

Internet Voting for the Swiss Abroad of Geneva: First Online Survey Results

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Abstract. Right after the national referendum votes of 27th September and 26th November 2009 by Geneva registered Swiss Abroad using the internet as their voting channel, our center conducted an online survey asking questions about usability and voting behavior. The surveys generated representative samples regarding gender, age and country of residence. The response rates were 55.4% for the first, and 47.9% for the second survey. More than 70% of the respondents reported the Geneva e-voting procedures to be very user friendly. The gender gap among e-voters was smaller than we expected. The age group with a clear preference for the electronic channel were the 30-39 year olds. On a left-right scale the political orientation of e-voters took the form of a normal distribution. Further online surveys with e-voters from other Swiss cantons should allow to corroborate or revise these first results.

Keywords: e-voting, internet voting, remote voting, e-democracy, e-participation, online survey, direct democracy, referendum.

1 Introduction

Swiss citizens living abroad and registered as voters in the Canton of Geneva for the first time had the option to vote via the internet for the referendum votes of the 27th September 2009, and then again on the 26th November 2009. 32.8% of them opted for the electronic voting channel in September, and 34.8% in November 2009. During the whole voting period² we collected information from e-voters with the help of online opinion surveys. Geneva based citizens in selected communes³ also had the opportunity to use the internet as a voting channel, they can do so since 2003.

Directly after the voting process all e-voters from abroad were automatically forwarded to a separate website where the survey data was collected and stored completely independently from Geneva authorities respecting strict anonymity rules.

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² Electronic voting ends Saturday at noon whereas polling stations close on Sunday at noon. This set up was chosen in order to give citizens the chance to get to the polling booths in time, in case they had difficulties to cast their vote via the internet.

³ The average e-voting turnout for the 27 September 2009 votes in Geneva was 15.6%, for the 26 November 2009 votes it was 12.8%.

Data collection took place for the purpose of statistical analysis only. The response rates of 55.4% in the case of the September vote and 47.9% for November (see Table 1) demonstrate the interest this new voting channel has generated among the Swiss abroad.

Table 1: Online survey sample size and response rates

	Sept 2009	Nov 2009
Swiss Abroad Using e-Voting Channel	2121	2698
Number of fully completed interviews	1175	1292
Response rate	55.4%	47.9%

One of the advantages of online data collection directly after the vote is the rapid availability of a dataset. Also, we can avoid the time lag (of up to a month) between the vote and a telephone interview conducted for up to two weeks after the vote.

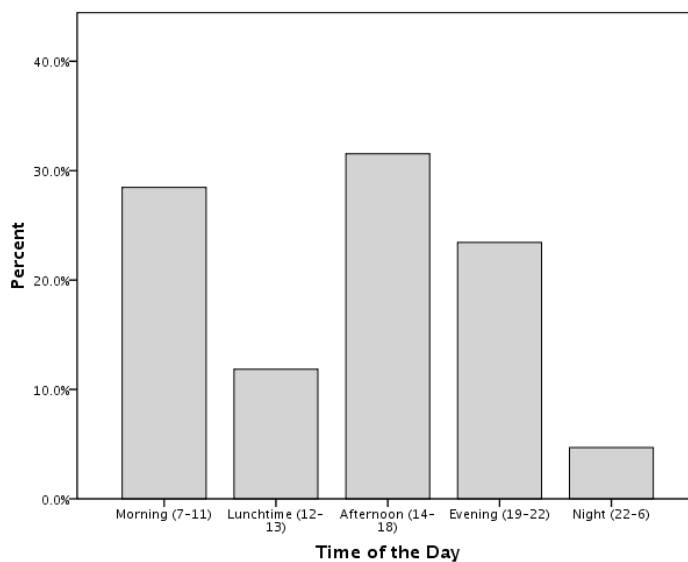


Fig. 1. Time zone corrected survey response times during the day as a proxy for e-voting time.

If we accept the time when respondents participated in the online survey directly after the vote as a good proxy for the time when e-voters casted their vote we can deduct that e-voting happens mainly during office hours and in the evening but less frequently over lunch and at night (see Fig. 1). On average respondents took seven minutes to complete the survey.

2 Socio-demographic profile

To establish a first sketch of a socio-demographic profile we can use the anonymous official voting records provided by the State Chancellery of Geneva (the so called rôle).⁴ Regarding the socio-demographic profile of Swiss e-voters from abroad we can observe (see Table 2) that for men the electronic channel seems to be more attractive than for women on both occasions. However, with roughly six percent the gap between men and women is less dramatic than we might have expected. On the other hand the gap seems to (at least for the time being) persist over time. In general, for both sexes, the popularity of the electronic channel has slightly increased between the September and November 2009 vote.

Table 2: Profile of e-voters from abroad compared to postal voters from abroad

		Sept 2009 (N=2121)	November 2009 (N=2698)
Gender	female	30.2 %	31.9 %
	male	36.7 %	38.2 %
Age	18-29 years	40.7 %	38.3 %
	30-39 years	50.9 %	50.8 %
	40-49 years	43.2 %	42.1 %
	50-59 years	33.5 %	35.9 %
	60-69 years	23.1 %	26.1 %
	70-79 years	13.7 %	15.7 %
	80 + years	7.20%	10.1 %
Country (Top 3)	USA	63.0 %	57.0 %
	Spain	46.0 %	50.0 %
	France	32.0 %	33.0 %

Source: official data (rôle) provided by the State Chancellery of Geneva

Only one age group clearly favored the internet as the preferred voting channel: the 30-39 years olds with a use of just over 50 percent. It is clearly too early to identify a temporal trend. However, it seems to be evident that e-voting is not necessarily the most popular among the youngest age group as one might have suspected. To the contrary, the overall popularity increase of the electronic voting channel among the Geneva registered Swiss abroad seems to consistently stem from the older than 50 years age groups.

⁴ For Gender, Age and Country of residence we thus have complete census data and do not necessarily depend on the online survey.

Furthermore we would like to illustrate just by presenting the three countries with the most Geneva registered Swiss abroad, namely France, the United States, and Spain (in this order with 76%, 4.8%, and 3.8% of all electronic votes in September 2009) that the farther away from Switzerland the Swiss abroad reside the higher the percentage of e-voters. Whereas from France, with many daily commuters ('frontaliers'), the postal vote still seems to be the preferred channel the electronic one dominated for the Swiss voters living in the United States, and Spain taking an intermediary position in this ranking.

Table 3: Educational background of Swiss e-voters from abroad

		Sept 2009 (n=1175)	November 2009 (n=1292)
Education	Secondary Degree	51.6%	54.0%
	University Degree	46.3%	44.1%
	Mandatory Schooling	2.1%	1.9%

Sources: c2d online surveys.

Unfortunately, we don't have information on the educational background of the universe of Geneva registered Swiss living abroad. These statistics simply don't exist. In our online survey we thus asked the e-voters about the highest achieved degree of formal education, well knowing that by this rather crude approach we can only capture a limited aspect of the education of an individual. In order to facilitate the interpretation we grouped them into three main categories: mandatory schooling, some kind of a continued education thereafter⁵, and a university degree. Surprisingly, the electronic channel seems to be most popular with voters holding a secondary degree, followed by the ones with a university degree (see Tab. 3).

3 Usability of Geneva e-voting solution

In order to gather feedback for the Geneva public authorities about the usability of their e-voting application as such we asked the respondents of the survey to assess the user friendliness⁶ of the e-voting procedure (see Tab. 4).

Table 4: User friendliness of the Geneva e-voting application

		Sept 2009 (n=1175)	Nov 2009 (n=1292)
User friendliness	Yes, fully	72.2%	76.7%

⁵ Including the following categories: 'Apprentissage', 'Diplôme professionnel', 'École professionnelle', 'Maturité/Lycée'.

⁶ The French term for user friendliness 'convivialité' was not well known to the respondents.

Rather yes	24.3%	20.7%
Rather no	2.6%	2.4%
No, not at all	0.9%	0.2%

In addition, users of the application were also allowed to comment in a free text field, reporting on eventual difficulties they encountered during the voting procedure. As we can see in Table 4, to a large degree the users consider the procedures as fully user friendly (72.2% and 76.7%). Cumulatively, more than 90 percent of all e-voting application users (fully agree and rather agree combined) give a positive feedback on user friendliness. In the open question a couple (less than ten) of comments mentioned problems with their browsers, the java version in use, or the verification of the numerical security certificate.

4 Turnout Potential, the Vote, and Political Orientation

Internet voting should also help to initiate and encourage the Swiss abroad to exercise their political rights. Important matters in Swiss politics are decided by a binding referendum vote three to four times a year. Issues on European integration, foreign policy in general, and also on the retirement schemes with regulations about pension funds can have a more or less direct impact on the daily lives of Swiss citizens abroad.

Table 5: Intention to turn out depending on availability of e-voting channel

		Sept 2009 (n=1175)	Nov 2009 (n=1292)
Participation	Would have voted anyway	92.2 %	91.3 %
	No, would not have voted	07.8 %	8.7 %

Sources: c2d online surveys.

We have thus asked the e-voters about their intention to turn out, whether they would have voted anyway or not (see Table 5). Although we have no formal proof roughly 8 percent declared to having turned out because of the availability of the electronic voting channel. A percentage in this range seems to be a realistic approximation of the turnout potential of e-voting as an addition voting channel.

We also asked the participants of the survey about their voting behavior regarding the five issues that were at stake on the occasion of the September and November 2009 referendum votes (see Tab. 6). As we know from previous surveys in Geneva and also Zurich the reported vote decisions correlate highly with the official vote results of the respective canton. Even for the relatively close 'Munitions' initiative vote with its 48% yes votes (in Geneva, not Switzerland in general) the aggregate result of e-voters did not flip to the other side. So far we never observed the vote

result of e-voters heading towards the opposite direction, for example, voting yes for a citizen's initiative when the general result was a no. Roughly 10 percent preferred not to answer this question. However, these questions are standard for any post election or referendum telephone survey as well.

Table 6: Yes votes in percent for the September and November 2009 votes

September 2009 (n=1080)	Insurance ⁷	Initiative ⁸	
Swiss abroad e-Voters	75 %	80 %	
Geneva Citizens	66 %	75 %	

November 2009 (n=1210)	Air Traffic ⁹	Munitions ¹⁰	Minarets ¹¹
Swiss abroad e-Voters	73 %	48 %	31 %
Geneva Citizens	73 %	48 %	40 %

⁷ Federal decree on the temporary supplementary financing of disability insurance through an increase in the value-added tax rate, as amended by the Federal decree of 12 June 2009 on the amendment of this decree.

⁸ Federal government decision of 19.12.2008 on the abandonment of the introduction of a general citizen's initiative.

⁹ Federal government decision of 3.10.2008 for the creation of a specialist fund for duties on air traffic.

¹⁰ Citizen's initiative of 21.9.2007 "For the prohibition of the export of munitions".

¹¹ Citizen's initiative of 8.7.2008 "Against the construction of minarets".

Sources: c2d survey and Federal Chancellery website for Canton of Geneva overall results.

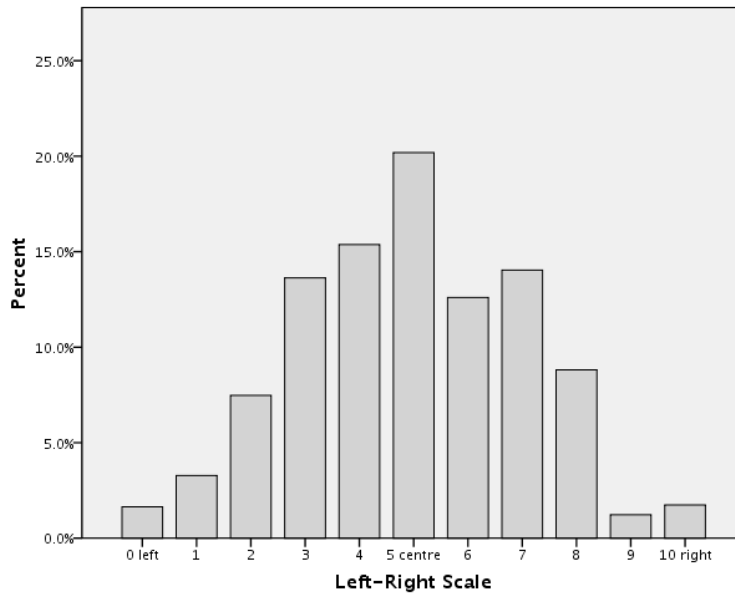


Fig. 2. Distribution on left-right scale for September 2009 survey (n=976).

During the implementation phase of the Swiss e-voting pilots the political actors, namely public administrations and governments, had to respond to critics as well. One point among several issues raised was the question of the political orientation of e-voters whether they are Swiss abroad or residents. A well established concept to measure at least one of the dimensions of a voter's political orientation is the well-known left-right scale ranging from 0 for far left to 10 for far right with 5 as the middle category. As we can see in Figure 2 for the September 2009 data the distribution is very close to a politically neutral normal curve. Political parties and the authorities the like therefore don't have to fear much from the e-voter – at least not from the Swiss abroad registered in the Canton of Geneva. The November 2009 data show an almost identical picture.

5 Outlook

As a part of the official e-Government strategy of the Swiss government e-voting for the Swiss living abroad should be available in all other Swiss cantons by the year 2015. The canton of Basel-City just started with the November 2009 vote (with a high e-voter turnout of 48%) and others will follow during 2010. We from our side hope to run some more online surveys in the future in order to challenge or further corroborate some of these first results presented here.

6 Annex: Representativeness of the Samples

In this section we would like to establish whether the samples of Swiss abroad covered in the online surveys provide us with a representative picture of the Geneva registered Swiss abroad using the internet as a voting channel. Representativity of a survey sample is a much desired feature because it would allow us to draw conclusions on the population of all Geneva based Swiss abroad using the electronic channel. Representativity can never be guaranteed fully, only regarding a selection of criteria. Commonly one tries to come up with representative sample surveys for gender, age, education and geographical spread.

For each sample size and percentage distribution in the respective category there is a statistical error term. This statistical error term provides a confidence interval based on the sample characteristics. For the current gender distribution in the September sample the error term is +/- 2.84 percent (for $\alpha = 0.05$). With a difference of 3.4 percent between actual and sample gender distribution we cross the boundary of having a sample that is within the acceptable boundaries for that particular group of e-voters. Women in the September sample are thus slightly underrepresented. None of the differences between both the September and the November sample and real world distributions of age groups among e-voters from abroad exceeds the critical limits.

In sum, Table 7 shows that the samples are quite well balanced regarding age groups, countries of residence (with the exception of France), but to a lesser degree regarding gender. However, we consider the differences not as dramatic enough to apply weighting procedures to the data sets. Ideally, we would also like to compare whether our samples correspond to the real world regarding education as an important variable in electoral studies. However, due to the lack of census data for the Swiss abroad we are not able check.

Table 7: Over or under representation (in percent) of the online survey compared to the real world regarding gender, age group and country of residence

	(N / n)	Sept 2009 (2121 / 1175)	Nov 2009 (2698 / 1292)
Gender	female	-3.4%	-3.0%
	male	+3.4%	+3.0%
Age	18-29 years	-1.6%	-0.9%
	30-39 years	+2.4%	+0.4%
	40-49 years	-2.6%	-0.6%
	50-59 years	+0.0%	-0.2%
	60-69 years	+2.1%	+1.1%
	70-79 years	+0.2%	+0.2%
	80 + years	+0.1%	-0.1%
Country (Top 3)	France	-4.1%	-4.7%

USA	+1.2%	+0.1%
Spain	+1.0%	+0.1%

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