

Political participation and procedural utility: An empirical study

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Abstract. Democracy can be characterized by policy outcomes as well as governmental processes. In this article, it is argued that people have preferences about both aspects and that they derive utility from the *processes* involved in decision making over and above the utility gained from outcomes. The authors study political participation possibilities as an important source of procedural utility. To distinguish between outcome and process utility, they take advantage of the fact that nationals can participate in political decision making, while foreigners are excluded and thus cannot enjoy the respective procedural utility. Utility is assumed to be measurable by individually reported subjective well-being. As an additional indicator for procedural utility, reported belief in political influence is analyzed.

Introduction

Participation in politics may contribute in two different ways to people's utility: through political outcomes that conform more closely to the preferences of the population, and through a political process that is valued in its own right. The utility produced by more favourable outcomes has been at the centre of attention in both political science and public choice analysis (see Dahl 1956; Downs 1957; Schumpeter 1950; Lijphart 1997; Mueller & Stratmann, 2003). The procedural utility derived from the political process as such has often been noted.¹ However, it has proved to be difficult to isolate and empirically measure the size of this source of utility.

This article seeks to discuss theoretically and identify empirically *procedural utility* from political participation possibilities over and above *outcome utility*. It studies the effects of direct democratic participation possibilities on reported satisfaction with life and the reported belief of political influence using cross-regional data for Switzerland. To identify procedural utility, we take people's nationality into consideration. As political participation in initiatives and referenda is restricted to Swiss nationals, only they can benefit the procedural utility to be derived from it. We find supporting evidence that citizens gain more life satisfaction from direct democracy than foreigners. Moreover, people believe they wield more political influence in jurisdictions

with more extended political participation possibilities. This rosy view is confronted with theoretical arguments concerning the discrimination of foreigners in democracy, and further alternative explanations. In an empirical sensitivity analysis, the robustness of the results is studied with respect to these arguments. While results for procedural utility as reflected in reported subjective well-being are robust, it is difficult to disentangle institutional and cultural reasons for the variation of the belief in political influence.

The empirical findings go beyond previous results on the effects of direct democratic decision making on political outcomes (e.g., Bowler & Donovan 1998; Butler & Ranney 1994; Cronin 1989; Hug 2004; Gerber 1999; Kirchgässner et al. 1999; Linder 1997). However, these findings are in line with previous research on procedural aspects of direct democracy. The discussion endogenously brought about by initiatives and referenda strengthens cooperation between 'winners' and 'losers' in a political decision because both feel that their preferences seriously have been taken into account in a fair political process (Frey 1994). This notion of procedural justice affects behaviour – for example, with regard to tax compliance (Pommerehne & Weck-Hannemann 1996; Frey 1997).

The article proceeds as follows. The next section categorizes the concept of procedural utility and discusses the relationship between procedural utility and political participation possibilities. In the third section on operationalization, measures of reported subjective well-being and the belief of political influence are put forward for empirical work. Further, it argues how process and outcome utility can be empirically distinguished, advances two testable hypotheses and discusses some alternative hypotheses. The empirical analysis is presented in the fourth section. First, an index of political participation possibilities and measures of life satisfaction and the belief in political influence are introduced, and a preliminary descriptive analysis is offered. Second, multiple regression analyses are conducted to control for correlated effects and the sensitivity of the results. The final section draws conclusions.

Procedural utility and political participation possibilities

Democratic institutions structure the *process* of political decision making that is judged by the people independently of the generated political outcome (see Hibbing & Theiss-Morse 2001). In this procedural view, people gain utility from the process itself. In the following sections, procedural utility is first discussed from a general perspective and then applied to the possibilities of political participation.

An extended view of the sources of utility: Procedural utility

Procedural utility constitutes a completely different approach to human well-being to the standard outcome-oriented approach predominant in social science research (for a survey, see Frey et al., 2004). Studies based on utility are greatly influenced by Bentham (1948 [1789]). This tradition focuses on individual pleasures and pains. In addition, choices between possible outcomes are used to infer the utility of the individuals deciding. Both approaches – Bentham's 'experienced utility' and 'decision utility' – are outcome oriented (see Kahneman et al. 1997, for these terms). Moreover, Harsanyi (1993) argues that procedural utility (e.g., in the case of gambling) is necessarily excluded from von Neumann-Morgenstern utilities.

Procedural utility refers to the non-instrumental pleasure and displeasure of a process as opposed to the consequences. This utility has rarely been included in rational choice theory and corresponding empirical research. In other approaches, concepts related to procedural utility have a long tradition and refer to the idea of Aristotelian eudaimonic well-being. In research carried out by social psychologists, for example, well-being consists of realization of human potential (Ryff & Singer 1998), self-determination (Ryan & Deci 2000) or personal control (Peterson 1999; Seligman 1992).

Procedural utility in the democratic process

Political philosophers have long argued that procedural utility is derived from the democratic process. Special emphasis is put on individuals' possibilities to participate in the political process (for references see Note 1). With regard to direct democracy, Cronin (1989: 11), for example, notes that 'giving the citizen more of a role in governmental processes might lessen alienation and apathy'. Moreover, the political discussion induced by initiatives and referenda generates a common understanding for different political opinions and positions. This strengthens the social contract based on consensus and motivates people to act beyond narrow self-interest (Bohnet & Frey 1994). Participation possibilities are thus considered to be an important source of perceived procedural fairness shaping individual behaviour. It has, for example, been shown that, with more extensive democratic participation rights, people have higher tax morale and evade taxes less (Frey 1997). Citizens' experience with direct democracy has further been found to form positive attitudes about their abilities to influence what government does (Bowler & Donovan 2002). Thus, direct democracy is strengthening citizens' feeling of political efficacy.

Related research on 'procedural fairness' by social psychologists (in particular, Lind & Tyler 1988; Tyler 1990; Tyler & Blader 2000) has been able to

show that people are at least as concerned with procedural justice as with the outcomes of these procedures. They evaluate procedures not only according to the results they yield, but according to the relational information that they convey, such as assessments of impartiality, trustworthiness of superiors and authorities, and the extent to which individuals perceive themselves to be treated with respect. Political participation possibilities contribute to what Lane (1988) calls 'procedural goods of democracy'. These contain, for instance, dignity goods such as self-respect, feeling of personal control or understanding and public resonance. Democracy can further provide utility if it offers relief from procedural pain (e.g., fear, embarrassment or humiliation) or if it directly generates intrinsic pleasure (e.g., by facing and meeting a challenge or by expressing oneself) (Lane 1988: 179–185; see also Lane 2000: Chapter 13).

According to the previous discussion, the following general hypothesis can be formulated: Citizens value the possibility of engaging themselves directly in politically relevant issues, irrespective of the outcome.

Operationalization

Measuring utility and belief in political influence

We propose two proxy measures to capture empirically procedural utility: reported subjective well-being and people's belief in political influence. Measures of reported satisfaction with life and happiness have for decades been extensively studied in psychology and contributed greatly to the understanding of individual well-being (see, e.g., Diener et al. 1999; Kahneman et al. 1999). In recent years, measures of subjective well-being have been successfully applied in political and economic research (e.g., Di Tella et al. 2001; Easterlin 1974; Frey & Stutzer 2000; Inglehart 1990; Oswald 1997; Radcliff 2001; for surveys, see Lane 2000; Frey & Stutzer 2002). With the help of a single question or several questions on global self-reports it is possible to get indications of individuals' evaluation of their life satisfaction or happiness. Behind the score indicated by a person lies a cognitive assessment as to what extent their overall quality of life is judged in a favourable way (Veenhoven 1993).

Subjective well-being is generally assessed in large-scale surveys. In a number of studies, the validity of these survey measures has been documented. It has, for example, been shown that different measures of happiness correlate well with one another (e.g., Fordyce 1988). Reliability studies have found that reported subjective well-being is moderately stable and sensitive to changing life circumstances (e.g., Ehrhardt et al. 2000; Headey & Wearing 1991). Consistency tests reveal that happy people are more often smiling during social

interactions (Fernández-Dols & Ruiz-Belda 1995), are rated as happy by friends and family members (Sandvik et al. 1993) as well as by spouses (Costa & McCrae 1988), are less likely to commit suicide (Koivumaa et al. 2001) and that changes in electrical activity in the brain and heartbeat account for substantial variance in reported negative affect (Davidson et al. 2000). The existing state of research suggests that, for many reasons, reported subjective well-being is a satisfactory empirical approximation to individual utility. It is thus possible to study procedural effects on individual well-being directly. However, general questions on subjective well-being capture elements of outcome as well as procedural utility. Thus, it is important to separate them out empirically. Therefore, the conditions for identifying procedural utility in the political process are discussed extensively in the next section.

Instead of looking at a summary measure like satisfaction with life, it is also possible to look at potential intermediary processes. One important aspect of procedural utility from political participation possibilities is people's belief in political influence. Concepts in political science refer to people's feeling of political efficacy (Lane 1959). It is referred to as internal efficacy when people experience a sense of 'being capable of acting effectively in the political realm' (Finkel 1985: 289; see also Niemi et al. 1991). What people think about their political influence can also be captured in surveys. Multiple indicators are proposed in research on political methodology (e.g., Balch 1974; Craig & Maggionto 1982).

Distinguishing outcome and procedural utility

Throughout history, people fought for democratic participation possibilities, also with the main aim of promoting policies from which they expected favourable outcomes. It is therefore very difficult to distinguish procedural utility from outcome utility. If participation rights would apply universally, an empirical study of procedural utility would be very much hampered. However, throughout the whole of history, certain people have been excluded from formal democratic participation either because they were, for instance, not male, too young, had been in jail or were not local or federal citizens. To the extent that these same people are not excluded from the outcome of the political process, procedural utility can be identified.

We propose the status of citizenship as an identification criterion. In most countries, the status of being a national fundamentally differs from that of foreigners by having the possibility to vote. In many other ways, the law demands that they be treated equally. Thus, for example, they have the same human rights and, once admitted into the country, they have (with few exceptions) the same rights to participate in social and economic affairs. It cannot, of

course, be denied that the national legislation and political decisions tend to be rigged in favour of nationals, but, nevertheless, it cannot be doubted that, on average, nationals derive more utility from political participation possibilities than foreigners. Nationals enjoy *both* outcome and process utility, while the foreigners only enjoy outcome utility.

The distinction between nationals and foreigners is largely exogenous. Whether a person may become a citizen or not is determined by law, in particular the requirement of having stayed in the host country for a sufficient number of years, having sufficient knowledge of the local language and the content of the constitution. Only after these stringent requirements have been met does the individual have the choice of whether to become a citizen or not. Of course, whether those persons eligible for citizenship indeed accept it, depends *inter alia* also on their expected procedural utility – that is, their wish to become a community member with full participation rights. Thus some will decide not to change their citizenship. Becoming a citizen is more or less automatic for young persons and spouses once the head of the household has decided to do so. Resident citizens have no possibility of choosing their status of citizenship. They cannot give up their current citizenship without relocation. The distribution of residents in a country between the two categories, foreigners and citizens, thus strongly reflects formal exogenous criteria for citizenship, and not revealed preferences for procedural goods. As a result of these considerations, one may assume that the distinction between nationals and foreigners influences the extent to which one benefits from outcome and process utility.²

Two empirically testable hypotheses can be put forward. Hypothesis I captures procedural utility in terms of subjective well-being.

Hypothesis I: The utility derived from the possibility of participating in the direct democratic process supports the subjective well-being of the citizens. Foreigners living in the same country who are excluded from this process, experience lower happiness compared to the citizens. The difference is the larger the more extended the political participation possibilities.

A procedural ‘good’ that is proposed to mediate procedural utility from political participation possibilities is people’s feeling of political effectiveness. Therefore, citizens’ perceived efficacy in the political process is studied complementarily. In Hypothesis II, this effectiveness is measured with survey data on people’s reported belief that they exert some political influence.

Hypothesis II: The possibility of participating in political decision making increases people’s belief that they exert some political influence. Foreign-

ers, who do not have formal political participation rights, report lower political influence. The difference between citizens' and foreigners' belief in political influence is the larger the more extended the political participation possibilities are.

In both hypotheses, the strategy used to identify procedural utility is based on the formal distinction between citizens and foreigners. The corresponding statistical approach is analogous to the difference-in-differences estimator for time series. In a crude formulation, procedural utility is reflected in the additional positive effect of more extended political participation possibilities on citizens' well-being or feeling of political influence compared to that of foreigners'.³

Alternative hypotheses

If inferences are drawn from correlations between individual outcomes and variables describing aggregates, there is always the possibility of misguided interpretations (sometimes called 'ecological fallacy'). In the following empirical analysis, political units are characterized by the development of political participation possibilities. It might well be that differences in these possibilities are correlated with some third variable that is related in a causal way to people's reported subjective well-being or perceived political influence. Observed correlations with participation possibilities are then spurious. It would, however, not be a misinterpretation or misspecification if the omitted variable captures some mediating mechanisms. We think that three alternative explanations should be taken into consideration. First, in political units with stronger participation possibilities, citizens may have accumulated more Putnam (2000)-style social capital and thus enjoy higher subjective well-being than citizens in units with less extended democratic participation possibilities. Second, direct democratic participation possibilities could be weaker in urban areas where most of the foreigners live and thus correlations may reflect urbanization. Third, the estimated correlations may capture cultural differences within Switzerland instead of institutional variation. These three alternative hypotheses are taken up again in the sensitivity analysis below.

While the possibility of spurious correlations due to omitted variables can be addressed directly by including additional variables, there is another difficulty with this kind of empirical research. There might be an alternative interpretation of the same empirical finding saying that a larger utility differential between citizens and foreigners in jurisdictions with more political participation possibilities does not necessarily reflect procedural utility. In particular, there is the fundamental problem of a 'tyranny of the majority' in a democracy. This

danger is seen to be particularly acute in the case of referendums where the will of the majority is unrestricted. As a result, civil rights may be thwarted.⁴ Empirically, some evidence for the suppression of civil rights has been found in local and state ballots in the United States (Gamble 1997), but there is also evidence to the contrary both there and in Switzerland (Cronin 1989; Frey & Goette 1998). However, previous research has not been comparative. Our analysis compares the degree of discrimination against foreigners in purely representative democratic jurisdictions with that found in jurisdictions with extended political participation possibilities. Preferences against minorities can be expressed by electing extreme politicians as well as by voting in favour of discriminating legislation. In most countries, economic restrictions and rights of foreigners are dealt with at the national level. However, to the extent that outcome discrimination also occurs at the regional level, utility differences cannot be interpreted as procedural utility alone. We will therefore make an estimate of how big outcome discrimination has to be so that there is no remaining differential that can be attributed to procedural utility.

In the Swiss context, political participation possibilities are sometimes related to xenophobia (usually without explaining what aspect intrinsic to the direct democratic process makes people more xenophobic). Nevertheless, it might be argued that extended direct democratic participation possibilities strengthen the in-group, the citizens, and that consequently develops resentment towards the outsiders, the foreigners. Utility differentials could then be understood as negative procedural utility. We address this alternative interpretation in the sensitivity analysis in the next section. We use voting behaviour in national referendums about immigration and naturalization legislation as proxy measures for citizens' attitudes towards foreigners.

Empirical analysis

Data and descriptive analysis

Political participation possibilities. It is hypothesized that citizens gain procedural utility from political participation possibilities. In Switzerland, there are several ways of engaging directly in the political process at three state levels over and above regular elections. The most important are the direct democratic instruments. They exist at the national level as well as at the level of the 26 cantons (states). As the federal institutions apply equally to all Swiss citizens, an empirical analysis cannot identify the *level effect* that these federal institutions of direct democracy have on the citizens' procedural utility. Instead, the empirical analysis has to be concerned with the variation around

the average satisfaction level (that is partly formed by Swiss federal institutions). We therefore use the institutional variation across the 26 Swiss cantons as the main explanatory variable.

In cantons, the major direct democratic instruments are the popular initiatives to change the canton's constitution or laws, a compulsory and optional referendum to prevent new laws or the changing of existing laws, and an optional financial referendum to prevent new state expenditure. Due to the federal structure of Switzerland, major areas of competence reside within the cantons and thus there is a high potential influence of direct legislation on the outcome of the political process in Swiss cantons. Moreover, citizens' access to the instruments mentioned above differs substantially from one canton to another. Thus, for example, the number of signatures required to launch an initiative or an optional referendum, and the time span within which the signatures have to be collected, varies. A referendum on public expenditures may be launched with different levels of additional outlays. We construct an index designed to reflect the extent of direct democratic participation possibilities in the 26 cantons (for details of the index construction, see the Appendix). This index is defined using a six-point scale, with 1 indicating the lowest, and 6 the highest degree of participation possibilities for the citizens. The variation in citizens' possibilities in political participation is necessary to test our two hypotheses on the effects of these possibilities on subjective well-being and on the belief in one's political influence.

Subjective well-being. Hypothesis I is tested with data on reported subjective well-being or 'happiness'. The survey at hand is the result of more than 6,000 interviews with residents of Switzerland collected by Leu et al. (1997).⁵ The proxy measure for individual utility is based on the answers to the following question: 'How satisfied are you with your life as a whole these days?' Simultaneously, the respondents were shown a table with a ten-point scale of which only the two extreme values ('completely dissatisfied' and 'completely satisfied') were verbalized. The survey found a high general life satisfaction in Switzerland with an average of 8.2 out of 10 points.

According to Hypothesis I, more extended participation possibilities are expected to increase reported satisfaction with life due to a larger gain in procedural utility. In Table 1, the difference in life satisfaction between residents living in cantons with weak participation possibilities (index of participation possibilities is lower than the sample mean of 3.83) and with strong participation possibilities is listed.⁶ On average, residents with strong participation rights report a 0.22 point higher well-being. However, this calculated difference may also be due to a favourable outcome of the political process. There is ample evidence that, in more direct democratic jurisdictions, the

outcome of the political process is closer to the wishes of the residents (see, e.g., the surveys by Eichenberger 1999; Frey & Stutzer 2006; Kirchgässner et al. 1999). To differentiate between outcome and procedural utility, the proposed identification criterion of people's nationality is considered. As foreigners are excluded from political participation rights, but not from the outcome of the political process, differences in levels of satisfaction between citizens and foreigners in cantons with weak and strong participation possibilities have to be compared. Where participation rights are weak, a difference in well-being between Swiss citizens and foreigners of 0.56 points is measured. The corresponding difference in cantons with extended direct democratic rights is 0.79 points. Both gaps in subjective well-being are due to differences in individual characteristics, incomplete assimilation and, above all, citizens' opportunity to reap procedural utility. The difference-in-differences between cantons with weak and strong participation possibilities then reflects the gain in procedural utility of citizens due to more extended participation possibilities (provided that individual characteristics and incomplete assimilation are distributed equally across cantons). The raw data show a large effect of procedural utility in terms of reported satisfaction with life – namely 0.23 points.⁷ A multiple regression analysis has to test whether this result still holds if individual characteristics are controlled for. An ordered probit estimation and extended discussion of the result is provided below.

Belief in political influence. Hypothesis II considers what people think about their political influence. This belief can be captured in surveys. We use answers to the following question: 'How much influence do you think someone like you can have on government policy?' Respondents indicate their belief on a scale from 0 'no influence' to 10 'very strong influence'. Data are from the first three waves of the Swiss Household Panel conducted between 1999 and 2001. In each

Table 1. Political participation possibilities and satisfaction with life, descriptive statistics

	Political participation possibilities		Difference
	Weak	Strong	
Whole sample	8.100 (0.033)	8.323 (0.029)	0.223 (0.044)
Foreigners	7.622 (0.090)	7.617 (0.104)	-0.005 (0.137)
Swiss citizens	8.178 (0.036)	8.406 (0.029)	0.228 (0.046)
Difference	0.556 (0.096)	0.790 (0.093)	0.234 (0.134)

Note: Standard errors in parentheses.

Source: Leu et al. 1997.

wave, around 7,000 people were interviewed and responded to the question about political influence. They believe, on average, that they have a political influence of 3.35 (with a standard deviation of 2.65) on the scale from 0 to 10.

Hypothesis II puts forward that people's belief in political influence is increased by more extended participation possibilities in political decision making. This hypothesis is not trivial because it is sometimes argued that direct democratic participation possibilities 'disturb' the representative democratic process of elected politicians to follow the will of the voters. Critics of direct democracy often argue that political pressure from interest groups and random decisions in referenda by badly informed voters worsen the outcome of the political process and actually reduce the impact of the citizens. An empirical test of hypothesis II is thus also a test of this alternative argument.

The first row of Table 2 compares people's belief in their political influence in cantons with strong and weak participation possibilities. The extent of participation possibilities is again measured with the index discussed above, whereby cantons with an index below (above) 3.83 are considered as the ones with weak (strong) possibilities. It shows that people in jurisdictions with developed participation possibilities report, on average, 0.63 index points higher belief in one's political influence than people with weak participation possibilities. However, perceived political influence may also be higher because the outcome of the political process corresponds better to people's preferences in these jurisdictions or due to some omitted variable that is correlated with political participation possibilities. In order to isolate the effect of the procedural differences from outcome considerations, the belief in the political influence of citizens and foreigners is compared. As foreigners have no formal participation rights in political decision making, their perceived effectiveness in politics is assumed to be independent of the variation in the

Table 2. Political participation possibilities and the belief of political influence, descriptive statistics

	Political participation possibilities		Difference
	Weak	Strong	
Whole sample	3.031 (0.026)	3.656 (0.025)	0.625 (0.036)
Foreigners	1.915 (0.081)	1.975 (0.087)	0.059 (0.120)
Swiss citizens	3.169 (0.027)	3.815 (0.026)	0.645 (0.038)
Difference	1.254 (0.083)	1.840 (0.089)	0.586 (0.121)

Note: Standard errors in parentheses.

Source: Swiss Household Panel, 1999–2001.

extent of participation rights across cantons. One might ask why foreigners believe that they have any political influence at all. At least two reasons are possible: first, they see other people like themselves, who they believe have some influence; and second, they think they could indirectly influence the political process because their friends, colleagues or people with the same interests have access to the political process. This would, however, indicate that there are also some kinds of procedural concerns for foreigners and an identification of the procedural component is only possible to a limited extent.

Whether or not citizens and foreigners are in fact affected in a different way by participation possibilities is descriptively studied in the bottom part of Table 2. In the first column, capturing respondents living in cantons with weak participation possibilities, citizens think that they have, on average, a 1.25 points higher political influence than foreigners. In cantons with strong participation possibilities, this difference is 1.84 points. Thus, the difference-in-differences estimate for the belief in political influence due to more extended participation rights is 0.59 points. This result is consistent with a gain in procedural utility by the citizens from political participation possibilities as put forward in Hypothesis II. In the next section, the robustness of this result is studied in a multiple regression analysis controlling for a large number of individual characteristics.

Multiple regression analysis

The descriptive analysis presented above offers preliminary evidence for positive procedural utility caused by more extended political participation possibilities for both measures: reported satisfaction with life and people's belief in their political influence. A multiple regression analysis has to show whether these results are robust. In addition, several sensitivity analyses are conducted. Once more a difference-in-differences estimation strategy is applied to identify procedural utility. Technically, an interaction term is included in the estimation equation that combines the variable that captures the proposed source of procedural utility with the identifying criterion. Here, the identifying characteristic is being a Swiss national or a foreigner. For the institutional variable political participation possibilities, the full variation on the index scale from 1 to 6 is considered.

Political participation possibilities and subjective well-being. Table 3 refers to Hypothesis I and presents the estimated coefficients and marginal effects of a well-being function, taking into account political participation possibilities, in addition to a large set of control variables. In order to exploit the ranking information contained in the originally scaled dependent variable, a weighted

Table 3. Procedural utility: Political participation possibilities and satisfaction with life

	Dependent variable: Satisfaction with life		
	Coefficient	T-value	Marginal effect (score 10)
Political participation possibilities	0.100	3.020	0.034
Political participation possibilities x foreigner	-0.066	-1.690	-0.022
Foreigner	-0.365	-7.050	-0.114
<i>Socio-demographic characteristics</i>			
Age 30–39	-0.092	-1.020	-0.031
Age 40–49	0.003	0.040	0.001
Age 50–59	-0.007	-0.110	-0.002
Age 60–69	0.304	4.370	0.108
Age 70–79	0.371	4.260	0.135
Age >80	0.322	2.890	0.117
Female	0.007	0.220	0.002
Bad health	-0.439	-7.720	-0.134
Middle education	0.079	2.270	0.027
High education	0.053	1.300	0.018
Separated, without partner	-0.592	-2.310	-0.163
Separated, with partner	-0.742	-2.000	-0.192
Widowed, without partner	-0.213	-4.060	-0.069
Widowed, with partner	0.070	0.450	0.024
Divorced, without partner	-0.381	-4.500	-0.116
Divorced, with partner	-0.110	-0.880	-0.036
Single, without partner	-0.176	-2.560	-0.058
Single, with partner	-0.096	-1.480	-0.032
Self-employed	0.059	1.100	0.021
Unemployed	-0.813	-4.700	-0.206
Student	-0.019	-0.210	-0.006
Housewife	0.128	2.250	0.045
Retired	-0.164	-2.700	-0.055
Other employment status	0.118	0.870	0.041
Equivalence income SFr. 2,000–3,000	0.065	1.770	0.022
Equivalence income SFr. 3,000–4,000	0.123	2.750	0.043
Equivalence income SFr. 4,000–5,000	0.251	4.860	0.090

Table 3. Continued.

	Dependent variable: Satisfaction with life		
	Coefficient	T-value	Marginal effect (score 10)
Equivalence income >SFr. 5000	0.176	3.610	0.062
N	6,137		
Log likelihood	-10,314.834		

Notes: Standard errors are adjusted for clustering on 26 cantons. In the reference group are 'people younger than 30', 'men', 'Swiss', 'healthy people', 'people with low education', 'married people', 'employed people' and 'people with a lower equivalence income than Sfr. 2,000'. Thresholds are as follows: $\text{Mu}(1) = -2.80$, $\text{Mu}(2) = -2.52$, $\text{Mu}(3) = -2.23$, $\text{Mu}(4) = -1.92$, $\text{Mu}(5) = -1.48$, $\text{Mu}(6) = -1.14$, $\text{Mu}(7) = -0.65$, $\text{Mu}(8) = 0.13$, $\text{Mu}(9) = 0.62$.

Source: Leu et al. 1997.

ordered probit model is applied. The weighting variable used allows representative results on the individual level for Switzerland.⁸ Throughout the remainder of this article, we use a robust estimator of variance because random disturbances are potentially correlated within groups or clusters. Here, dependence refers to residents of the same canton.⁹

The estimation results show sizeable effects for both variables considered in Hypothesis I (see the top of Table 3). The overall effect of participation rights on reported satisfaction with life is positive. In an ordered probit estimation, a positive coefficient indicates that the probability of stating a well-being greater than or equal to any given level (or threshold) increases. This positive effect can be attributed to a gain in outcome or procedural utility in cantons with more extended participation rights. The interaction term in the second row reveals the difference in the positive effects for Swiss citizens and foreigners. The negative coefficient indicates that foreigners gain less from stronger participation rights than the people in the reference group (i.e., the citizens). This result is consistent with Hypothesis I that foreigners reap less procedural utility from direct democratic participation possibilities than Swiss nationals. If it is further assumed that foreigners do not reap any procedural utility at all, but cannot be excluded from the outcome of the political process, the relative size of procedural utility can be assessed. A comparison of the negative coefficient of the interaction variable, which under these assumptions captures procedural utility, and the coefficient for the variable participation possibilities, which captures combined outcome and procedural utility shows: two thirds of the positive effect of more extended political participation possibilities are due to procedural utility and one third stems from outcome utility.

A useful interpretation of the size of the effects is provided by the marginal effects. The marginal effect indicates the change in the proportion of persons belonging to a stated satisfaction level when the independent variable increases by one unit.¹⁰ In the case of dummy variables, the marginal effect is evaluated with regard to the reference group. It must hold that if changes over all categories are summed up they add up to zero. In order to measure the shift in the distribution, we therefore only show the marginal effects for the top class of complete satisfaction with life (score 10) in Table 3. An increase in the index of participation possibilities by one point raises the proportion of persons indicating very high satisfaction with life by 3.4 percentage points. For foreigners, however, this effect is smaller, as the interaction term has to be considered. 2.3 percentage points of the increased probability to report maximum subjective well-being cannot be reaped by the foreigners. In our interpretation, this is because they are excluded from the political process and thus from procedural utility. This differential effect for foreigners is estimated when controlling for their lower level of life satisfaction in general. As the measure for political participation possibilities is mean adjusted, the average difference between citizens and foreigners is evaluated at the mean of the institutional variable. Foreigners are estimated to be 11.4 percentage points less likely to report a satisfactory score of ten.

The effect of procedural utility, as reflected in reported life satisfaction, is in itself sizeable. This can be seen from a comparison with marginal effects for numerous control variables. The marginal effect capturing procedural utility is, for example, as large as the effect of living in the second lowest income category (Sfr. 2,000–3,000) instead of the lowest income category (<Sfr. 2,000). Moreover, the effect of procedural utility is sizeable in an aggregate sense because it affects every citizen.

The results discussed so far hold *ceteris paribus* – that is, a large number of determinants or correlates of happiness are controlled for. Most important are individual socio-demographic characteristics. In the estimation equation, the respondent's age, gender, state of health, education level, civil status, employment status and household income are considered (for a discussion of these results, see Frey & Stutzer 1999).

Earlier, we introduced several alternative explanations for the observed correlations, here we address them empirically and provide a sensitivity analysis in Table 4. First, there might be a third variable that either drives both political participation possibilities and life satisfaction, or which should be included in order to prevent an omitted variable bias. Here, a dummy variable for people's participation in clubs or associations is used to test whether in cantons with stronger participation possibilities citizens may have accumulated more Putnam (2000)-style social capital and thus enjoy higher subjective

Table 4. Sensitivity analysis: Political participation possibilities and satisfaction with life

	Dependent variable: Satisfaction with life			
	A	B	C	D
Political participation possibilities	0.097 (3.22)	0.050 (1.76)	0.069 (1.78)	0.055 (1.59)
Political participation possibilities x foreigner	-0.067 (-1.75)	-0.046 (-0.90)	-0.032 (-0.55)	-0.064 (-1.04)
Foreigner	-0.299 (-5.55)	-0.306 (-5.50)	-0.304 (-5.79)	-0.303 (-5.45)
<i>Socio-demographic characteristics</i>	Yes	Yes	Yes	Yes
<i>Additional control variables</i>				
Member of associations	0.167 (6.98)	0.164 (6.87)	0.166 (7.06)	0.167 (6.92)
Living in urban area	-0.057 (-1.34)	-0.022 (-0.58)	-0.050 (-1.18)	-0.045 (-1.12)
French-speaking canton	-0.075 (-0.96)	-0.024 (-0.49)	-0.017 (-0.20)	0.038 (0.52)
Italian-speaking canton	0.297 (4.30)	0.145 (2.36)	0.239 (2.73)	0.185 (2.81)
Proportion voting				
- against easier naturalization of young foreigners (12 June 1994)		0.012 (7.08)		
... x foreigner		-0.005 (-0.91)		
- in favour of measures against illegal immigration (1 December 1996)			0.008 (1.39)	
... x foreigner			-0.007 (-0.93)	
- in favour of limiting the foreign population to 18% (24 September 2000)				0.013 (2.66)
... x foreigner				-0.18e-3 (-0.02)
N	6,124	6,124	6,124	6,124
Log likelihood	-10,254.489	-10,243.594	-10,252.269	-10,248.877

Notes: T-values are in parentheses. Standard errors are adjusted for clustering on 26 cantons. Socio-demographic variables are the same as in Table 3. In the reference group are 'people who are neither active nor passive members of associations', 'people living in non-urban areas' and 'people living in a German-speaking canton'.
Source: Leu et al. 1997.

well-being than citizens in cantons with less extended democratic participation possibilities. A dummy variable for living in an urban area is included to investigate the argument that direct democratic participation possibilities could be weaker in urban areas where most of the foreigners live, and thus the raw effect may reflect urbanization. Dummies for the language that is spoken in the canton are included in order to test whether the patterns in the descriptive statistics may capture cultural differences within Switzerland instead of institutional variation. Results for these variables are shown in panel A of Table 4. For political participation possibilities and the interaction variable, correlations very similar to the ones presented in Table 3 are estimated and indicate robustness.

Second, there might be an alternative interpretation of the interaction variable in terms of outcome discrimination. However, we cannot directly control for potential outcome differences because we are not aware of policy competences at the cantonal level that allow direct discrimination of foreigners. Instead, we can make an estimation of the difference in outcome utility necessary to offset any differential that can be attributed to procedural utility. Therefore, the gross effect for citizens is divided by the net positive effect for foreigners. For estimates in panel A in Table 4, this is $0.097 / (0.097 - 0.067) = 3.23$. This indicates that outcome utility would need to be more than three times larger for citizens than for foreigners in order to offset any difference due to procedural utility.

Third, there might be negative procedural utility involved for foreigners rather than positive procedural utility for citizens due to more xenophobic attitudes in more direct democratic cantons. One way to directly address this alternative explanation is to include proxy measures for attitudes towards foreigners in the estimation equation. Here, we rely on citizens' voting behaviour in national ballots about federal naturalization and immigration policy. Two votes were held shortly after the survey study was conducted between 1992 and 1994. On 12 June 1994, there was a referendum about easier naturalization of young second-generation foreigners. The proposal was defeated because more than half of the cantons were against the revised naturalization law. Rejection rates varied between 30 per cent in Geneva and 67 per cent in Appenzell Innerrhoden. On 2 December 1996, citizens voted on an initiative that proposed restrictive measures against illegal immigrants; 54 per cent were against the proposal. Rejection was lowest in Schwyz (40 per cent) and highest in Geneva (69 per cent). A third ballot was held on 24 September 2000. Although this is more than six years after the survey was conducted, the initiative might be a relatively good proxy for attitudes towards foreigners. Citizens voted on an initiative that wanted to restrict the foreign population to 18 per cent; 63 per cent of the voters and all cantons rejected the initiative.

Panels B to D in Table 4 include voting behaviour across cantons. Separate coefficients are allowed for citizens and foreigners in order to capture utility differentials between the two groups that might be due to citizens' attitudes. According to one of the alternative hypotheses, these differences might explain the differential effect of political participation possibilities on foreigners' life satisfaction. Results in panels B to D indicate three things. First, due to multicollinearity, standard errors for the estimated coefficients for participation possibilities and voting behaviour become relatively large and levels of statistical significance go down. Second, while the coefficients for the interaction variable capturing procedural utility get smaller, they do not vanish. Third, the net correlation between foreigners' well-being and living in a canton that voted more restrictively with regard to foreigners' rights seems positive rather than negative. This is a surprising finding and certainly needs additional investigation before further interpretation can be made. However, the sensitivity analysis for the effect of political participation possibilities on life satisfaction leaves the general interpretation of the results in terms of procedural utility and outcome utility intact.

Political participation possibilities and people's belief in their political influence. The descriptive analysis above showed that citizens perceive to have more political influence than foreigners, and that the difference is larger in cantons where citizens have more extended possibilities of participating in political decision making. This result is tested in a multiple regression approach in order to control for alternative explanations of the result. Similar control variables to the previous equation are included and the same econometric approach using ordered probit estimation is applied. The results of the micro-econometric estimation are presented in Table 5.

More extended political participation possibilities increase people's belief that they exert some political influence, *ceteris paribus*. As we have seen in the descriptive analysis, there is also a positive correlation for foreigners that cannot be readily interpreted. To the extent that the interaction variable between participation possibilities and being a foreigner captures a third variable or outcome considerations, the differential can be attributed to procedural utility. If there are procedural concerns also in foreigners' reports of the political influence of people like them (probably citizens), then the partial correlation for citizens might entirely reflect procedural utility. The general effect on citizens' perceived political influence is quite sizeable. If the marginal effect for the full variation of political participation possibilities is considered, the effect on what people think about their political influence (marginal effect = 0.157) is larger than the effect of having a university degree rather than compulsory school education (marginal effect = 0.125). A marginal effect of

Table 5. Procedural utility: Political participation possibilities and the belief of political influence

	Dependent variable: Belief of political influence		
	Coefficient	T-value	Marginal effect (scores 5 to 10)
Political participation possibilities	0.106	5.480	0.040
Political participation possibilities x foreigner	-0.058	-1.680	-0.022
Foreigner	-0.688	-12.540	-0.228
<i>Socio-demographic characteristics</i>			
Female	-0.059	-3.000	-0.023
Age	0.021	6.060	0.008
Age ² /100	-0.026	-6.660	-0.010
Incomplete compulsory school	-0.226	-1.930	-0.082
Apprenticeship	0.135	4.180	0.052
Maturity	0.236	5.710	0.092
Vocational high school	0.230	4.860	0.090
University of applied sciences	0.255	5.100	0.099
University	0.319	7.510	0.125
In education	0.188	4.130	0.073
Married	-0.087	-3.670	-0.033
Separated	0.047	0.440	0.018
Divorced	-0.240	-4.650	-0.088
Widowed	-0.119	-1.750	-0.044
Part-time paid work	0.047	1.490	0.018
Work in the family business	0.027	0.280	0.010
At home	0.027	0.850	0.010
Retired	0.029	0.740	0.011
Unemployed	0.27e-3	0.000	0.000
Year effects	Yes		
N	17,459		
Log likelihood	-36,498.742		

Notes: Standard errors are adjusted for clustering on 26 cantons. In the reference group are 'Swiss', 'men', 'people with compulsory school education', 'singles', 'people with full-time paid work'. Results not shown for 'child 20 or younger at home', 'retired due to invalidity', 'work in protected atelier or other situation', 'level of education not available' and 'occupation not available'. Thresholds are as follows: Mu(1) = 0.88, Mu(2) = 1.06, Mu(3) = 1.38, Mu(4) = 1.67, Mu(5) = 1.91, Mu(6) = 2.42, Mu(7) = 2.76, Mu(8) = 3.19, Mu(9) = 3.74, Mu(10) = 3.89.

Source: Swiss Household Panel, 1999–2001.

0.040 for an increase of political participation possibilities by one index point indicates that the proportion of people who believe they have political influence of or above 5 is increased by 4.0 percentage points. This is from a base probability at the sample mean of 37.8 percent to 41.8 percent.

There are several socio-demographic characteristics that also have a sizeable and statistically significant effect on one's belief in one's political influence. The correlation with age is inversely U-shaped, with a maximum at age 40. Men, people with more education and Swiss citizens perceive more political effectiveness than women, people with low education and foreigners. Foreigners report a 22.8 percentage point lower probability than Swiss citizens that they believe they have political influence exceeding level 4.

In Table 6, the sensitivity of these results is studied. Three sets of additional variables control for alternative explanations of the descriptive results.¹¹ Due to similar counter-arguments to the previous section, we include two variables for Putnam-style social capital (panel A), 21 dummy variables characterizing the type of community (panel B) and two variables for possible cultural differences within Switzerland (panel C). Results show that the correlation between political participation possibilities and people's belief in their political influence is robust with regard to the inclusion of proxies for social capital as well as the type of community. Thereby, active members as well as passive members of associations report higher perceived influence on the political process than non-members. People reported active and passive membership for seven separate associations (local/parents, protection of the environment, cultural or tenant rights association, syndicate, political party and charitable organization).

However, the correlation is sensitive to the inclusion of cultural variables. The coefficient falls to -0.009 ($t = -0.69$), whereas French-speaking (coeff. = -0.365 , $t = -11.35$) and Italian-speaking people (coeff. = -0.554 , $t = -22.85$) report feeling substantially less political influence. Due to the low variation within the French-speaking cantons in the extent of political participation possibilities, it is not possible to empirically conclude whether this is the case because these citizens actually have lower participation possibilities or whether this just reflects cultural differences. Both explanations might be correct. We have to conclude that the institutional effect on the belief of political influence is too sensitive to make clear statements.

Concluding remarks

This article has established that participatory decision making in politics is an important source of procedural utility. Possibilities of participating

Table 6. Sensitivity analysis: Political participation possibilities and the belief of political influence

	Dependent variable: Belief of political influence		
	A	B	C
Political participation possibilities	0.095 (5.38)	0.112 (6.73)	-0.009 (-0.69)
Political participation possibilities × foreigner	-0.049 (-1.38)	-0.050 (-1.44)	-0.037 (-1.02)
Foreigner	-0.651 (-11.01)	-0.710 (-12.75)	-0.642 (-11.24)
<i>Socio-demographic characteristics</i>	Yes	Yes	Yes
Year effects	Yes	Yes	Yes
<i>Additional control variables</i>			
Number of memberships in associations (active)	0.100 (9.28)		
Number of memberships in associations (passive)	0.083 (18.58)		
Type of community (22 types)		Yes	
French-speaking			-0.365 (-11.35)
Italian-speaking			-0.554 (-22.85)
N	17,459	17,459	17,459
Log likelihood	-36,346.46	-36,458.22	-36,375.12

Notes: T-values are in parentheses. Standard errors are adjusted for clustering on 26 cantons. Socio-demographic variables are the same as in Table 5. In the reference group are 'Swiss', and 'German-speaking'.
Source: Swiss Household Panel, 1999–2001.

directly in the democratic process give citizens a feeling that their preferences are seriously taken into account in a fair political process. Foreigners, who are excluded from political decision making, cannot gain such procedural utility. The results of our empirical analysis are broadly consistent with this notion of procedural utility. Citizens, as well as foreigners, living in jurisdictions with more extended political participation possibilities enjoy higher levels of subjective well-being. The positive effect on reported satisfaction with life is, however, smaller for foreigners, reflecting their exclusion from procedural utility. It is thus empirically feasible to distinguish between outcome and process utility. Moreover, it is possible to get a notion of the relative size of outcome and process utility. The positive effect of participation rights is three times larger for citizens than it is for foreigners (i.e., a major part of the welfare gain from the political process seems due to procedural utility).

In the second test of the concept of procedural utility, we find that, in cantons with more extended political participation possibilities, people think that they have substantially higher political influence. The maximum size of the institutional effect is larger than the effect of having a university degree rather than compulsory school education. However, the estimated correlation is sensitive and cannot be clearly separated from a cultural interpretation of variation across cantons.

Based on the empirical findings, we think that individuals derive substantial procedural utility from political participation possibilities. Future research should study whether this result attained for political participation possibilities in the semi-direct Swiss democracy can be applied to other countries with similar political participation possibilities such as the United States, as well as to other forms of political participation.

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Appendix. Index for political participation possibilities in Swiss cantons

Political participation possibilities are measured here in terms of direct democratic participation rights. In Switzerland, these rights exist at the national level

and apply equally for all citizens. However, they are very heterogeneous at the cantonal level. An index is constructed to measure the different barriers to citizens entering the political process, apart from elections in the year 1992. The index is based mainly on data collected in Trechsel and Serdült (1999) (for details, see Stutzer, 1999).

The four main legal instruments directly influencing the political process in Swiss cantons are: the popular initiative to change the canton's constitution; the popular initiative to change the canton's law; the compulsory and optional referendum to prevent new law or changing law; and the compulsory and optional referendum to prevent new state expenditure. Barriers are in terms of the necessary number of signatures needed to launch an instrument (absolute and relative to the number of citizens with the right to vote), the legally allowed time span to collect the signatures and the level of new expenditure per head allowing a financial referendum. Compulsory referenda are treated like referenda with the lowest possible barrier. Each of these restrictions is evaluated on a six-point scale: 1 indicates a high barrier, 6 a low one. From the resulting ratings, a non-weighted average is calculated for the composite index that represents the measure of participation rights in Swiss cantons. The results are presented in Figure A1.

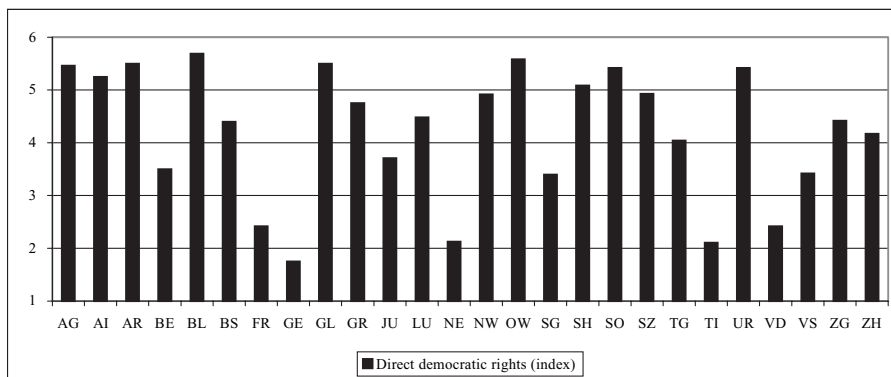


Figure A1. Political participation possibilities in Swiss cantons. The figure shows the degree of direct democratic participation possibilities in the 26 Swiss cantons – namely Aargau (AG), Appenzell i. Rh. (AI), Appenzell a. Rh. (AR), Bern (BE), Basel Land (BL), Basel Stadt (BS), Fribourg (FR), Genève (GE), Glarus (GL), Graubünden (GR), Jura (JU), Luzern (LU), Neuchâtel (NE), Nidwalden (NW), Obwalden (OW), St. Gallen (SG), Schaffhausen (SH), Solothurn (SO), Schwyz (SZ), Thurgau (TG), Ticino (TI), Uri (UR), Vaud (VD), Valais (VS), Zug (ZG) and Zürich (ZH).

Notes

1. Political philosophers and proponents of participatory democracy have argued for a long time that participation in self-governance provides people with a feeling of competence, control and satisfaction (e.g., Barber 1984; Mansbridge 1983; Pateman 1970; Thompson 1970). A procedural value of participation – in a non-consequential sense – is also emphasized in democratic theory (e.g., Dahl 1956; Sartori 1987; Scharpf 1970).
2. There are, of course, many more differences between foreigners and nationals that influence their respective utility level such as the degree of integration, access to social networks, unobserved social conditions and language problems. These systematic differences between the two groups exist independently of the political institutions and are taken into account in the empirical analysis. They do *not* affect the empirical test.
3. It is likely that citizens benefit to different extents from political participation possibilities, given that there are differences in people's preferences for institutions of decision-making. An extended hypothesis would, e.g., propose larger effects for those who actually participate (compared to absentees).
4. However, this is not necessarily the case. Most importantly, if there are economic, social and political cross cleavages, no group of citizens is *always* in the majority and therefore will be careful not to antagonize other social groups.
5. The survey data were collected between 1992 and 1994 in order to investigate the problem of poverty in Switzerland. The information contained in the data set is based on personal interviews and tax statistics.
6. As there is no theoretical reason for a particular threshold along which we should split the sample, we choose the sample mean. This, of course, makes it more likely to find statistically significant differences already in the descriptive analysis.
7. An alternative difference-in-differences interpretation considers the rows in Table 1 instead of the columns. Given that foreigners cannot reap procedural utility from the democratic process because they are formally excluded, the difference in reported life satisfaction between people living in cantons with weak and strong participation possibilities is due to a difference in outcome utility. For the raw data, differences in outcome utility are about zero. In the case of Swiss citizens, the difference includes procedural as well as outcome utility. The raw effect of stronger participation rights is on average 0.23 points on the satisfaction scale. Considering foreigners and Swiss citizens, the difference-in-differences due to procedural utility is 0.23 points.
8. Due to clustering and stratification, in contrast to pure random sampling, weights are necessary to get approximately unbiased point estimates. Weights are proportional to the inverse of the probability of being sampled. In addition, the weights are adjusted to the demographic structure in 1992.
9. Ignoring the clustering in the estimation model is likely to produce downward biased standard errors due to the effects of aggregate variables on individual data (Moulton 1990). To get unbiased standard errors for the aggregate variable 'political participation possibilities', the 26 cantons are used as sampling units.
10. Alternatively, the marginal effect indicates the change of the probability belonging to a stated satisfaction level when the independent variable increases by one unit.
11. As two separate data sets are analyzed, the additional control variables are not identical, but they are similar enough to capture the same correlated effects.

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