5% | 17.8% |
| Greenliberal | 8.7% | 4.4% | 5.6% | 7.2% |
| Liberale | 1.2% | 1.5% | 3.7% | 1.3% |
| EVP | 4.0% | 2.3% | 5.6% | 3.5% |
| EDU | 1.1% | 1.0% | 0.7% | 1.0% |
| SD | 0.6% | 0.3% | 0.4% | 0.5% |
| Lega | 0.1% | 0.1% | 0.4% | 0.1% |
| PdA | 0.2% | 0.4% | 0.0% | 0.2% |
| Alternative | 1.6% | 1.5% | 2.2% | 1.6% |
| Other Party | 2.5% | 1.7% | 3.3% | 2.3% |
| No Answer | 2.2% | 1.5% | 4.5% | 2.0% |
| | 100% | 100% | 100% | 100% |
| Total | 10861 | 5481 | 269 | 16611 |

Source: NCCR Democracy, post electoral survey of *smartvote* users 2007.

**Table 7: *smartvote* influence according to socio-demographical indicators**

| | **Influence by *smartvote* on choice to select candidates / parties** | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Age groups** | Yes | | No | | No Answer | | Total | |
| 18-29 | 39.4% | *71.2%* | 29.9% | *27.3%* | 35.2% | *1.5%* | 36.2% | *100.0%* |
| 30-39 | 26.5% | *70.1%* | 21.5% | *28.7%* | 18.8% | *1.2%* | 24.7% | *100.0%* |
| 40-49 | 17.0% | *62.9%* | 18.9% | *35.4%* | 19.2% | *1.7%* | 17.6% | *100.0%* |
| 50-59 | 10.3% | *55.4%* | 15.9% | *43.2%* | 11.1% | *1.4%* | 12.1% | *100.0%* |
| 60-69 | 5.6% | *49.0%* | 11.0% | *48.7%* | 10.7% | *2.3%* | 7.4% | *100.0%* |
| 70- | 1.1% | *42.1%* | 2.7% | *53.2%* | 5.0% | *4.7%* | 1.7% | *100.0%* |
| No answer | 0.1% | *61.5%* | 0.2% | *38.5%* | 0.0% | *0.0%* | 0.2% | *100.0%* |
| Total | 100% 10858 | *65.4%* | 100% 5483 | *33.0%* | 100% 261 | *1.6%* | 100% 16602 | *100.0%* |
| **Sex** | | | | | | | | |
| Male | 67.9% | *64.1%* | 72.5% | *34.5%* | 62.5% | *1.5%* | 69.4% | *100.0%* |
| Female | 31.9% | *68.5%* | 27.3% | *29.6%* | 35.3% | *1.9%* | 30.4% | *100.0%* |
| No answer | 0.2% | *51.2%* | 0.3% | *34.1%* | 2.2% | *14.6%* | 0.2% | *100.0%* |
| Total | 100% 10889 | *65.4%* | 100% 5496 | *33.0%* | 100% 269 | *1.6%* | 100% 16654 | *100.0%* |
| **Education categories** | | | | | | | | |
| No education | 0.0% | *0.0%* | 0.0% | *100.0%* | 0.0% | *0.0%* | 0.0% | *100.0%* |
| Elementary school | 3.0% | *68.6%* | 2.5% | *29.1%* | 4.1% | *2.3%* | 2.9% | *100.0%* |
| Vocational/general education | 14.6% | *59.1%* | 19.3% | *39.4%* | 14.9% | *1.5%* | 16.1% | *100.0%* |
| Higher vocational/general education | 34.2% | *67.2%* | 31.4% | *31.1%* | 33.8% | *1.6%* | 33.3% | *100.0%* |
| Tertiary education | 46.7% | *66.5%* | 44.6% | *32.0%* | 42.4% | *1.5%* | 46.0% | *100.0%* |
| Others | 0.7% | *52.0%* | 1.2% | *44.7%* | 1.9% | *3.3%* | 0.9% | *100.0%* |
| No answer | 0.7% | *58.3%* | 0.9% | *35.6%* | 3.0% | *6.1%* | 0.8% | *100.0%* |
| Total | 100% 10889 | *65.4%* | 100% 5496 | *33.0%* | 100% 269 | *1.6%* | 100% 16654 | *100.0%* |

Source: NCCR Democracy, post-electoral survey of *smartvote* users 2007.