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Political interest in Swiss probability-based political and social surveys

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SUMMARY

Political scientists often draw conclusions about political behaviour based on a single survey, usually a postelection survey. Besides political surveys, social surveys that include measures of political behaviour are also considered rich sources and are used by many political scientists. Probability-based surveys face the problem of unit nonresponse: they disproportionately sample individuals who are more politically engaged. This is known to be a problem not only in political surveys but also in social surveys. What we do not yet know is whether there is a difference between political and social surveys in terms of the share of politically interested respondents. The present study offers an examination of political interest in Swiss probability-based cross-sectional political and social surveys, drawing upon a rich data set combining the Swiss Election Study (Selects), the European Social Survey (ESS), and the Measurement and Observation of Social Attitudes in Switzerland (MOSAiCH). Our findings suggest that Selects is more likely to comprise citizens with higher levels of political interest than ESS and MOSAiCH, though the effect is only significant compared to the latter. We discuss the implications of these results for the accuracy of political behaviour estimates of these surveys.

Keywords: postelection surveys, social surveys, political interest, unit nonresponse

1. INTRODUCTION

Surveys are a crucial tool for understanding political behaviour, but they are subject to different errors and biases that can make their estimates inaccurate. Unit nonresponse – the failure of sampled units to respond to the survey as a whole (Brick, 2013; Groves, 1989) – is one the most problematic issues in survey research. The problem has been exacerbated by the upward trend in nonresponse rates in Western Europe and the United States since the late 1960s, even in reputable surveys. While low response rates do not necessarily lead to nonresponse bias – a bias arising from systematic differences between respondents and non-respondents (Groves et al., 2009) –, declining response rates have raised concerns among political scientists working with survey data (Brehm, 1993; Goyder, 1987; Groves and Couper, 1998; Groves and Peytcheva, 2008; Hox and de Leeuw, 1994). Political scientists often draw conclusions about political behaviour based on a single survey, which is usually a postelection survey. Previous research has shown that there may be a unit nonresponse bias in political surveys due to political interest, as politically engaged individuals are more likely to participate in a survey about politics (Bernstein, Chadha, and Montjoy, 2001; Brehm, 1993; Goldberg and Sciarini, 2022; Jackman, 1999; Sciarini and Goldberg, 2016, 2017; Selb and Munzert, 2013; Smeets, 1995; Traugott, 1987; Voogt and Saris, 2003; Voogt et al., 1998).

The consequences of unit nonresponse in postelection surveys due to political interest for political research are important for at least three reasons. First, surveys are indispensable in politics to gauge public opinion and help to build a political representation of the public through random samples and within measurable levels of sampling error (Brehm, 1993; Groves et al., 1992). The problem of nonresponse bias implies that surveys disproportionately sample more politically engaged individuals and are less representative of the public than they appear or are hoped to be. Second, nonresponse may jeopardise both the internal and external validity of a political study (Brehm, 1993). Internal validity refers to the extent to which the survey findings are valid for the sample at hand. If the variability of the sample at hand is reduced by interviewing solely the most interested individuals in the population, nonresponse reduces the apparent importance of interest in the sample. External validity, on the other hand, refers to the extent to which we can generalise our findings from the sample to the population. If nonresponse means that our sample is not a fair representation of the population, then our findings cannot be generalised to the population. Both internal and external validity are in jeopardy when surveys are mostly composed of politically interested individuals. Finally, political interest is one of the main determinants of electoral participation: the more interested a citizen is in politics, the more likely he or she is to participate in elections (Goldberg and Sciarini, 2022). Therefore, the fact that respondents are significantly more interested in politics than non-respondents may cause political surveys to inaccurately overestimate voting behaviour and cast doubt on the findings.

An alternative to political surveys is social surveys that include measures of political behaviour, and many political scientists use them in their research. Unit nonresponse is known to be a problem not only in political surveys but also in social surveys. What we do not yet know is whether there is a difference between political and social surveys in terms of the relative share of politically interested respondents. The present study offers a comparative examination of political interest in Swiss probability-based cross-sectional political and social surveys, drawing upon a rich data set combining the Swiss Election Study (Selects), the European Social Survey (ESS), and the Measurement and Observation of Social Attitudes in Switzerland (MOSAiCH). We carry out this study on Swiss probability-based political and social surveys for two major reasons. First, Switzerland is notorious for its low voter turnout rates in a comparative perspective. If political surveys are composed of more politically interested respondents than social surveys, this may lead to a greater turnout bias – an overestimation of voter turnout – in political surveys, given that political interest is an important determinant of political participation. The extent and scope of turnout bias can be more substantial in a low-turnout country like Switzerland and can undermine the findings of these surveys. Second, Switzerland

is a country that invests heavily in political and social scientific surveys at the national and international levels, but its national postelection survey has on average lower response rates than social surveys (see Table 1 in the data and methods section). The sample composition of Swiss probability-based political and social surveys in terms of political interest is therefore worth analysing in depth to better understand the data quality of these surveys.

The contribution of the present study is methodological. It is the first study to shed comparative light on political interest in Swiss probability-based political and social surveys. This paper is structured as follows. In the next section, we review the literature on political interest, survey participation, and unit nonresponse in probability-based surveys and set out our hypothesis. Section 3 is devoted to the data, measures, and methods we will use to test our hypothesis. We present the findings of our analyses in the fourth section. We finalise the paper with a discussion and conclusion.

2. BACKGROUND AND THEORETCIAL CONSIDERATIONS

Postelection surveys are an important tool that allow respondents to report their own political attitudes and behaviours, which in turn inform political scientists' understanding of issues such as voter turnout (Wolfinger & Rosenstone, 1980), partisanship (Campbell, Miller, & Converse, 1960) and political activism (Verba, Schlozman, & Brady, 1995). However, these surveys are not without flaws and their estimates are subject to different types of errors due to sampling, data collection and data processing. Different survey designs may lead to different estimates and, if errors are not adequately taken into account, different conclusions may ultimately be drawn (e.g., Heath et al., 2009). One of the most problematic errors in political surveys is unit nonresponse. The extent to which unit nonresponse constitutes a bias depends on whether there is a systematic difference between the characteristics of respondents and non-respondents.

The *leverage-saliency theory* (Groves and Peytcheva, 2008; Groves, Presser, and Dipko, 2004; Groves, Singer, and Corning, 2000) helps us identify the nexus between survey participation and nonresponse bias. It suggests that people differ in the importance they attach to different aspects of a survey request. For some, survey topic may be important. People who are more interested in the survey topic are more likely to respond positively to a survey request than those who are less interested (Dillman, 2002; Glaser, 2012; Goyder, 1987). For some, it may matter whether the survey was conducted by a reputable organisation. Some individuals respond more positively to a survey conducted by government agencies than universities (Goyder, 1987). For others, a chance of winning a monetary reward may be the most important factor in their decision to take part in a survey (Stähli and Joye, 2016). The impact of each component of the survey request depends on both the weight given by the sampled individual (leverage) and its importance in the request protocol (salience). When a survey attribute (e.g., survey topic) has a great leverage on the decision to participate in a survey is also an item of survey measurement, nonresponse bias is more likely to occur.

There is a large body of evidence that political surveys are not completely random, and their respondents are not fully representative of the public. Political surveys disproportionately sample individuals who are more politically interested, informed, and participatory in the society (Bernstein et al., 2001; Brehm, 1993; Groves, 2006; Groves and Peytcheva, 2008; Groves et al., 2000; Groves et al., 2004; Jackman, 1999; Sciarini and Goldberg, 2016, 2017; Voogt and Saris, 2003). Politically engaged citizens may view taking part in a survey about politics as a political act and respond positively to the survey. Politics as the topic of the survey creates therefore a greater leverage effect on politically involved citizens. The fact that politically interested citizens are more likely to respond positively to a survey about politics jeopardises survey analyses of political behaviour because political surveys, which are the main source of information about who do and do not participate in politics, are nothing more

than a simple replication of those who participated already (Brehm, 1993). Concern among political scientists about nonresponse bias in political surveys has been exacerbated by declining response rates over time (Brehm, 1993; Goyder, 1987; Groves and Couper, 1998; Groves and Peytcheva, 2008; Hox and de Leeuw, 1994). Efforts to increase response rates have therefore been longstanding. Some studies have found little evidence of a relationship between increasing nonresponse rates and increasing nonresponse error, suggesting that nonresponse may, but need not, lead to nonresponse bias in survey estimates (Curtin, Presser, and Singer, 2000; Groves, 2006; Groves and Peytcheva, 2008; Merkle and Edelman, 2002). Other studies suggest that the increase in response rates is mainly due to the success of interviewers in attracting more politically engaged citizens to the sample (Groves, 2006; Lin and Schaeffer, 1995), thereby leading to even more nonresponse bias.

Apart from political surveys, social surveys that include measures of political behaviour are used by many political scientists. Unit nonresponse is known to exist in social surveys as well. However, we do not know yet whether there is a systematic difference between political and social surveys in terms of the relative share of politically engaged respondents. Swiss probability-based political and social scientific surveys are conducted by the Swiss Centre of Expertise in Social Sciences (FORS) with the collaboration of the University of Lausanne (UNIL) and financed by the Swiss National Science Foundation (SNSF). These surveys are organised according to a rigorous methodology. Monetary incentives are used in many of these surveys to recruit respondents. Swiss political and social surveys therefore share similar characteristics in terms of the survey organisation, sponsor, and design.

Among the many characteristics of a survey request, we believe that the survey topic is particularly likely to distinguish Swiss probability-based political surveys from social surveys in terms of the share of politically interested respondents. The topic is made salient in the advance letters and flyers of political surveys and hence sample members clearly know that the survey will be all about elections and politics. Equally important are the differences in terms of their target population and mode of data collection. Swiss political surveys only cover citizens over the age of 18, while social surveys generally target permanent residents over the age of 15. Another key difference between them is the mode of data collection. Some Swiss social surveys (e.g., ESS) have consistently used computer-assisted personal interviews (i.e., CAPI) while others have used over time different modes of data collection including computer-assisted telephone interviews (i.e., CATI) and self-administered paper and/or online questionnaires.

The role of the mode of data collection in public opinion research is controversial. Face-to-face and telephone interviews have long been recognised as the best methods in quantitative research to produce higher response rates and high-quality data that provide information about the opinions, attitudes and behaviour of the population (Dillman, 1978), though some studies have shown that telephone interviews produce lower response rates and lower quality data than face-to-face interviews (e.g., Holbrook, Green, and Krosnick, 2003). Over the last few decades, self-administered online surveys have been increasingly used in public opinion research because they can be conducted at relatively low costs (Dillman, Smyth and Christian, 2014). Some studies have shown that online surveys introduce a bias as their respondents are often younger, better educated and more involved in politics (Faas and Schoen, 2006; Vehovar, Batagelj, Manfreda, and Zaletel, 2002). Other studies have shown that the data quality of online surveys is comparable to that of face-to-face surveys and therefore online surveys are useful in political research (Bytzek and Bieber, 2016).

As noted above, Swiss probability-based political and social surveys share both similar and different design characteristics. Drawing upon the leverage-saliency theory, we hypothesise that the relative share of political interest is larger in Swiss probability-based political surveys than in social surveys, when other design characteristics are similar, if not equal.

Besides political interest, there are other factors that can lead an individual, albeit not in a causal way, to participate in a survey (Groves et al., 1992). The most discussed factors in the survey literature are the sociodemographic characteristics of the respondent such as age (Brehm, 1993; Brown and Bishop 1982; Glaser, 2012; Herzog and Rodgers 1988; Johnson, 2008; Roose, Waege, and Agneessens, 2002), gender (Brehm, 1993; DeMaio 1980; Glaser, 2012; Johnson, 2008; Roose et al., 2002; Smith 1979), education (Brehm, 1993; Glaser, 2012; Johnson, 2008; Roose et al., 2002), income (Brehm, 1990; Goyder, 1987), environment (Brehm, 1993; Groves and Couper, 1998; Smith, 1983) and migration background (Vandecasteele and Debels, 2007). The findings of studies on age are nonlinear. Older individuals are easier to contact due to their reduced mobility, but they have higher nonresponse rates. Other studies have shown that young adults have a lower response rate compared to middle-aged and older adults (Hellevik, 2015). When it comes to gender, most studies have either found no effect or a small effect with women being slightly more likely to participate in surveys (Roose et al., 2002). Lower levels of education lead to higher levels of nonresponse. Some surveys overrepresent low-income groups while others underrepresent these groups (e.g., Brehm, 1993; Goyder, 1987). Large urban areas tend to generate more refusals in household surveys and households with more than one member generate fewer refusals than single person households (Groves and Couper, 1998). Finally, immigrants, especially those more exposed to exclusion, such as former Yugoslavs and Albanians, and those from non-neighbouring countries, are underrepresented compared to natives in both cross-sectional and longitudinal surveys in Switzerland (Lipps, Laganà, Pollien, and Gianettoni, 2013). It is therefore important to take into account the socio-demographic characteristics of respondents to Swiss probability-based political and social surveys.

3. DATA AND METHODS

3.1. DATA

To empirically test our hypothesis, we will be using Switzerland's national postelection study, the Swiss Election Study (Selects) as political surveys. As for social surveys, there is in fact a wide range of surveys conducted in Switzerland that can be classified as such. However, not all of these social studies systematically include the variables that I want to measure. We will be using the European Social Survey (ESS) and the Measurement and Observation of Social Attitudes in Switzerland (MOSAiCH) as social surveys as they include all the necessary variables.

3.1.1. SWISS ELECTION STUDY (SELECTS)

The Swiss Election Study (Selects) is a cross-sectional survey that aims to reveal information on the dynamics of the citizens' opinion formation and on the determinants of their political participation and voting choice for a specific candidate or party. To this end, the study consists of a postelection survey that has been investigating the electoral behaviour of Swiss citizens in national elections ever since 1995, a panel study collected in several waves during the election year ever since 2011, a candidate survey about their campaign activities, policy positions, and views on representation, and a media analysis of vast amounts of data on the election campaign in the mass media ever since 2007. In our analyses, we will only be using postelection surveys for comparability reasons. Since ESS and MOSAiCH have a repeated cross-sectional survey design, we prefer to use Selects' post-election survey, which is also a repeated cross-sectional survey. The postelection survey examines two basic questions: Who participates in the elections and why? Who votes for a certain party or candidate and why? It has been collected systematically since 1995. The sample is disproportionally stratified by canton. That is, sample members are not drawn across from the whole of Switzerland, but randomly drawn in each of the 26 cantons. An oversampling is carried out in small cantons and also in the cantons of Zurich, Geneva, and Ticino thanks to the financial support from

these cantons. A net sample size of this survey consists of about 5000 respondents. Selects has on average lower response rates than ESS and MOSAiCH.

3.1.2. EUROPEAN SOCIAL SURVEY (ESS)

The European Social Survey (ESS) is a cross-national cross-sectional survey that has been conducted in around thirty European countries every two years ever since 2002. Switzerland has taken part in all the rounds from the beginning. The survey measures values, attitudes, and behaviours of the populations of European countries. The questionnaire consists of two parts. The first part, the "core module", includes questions about media and trust; politics; subjective well-being, social exclusion, religion, and national identity; and socio-demographics. These questions remain the same in each round. The second part contains two or more periodically repeated "rotating modules" that focus on specific topics. Finally, an "additional module" is dedicated to the Schwartz human values scale and a selection of experimental tests. A minimum of 1500 respondents participates in approximately one-hour face-to-face interview (CAPI) in each country. To improve the quality of collected data, each interviewer conducts only a limited number of interviews. Sample members are drawn from a probabilistic sample that represents the countries' population aged 15 and over. Since 2010, a simple one-stage random sampling of individuals at the national level from the sampling register of the Federal Statistical Office (FSO), is carried out without any stratification. As of the third round, Switzerland has achieved a response rate of higher than 50 percent, which is an exceptionally high response rate for this type of survey in Switzerland. ESS has higher response rates than Selects and MOSAiCH.

3.1.3. MEASUREMENT AND OBSERVATION OF SOCIAL ATTITUDES IN SWITZERLAND (MOSAICH)

The Measurement and Observation of Social Attitudes in Switzerland (MOSAiCH) is a cross-sectional survey that investigates the Swiss population's values and attitudes towards a range of social issues ever since 2005, though selected parts of the survey had previously been administered in Switzerland under different surveys. The content of the survey is designed in a way to enable comparisons over time and across countries and the thematic focus is the current module of the International Social Survey Programme (ISSP). Ever since 2018, the MOSAiCH questionnaire is composed of two parts: a main survey with the current module of ISSP together with selected socio-demographic questions, and one or two follow-up surveys that include Switzerland-specific questions. The survey was conducted every two years as a CAPI until 2017. As of 2018, the mode of data collection has been changed to a self-administered survey (online/paper) and the survey has started to be administered annually. Sample members are drawn from a probabilistic sample that represent Switzerland's population aged 18 and over. A minimum net sample size of 1000 respondents is required. A random sampling in three stages was administered until 2009. A sample of postal codes that represent all the regions of Switzerland was drawn and afterwards a specified number of households was selected from each of the sampled postal codes. In the last stage, one person from each household was randomly drawn. Since 2010, a simple one-stage random sampling of individuals at the national level from the sampling register of FSO, is carried out without any stratification. On average, MOSAiCH has lower response rates than ESS and higher response rates than Selects.

3.2. SURVEY COMPARISON STRATEGY

The main objective of this research is to investigate political interest in Swiss probability-based political and social surveys. Since the three surveys that we use in our analyses differ from each other not only in terms of topic but also in terms of survey design characteristics, they should be made as comparable as possible. One way of achieving this comparison is to treat

Selects as a political survey and the other two surveys as social surveys. However, the two social surveys mentioned above are somewhat different from each other in terms of survey research design. Pooling these two surveys under the umbrella of "social surveys" may cause us to overlook these design differences and the potential measurement errors that come along. Therefore, in our analyses, we will be comparing Selects, the political survey, with each social survey separately rather than making a comparison of political vs. (pooled) social surveys.

Besides topic, one of the most important differences between these three surveys is their target populations. Selects only surveys citizens over the age of 18, while the target population of ESS and MOSAiCH consists of permanent residents aged 15 and over. We subset the ESS and MOSAiCH data based on the variables of age and citizenship so as to include only citizens aged 18 and over. Another major difference among the three surveys is their mode of data collection. Among these three surveys, ESS is the only one that has been systematically conducted as a CAPI. MOSAiCH was conducted as a CAPI until 2017, but as of 2018 it has been switched to a self-administered survey (online/paper). As for Selects, until 2015, computer-assisted telephone interviewing (CATI) was the main data collection method. Self-administered questionnaires (online/paper) have been used as a data collection method since then. A third major difference among the three surveys is the context in which they were conducted. Selects is only conducted in election years and immediately after the elections, whereas ESS and MOSAiCH are conducted independent of election years. In order to minimise the differences that may arise from the context and the mode of data collection, in our analyses we prefer using rounds of these three surveys where the fieldwork period and the mode of data collection are as similar as possible. As a result, we will conduct our survey comparison analyses using Selects 2015, ESS 2014 and MOSAiCH 2015 data. ESS 2014 and MOSAiCH 2015 were conducted as CAPIs. Selects 2015 postelection survey was designed as a mixed-mode survey, with both CATI and self-administered questionnaires randomly assigned. Telephone interviews account for 18% of the total interviews. As the literature on the effect of survey mode on sample composition is far from conclusive, we prefer to compare only the CATI data from Selects 2015 with the ESS and MOSAiCH, as this way they all consist of interviewer-administered surveys.[1] The survey design characteristics of Selects 2015, ESS 2014 and MOSAiCH 2015 are summarised in Table 1.

Table 1. Survey design characteristics of Selects, ESS, and MOSAiCH

	Selects 2015	**ESS 2014**	**MOSAiCH 2015**
Mode of data collection	CATI + Self-administered questionnaire (online)	CAPI	CAPI
Target population	Citizens aged 18 and over	Permanent residents aged 15 and over	Permanent residents aged 15 and over
Sampling design	Random sampling in two stages	Random sampling in one stage	Random sampling in one stage
Incentive	Unconditional postal voucher incentive of CHF 10	Unconditional cash incentive of 10 CHF	Unconditional cash incentive of 10 CHF
Rotating module topic	-	Health inequalities; attitudes toward immigration	Citizenship; work orientations

[1] A two-sample weighted t-test de Welch was conducted to assess whether the level of political interest differs by survey mode in Selects 2015 postelection survey. Respondents who participated through the self-administered online survey mode were more interested in politics (M = 2.88, SD = .77, N = 4386) than respondents who participated through telephone interviews (M = 2.86, SD = .81, N = 951), but the difference was not significant, $t(1350) = .47$, $p > .05$.

Fieldwork period	19.10.2015 – 29.11.2015	01.09.2014 – 16.02.2015	12.02.2015 – 10.07.2015
Response rate (%)	44	52.5	51.4
N	5337 (CATI – 951)	1532	1235

Note. “Selects 2015” refers to the postelection survey of Selects 2015.

3.3. OPERATIONALISATION OF THE VARIABLES

The dependent variable of this study is political interest. Table 2 shows the question wording and response categories of the variable of political interest in Selects, ESS, and MOSAiCH. Question wording and response categories are almost the same in all three surveys. For our analyses, we recoded the original indicator for political interest as from 1 "Not at all interested" to 4 "Very interested". The main independent variable is a nominal variable with three categories, “Selects”, “ESS” and “MOSAiCH”. In addition to these main variables, we included the indicators for age, gender, education, income, household size, migration background, and urbanity. We recoded the original continuous indicator for age as a categorical variable to represent younger adults (aged between 18 and 35), middle-aged adults (aged between 36 and 55) and older adults (aged over 55). We used gender as a dummy variable where 0 represents men and 1 represents women. To harmonise the response categories across the three surveys, we recoded the original indicator for highest education achieved into a categorical variable with the categories of compulsory, secondary and tertiary education. Since the original indicators for total monthly household income in Selects, ESS and MOSAiCH have quite different categories, we first recoded them by quartiles and then created a categorical variable that includes the categories low income, middle income, and high income, with low income corresponding to the first quartile, middle income to the second and third quartiles and

Table 2. Question wording and response categories of political interest in Selects, ESS, and MOSAiCH

	Selects	**ESS**	**MOSAiCH**
Question wording	In general, how interested are you in politics?	How interested are you in politics?	How interested would you say you personally are in politics?
Response categories	1 Very interested 2 Rather interested 3 Rather not interested 4 Not at all interested	1 Very interested 2 Quite interested 3 Hardly interested 4 Not at all interested	1 Very interested 2 Fairly interested 3 Not very interested 4 Not at all interested

high income to the fourth quartile. Household size is a continuous indicator for the number of persons in the respondent's household. In the Swiss context, we know that citizens with a migration background are not a homogeneous group and, as already mentioned, immigrants such as Yugoslavs, Albanians and those from non-neighbouring countries are subject to greater exclusion and are less likely to participate in surveys and in politics (Lipps et al., 2013; Ruedin, 2018; Strijbis, 2014). It would therefore have been very pertinent to include an indicator for the respondent’s country of origin to distinguish these different groups. Due to the low sample size, we recoded the migration background variable into three categories: natives, citizens with a migration background from neighbouring countries (i.e., Austria, France, Germany, and Italy), and citizens with a migration background from non-neighbouring countries. This variable is operationalised according to the place of birth of the respondent's parents. Respondents with both parents born in Switzerland are recoded as natives. We recoded those whose parents migrated from neighbouring countries as citizens with a

migration background from neighbouring countries and the rest as citizens with a migration background from non-neighbouring countries. Urbanity is measured by the indicator "degurba" in three surveys that include the categories of "thinly populated area", "intermediate density area" and "densely populated area". Finally, we included a nominal variable with three categories (i.e., German-speaking, French-speaking and Italian-speaking) to control for potential design differences in the regions of Switzerland where different languages are spoken.

3.3. ANALYTICAL APPROACH

The dependent variable of this study is political interest, an ordinal variable. Ordinal variables are common in survey data, but special problems arise when these indicators are used as dependent variables in regression analyses. Researchers would often estimate models with ordinal dependent variables using OLS regression. The unrealistic assumption of equal intervals between categories of ordinal variables and its potential for misleading results has led to the popularity and wider use of more specific methods designed for ordinal dependent variables, such as ordinal logistic regression (Long, 1997). One of the most well-known statistical methods for ordinal logistic regression is the proportional odds model (McCullagh, 1980; Simon 1974; Walker and Duncan 1967; Williams and Grizzle, 1972). The proportional odds model is an extension of binary logistic regression. It uses cumulative probabilities up to a threshold and thus binarizes the entire range of ordinal categories at that threshold. The model is easy to estimate and interpret. One caveat with this model is that the proportional odds assumption, or the parallel regression assumption – the odds of any independent variable is similar or *proportional* across all cutpoint values of the ordinal dependent variable – is often violated in practice. The proportional odds assumption should be tested in all analyses using the proportional odds model, but it is often ignored in most analyses in political science (Jones and Sobel, 2000). As our dependent variable is an ordinal variable, a proportional odds model would be a good fit to test our hypothesis. Using the “brant” command from the “brant” package in R software, we performed a Brant test (Brant, 1990) to test for a possible violation of the proportional odds assumption in our proportional odds model. The Brant test results showed that our overall model does not hold the proportional odds assumption ($p < .01$, see Table A1 in the Appendix) due to the variables of age, gender and income. The test for the assumption of proportional proportions is considered as anti-conservative and almost results in a violation of the proportional odds assumption, especially when the number of independent variables is large, the sample size is large or there are continuous independent variables in the model (Allison, 1999; Brant, 1990; O’Connell, 2006). In such cases, the partial proportional odds model is an alternative to the proportional odds model (Jones and Westerland, 2006; Peterson and Harrell, 1990; Williams, 2005, 2006). This model relaxes the proportional odds assumption by allowing independent variables that violate this assumption to vary at different levels of the dependent variable. Since our overall model violates the proportional odds assumption because of the variables of age, gender and income, we conducted a partial proportional odds model where we only allow these three variables to vary at different levels of political interest. We performed this model by using the “vglm” command from the “VGAM” package in R software (Yee, 2010). Since Selects carries out oversampling certain cantons, we conducted all our analyses using design weights.

4. RESULTS

Table 3 presents the relative share of political interest in Selects, ESS and MOSAiCH. In all three surveys, the relative share of respondents who are “rather interested” in politics is the largest, constituting almost half of the sample. The next largest relative shares belong to respondents who are “rather not interested” and “very interested” in politics, respectively. The

share of respondents who are “not at all interested” in politics is the smallest in all three surveys. Overall, all three surveys are mostly composed of politically interested citizens. A survey-based comparison shows that the share of citizens in higher categories of political interest is greater in Selects than in ESS and MOSAiCH. Although the overall percentage of citizens interested in politics is almost the same in ESS and MOSAiCH (around 67%), the share of “very interested” individuals in ESS is larger than in MOSAiCH. A weighted chi-square test of independence was performed to examine whether the level of citizens’ political interest differ by the survey they participated in. The results show that the relation between political interest and survey type is significant, X^2 (6, N = 2961) = 23.02, p < .001. The level of political interest does indeed differ by survey. However, the strength of the association is quite small, *Cramer’s V* = .06.

Table 3. Relative share of political interest in Selects, ESS, and MOSAiCH (%)

	Selects	ESS	MOSAiCH
1 Not at all interested	6.6	7	5.7
2 Rather not interested	20.5	26.1	27.5
3 Rather interested	52.8	47.7	52
4 Very interested	20.1	19.2	14.8
N	966	1118	877

Sources: Selects PES 2015 (CATI only); ESS 2014; MOSAiCH 2015; *design-weighted results*.

Table 4 presents the results of our partial proportional odds model for political interest in ESS and MOSAiCH compared to Selects at the levels of “Rather not interested”, “Rather interested” and “Very interested”, while controlling for age, gender, education, income, household size, migration background, urbanity, and linguistic region. In interpreting the results of each level of political interest, categories lower than the current category are taken as reference categories. In other words, the results at the current level are equivalent to a binary logit model where categories from one to the current category are recoded as zero (as the reference category) and categories equal to and greater than the current category are recoded as one. Therefore, positive coefficients or odds ratios greater than one imply that higher values of an independent variable increase the probability that a respondent is in a higher category of Y than the current category. Negative coefficients or odds ratios smaller than one mean that higher values of an independent variable increase the probability of being in a lower category than the current category (Williams, 2006).

The odds ratio for ESS shows a 9% decrease in the odds that ESS' respondents are in or above the “Rather not interested” category of political interest compared to Selects' respondents, but the difference is not statistically significant (p > .05). In a similar vein, the odds ratio for MOSAiCH indicates a 21% decrease in the odds that its respondents are in or above the “Rather not interested” category of political interest compared to Selects' respondents and the difference is statistically significant (p < .05). Overall, it can be said that Selects increases the probability of being in higher categories of political interest compared to ESS and MOSAiCH, but this effect is only statistically significant compared to the latter. These results partially confirm our hypothesis, for we observe that the relative share of citizens in higher categories of political interest is likely to be larger in Selects than in both social surveys. However, we cannot fully confirm our hypothesis as this effect is significant only for one of these social surveys, MOSAiCH.

Table 4. Partial proportional odds model for political interest in Selects, ESS and MOSAiCH

	Y >= Rather not interested	Y >= Rather interested	Y >= Very interested
Survey			
Selects	-	-	-
ESS	.91 (.10)	.91 (.10)	.91 (.10)
MOSAiCH	.79 (.10)*	.79 (.10)*	.79 (.10)*
Age			
Middle-aged adults	-	-	-
Younger adults	.74 (.24)	.85 (.13)	.43 (.22)***
Older adults	1.83 (.22)**	2.47 (.12)***	1.77 (.13)***
Gender			
Male	-	-	-
Female	.75 (.18)	.59 (.10)***	.50 (.11)***
Education			
Primary	-	-	-
Secondary	1.71 (.13)***	1.71 (.13)***	1.71 (.13)***
Tertiary	3.83 (.15)***	3.83 (.15)***	3.83 (.15)***
Income			
Low	-	-	-
Middle	2.26 (.20)***	1.41 (.11)**	.92 (.14)
High	5.07 (.35)***	2.00 (.15)***	1.87 (.16)***
Household size	.92 (.04)*	.92 (.04)*	.92 (.04)*
Migration background			
Native	-	-	-
Neighbouring	.87 (.12)	.87 (.12)	.87 (.12)
Non-neighbouring	.76 (.15)	.76 (.15)	.76 (.15)
Urbanity			
Thinly populated	-	-	-
Intermediate	1.09 (.09)	1.09 (.09)	1.09 (.09)
Densely populated	1.62 (.12)***	1.62 (.12)***	1.62 (.12)***
Linguistic region			
German	-	-	-
French	.68 (.10)***	.68 (.10)***	.68 (.10)***
Italian	.58 (.20)**	.58 (.20)**	.58 (.20)**
Observations	2381		
Residual deviance	5154.686		
Log-likelihood	-2577.343		
R^2 (McFadden)	.255		

Notes. Shown are odds ratios, standard errors in parentheses. * p < .05, ** p < .01, *** p < .001. No Ha uck-Donner effect found in any of the estimates. *Sources*: Selects 2015 (PES, CATI only); ESS 2014; MOSAiCH 2015; *design-weighted results*.

As for the control variables, the odds ratios lower than one for younger adults at all the thresholds of political interest suggest that younger adults are less likely to be in higher

categories of political interest than middle-aged adults. However, this difference is only significant at the highest level of political interest, Y>=Very interested. Odds ratios greater than one and significant for older adults at each level of political interest indicate that older adults tend to be in higher categories of political interest than middle-aged adults, significantly. Odds ratios smaller than one for gender mean that women are less likely to be in higher categories of political interest, but this difference is significant at the thresholds of Y>=Rather interested and Y>=Very interested. Citizens with secondary or tertiary education are significantly more likely to be in higher categories of political interest compared to those with primary education. Odds ratios greater than one and significant for middle income at the thresholds of Y>=Rather not interested and Y>=Rather interested show that middle-income citizens are more likely to be in or above these categories of political interest compared to low-income citizens. On the other hand, the odds ratio less than one for middle income at Y>=Very interested implies that middle-income citizens are less likely to be in this category than low-income citizens. Yet, this effect is not significant. Odds ratios greater than one and significant for high income at each Y level mean that high-income citizens are more likely to be in higher categories of political interest than low-income citizens. Surprisingly, citizens with a larger household are significantly less likely to be in higher categories of political interest. Citizens with a migration background from neighbouring or non-neighbouring countries are less likely to be in higher categories of political interest compared to natives, though the difference is not significant. Citizens living in a medium-density region or a densely populated region are more likely to be in higher categories of political interest than those living in a thinly populated region, but only the difference between those living in a thinly populated region and those living in a densely populated region is statistically significant. Finally, citizens from French- and Italian-speaking regions are significantly less likely to be in higher categories of political interest compared to those from German-speaking regions. Looking at the model fit metrics, McFadden's R^2 indicates that the model explains 25.5% of the variation in political interest in ESS, Selects and MOSAiCH from the included independent variables, representing a very good fit (McFadden, 1977).

5. DISCUSSION AND CONCLUSION

The present study aimed to examine political interest and participation in Swiss probability-based political and social surveys, drawing upon a rich data set combining Selects, ESS, and MOSAiCH. This study is important as it is the first to compare probability-based political and social surveys in Switzerland and to reassure political scientists and survey methodologists whether there is a significant difference between them in terms of the relative share of politically interested respondents. According to our ordinal logistic regression analysis, Selects is more likely to comprise a higher relative share of citizens with higher levels of interest in politics than ESS and MOSAiCH, but only the difference between Selects and MOSAiCH is statistically significant. Thus, our findings provide only partial evidence for our hypothesis that the relative share of politically interested citizens will be larger in political surveys than social surveys. It is surprising that there is a significant effect for MOSAiCH but not for ESS, as these two surveys are quite similar in many respects and strive to have the same standards. The lack of a significant effect on the relative share of political interest in ESS may be due to the rotating module topics of ESS 2014. Health inequalities and immigration in particular may be more politically charged topics in the Swiss context, compared to citizenship and work orientations, which were the rotating topics of MOSAiCH 2015. This may have led ESS 2014 to attract respondents who are more interested in politics and hence may have reduced the gap between the relative share of political interest in Selects and ESS.

This study has many limitations as well as strengths. The biggest limitation is that we used data at disposal and therefore had no control over the design characteristics of the surveys we used. We compared these three surveys topic-wise as political and social surveys, but they

are quite different from each other not only in terms of topic but also in terms of design characteristics. As mentioned before, even ESS and MOSAiCH differ from each other on some issues such as module topic. To minimise these differences, we compared rounds with relatively "similar" fieldwork period and mode of data collection, and we subset the respondents of the three surveys to be only 18 aged over citizens. However, all these measures do not rule out the actual design differences between them. This makes it difficult to attribute the significant difference between Selects and MOSAiCH to the topic alone. As noted throughout this study, among the many characteristics of a survey request, topic is considered more likely to lead to unit nonresponse bias because individuals who are more interested in the topic tend to have different attributes on key survey variables than those who are less interested in the topic (Groves et al., 2004; Rubin, 1987). Experimental studies are needed to better understand how the topic alone can lead politically interested citizens to participate in political and social surveys.

Despite the limitations, our study still has several implications for future research in political science and survey methodology. Our results show that there is overall no significant difference between political and social surveys in terms of the relative share of political interest, which is reassuring for political scientists working with these data. However, it should still be noted that ESS and MOSAiCH systematically consist of a smaller share of politically interested citizens than Selects. Although the difference seems not very large, it is not known whether this would lead to a bias in the survey estimates of political behaviour. As mentioned before, political interest is one of the main predictors of political participation. The more citizens are interested in politics, the more likely they are to participate in elections. The more they are interested in politics, the more they also tend to participate in surveys (Bernstein et al., 2001; Brehm, 1993; Goldberg and Sciarini, 2022; Groves, 2006; Groves and Peytcheva, 2008; Groves et al., 2000; Groves et al., 2004; Jackman, 1999; Selb and Munzert, 2013; Sciarini and Goldberg, 2016, 2017; Voogt and Saris, 2003). The larger share of politically interested citizens in Selects may lead this survey to overestimate voter turnout than ESS and MOSAiCH. Future research should, as a next step, compare the accuracy of the estimates of voter turnout in these surveys.

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7. APPENDIX

Table A1. Brant test for the proportional odds assumption

	X^2	df	Probability
Omnibus	53.17	32	**.01**
Survey			
Selects	-	-	-
ESS	.59	2	.74
MOSAiCH	3.17	2	.2
Age			
Middle-aged adults	-	-	-
Younger adults	6.85	2	**.03**
Older adults	7.99	2	**.02**
Gender			
Male	-	-	-
Female	6.04	2	**.05**
Education			
Primary	-	-	-
Secondary	.14	2	.93
Tertiary	1.17	2	.56
Income			
Low	-	-	-
Middle	12.57	2	**.000**
High	5.07	2	.08
Household size	.89	2	.64
Migration background			
Native	-	-	-
Neighbouring	1.1	2	.58
Non-neighbouring	2.75	2	.25
Urbanity			
Thinly populated	-	-	-
Intermediate density	.22	2	.9
Densely populated	1.43	2	.49
Linguistic region			
German	-	-	-
French	.64	2	.73
Italian	1.32	2	.52

Notes. Results that are significant at $p < .05$ are shown bolded. "Omnibus" represents the Brant test for the overall model. H0 does not hold ($p < .001$). *Sources*: Selects PES 2015 (CATI only); ESS 2014; MOSAiCH 2015; *design-weighted results*.