

How membership in civil associations affects political participation: Evidence from Sweden

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April 17, 2019

Abstract

What is the effect of membership in civil associations on political participation? Membership has been linked to providing social capital and personal networks, which in turn assist citizens to more easily navigate politics. Yet, this link is empirically complex since politically interested individuals self-select into networks and associations. In this research note, we address the impact of membership on different forms of political participation using a panel survey from Sweden where we separate between passive and active membership in various types of associations. Our baseline results reaffirm a strong correlation between membership and political participation. We then make use of the survey's panel dimension and find that earlier scholarship has likely overstated the robustness of membership's participatory effects. Rather, the remaining impact in the panel specification of association membership is mainly driven by those types of associations where we expect to observe the highest degree of selection behavior.

Introduction

Social capital is a central resource that increases trust (Fukuyama, 1995, Ostrom and Ahn, 2008, Putnam, 2000) and connects individuals, different groups, and societies (Verba and Nie, 1987). As Putnam (2000, p. 19) puts it, social capital “refers to connections among individuals – social networks and

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the norms of reciprocity and trustworthiness that arise from them.” Social capital is primarily noticed as trust and other civic attitudes in the political arena, which aid citizens to cooperate (Hooghe and Stolle, 2003). When individuals are part of the same organization, they are also a part of the same social network and may thus work together to reach mutual goals. This may in turn increase their political participation (Paxton, 2002, Stolle and Rochon, 1998, Wollebaek and Selle, 2002).

An important part of Putnam’s theory is that the formation of social capital and the acquisition of civic skills comes from active participation in organizations, where friends and acquaintances are part of the same social network. Scholarship has since reached the conclusion that social capital also can be acquired through passive membership (Teorell, 2003, Wollebaek and Selle, 2003) and through membership in many different kinds of organizations (Teorell, 2003).

Understanding the role of membership in civil organizations in increasing political participation is crucial, given that studies from many different sub-fields frequently account for it in their kitchen sink models (e.g., Cook, Page and Moskowitz (2014), Fleischmann, Martinovic and Böhm (2016), Grasso et al. (2018)). Notwithstanding the inclusion of these membership variables, previous research still has not fully disentangled the impact of membership in associations on political participation.

We return to this classic discussion in this research note. We pursue an empirical strategy that allows us to separate between passive and active membership in civil society organizations. We expect active membership to encourage political participation for several reasons. When individuals actively participate in these associations, they are likely to become friends. By meeting, they further educate each other, and learn in practice about the democratic process. These interactions might increase individuals’ willingness to participate politically or even run for office (Lundin, Nordström-Skans and Zetterberg, 2016, Hooghe, Stolle and Stouthuysen, 2004).

Passive membership on the other hand might also increase political participation because individuals gain cues that decrease the cost of participation (La Due Lake and Huckfeldt, 1998, Teorell, 2003). Passive membership might thus make sure that individuals are at least asked to participate, and as a result overcome the worry of Verba, Schlozman and Brady (1995, p. 15) that individuals do not take part in politics “because they can’t; because they don’t want to; or because nobody asked.” In line with this argument, we might also expect the number of associations a person is a member of to also matter for political participation.

Nevertheless, assessing the effects of membership in an association, let alone distinguishing between active and passive membership, is hindered by

self-selection. Prior scholarship has yet to fully account for self-selection into civil organizations. Because individuals choose membership into civil organizations, we cannot causally estimate the effects of membership without accounting for this selection. The self-selection problem is present for both passive and active membership, though to differing degrees.

We should be most worried about self-selection when it comes to active membership. Individuals who are inclined to participate in politics may also be more likely to become active members of organizations, simply because they enjoy meeting and discussing with other people, or because they have the resources to do so. Consequently, we would expect to see a positive correlation between association membership and political participation, even if the first does not affect the latter. Passive membership in an organization, on the other hand, may be an attractive choice for many other practical reasons, such as receiving a discount, organizational support or insurance purposes that certain associations provide to their members. In line with this reasoning, it is also likely that membership in associations more closely connected to the political sphere (e.g., environmental organizations) is more likely due to selection based on prior political interest, whereas membership in other types of associations (e.g., sports organizations) is comparatively less linked to the political arena.

Our main contribution to the literature is that the panel dimension in our data allows us to better deal with the issue of selection behavior, which arguably has caused previous research to exaggerate the effect that association membership has on political participation. In addition, we also distinguish between active and passive membership, as well as between different kinds of organizations, when we estimate how participation is affected by membership in civic associations.

Data

Our analysis is centered on Sweden, which is a country that has a large number of civil associations. Associations in Sweden are numerous, but it is difficult to provide an exact total number given that it depends on how associations are defined and measured (Schlüter, Then and Walkenhorst, 2001, Wijkström and Einarsson, 2004, Commission, 2010). On average, every adult was associated to nine associations (Lundström and Wijkström, 1997). Thus, Sweden serves as an important case of a country where individuals have access to platforms that may increase their social capital. On the other hand, political participation in Sweden, and especially voter turnout, is already high, which could mean that the rates of membership in civil associations

are a result of self-selection.

To assess membership in civil society associations, we rely on the Swedish Living Conditions Surveys (ULF/SILC), which is conducted yearly by Statistics Sweden (SCB). The survey is administered through personal interviews, and a subset of respondents are part of a panel that is asked the same battery of questions on two occasions with seven years apart. We focus our entire empirical analysis on this panel of individuals.¹

The outcome variables that we focus our empirical analysis on capture various forms of political participation.² First, we study voter turnout, which is arguably one of the most important forms of political participation since voter turnout is likely to affect public policy. Specifically, we focus on voter turnout in European parliamentary elections, because these have more variation in turnout (e.g., 1999: 38.84%, 2004: 37.85%). General Swedish elections, on the other hand, have comparatively higher turnout, usually reaching over 80%. Sweden became a member of the EU in 1995, meaning that we may measure this outcome for elections held after that year.

Second, we study other acts of political participation as outcomes, such as contacting political officials, participating in protests and demonstrations, and writing opinion pieces about politics in newspapers. Given that our main focus is on political participation generally, and not on the specific effect of civil associations on particular measures of political participation, we conduct a factor analysis for all dependent variables except voter turnout. Our prior is that variation in the variables may be captured in one factor, which is confirmed in Figure A1.³ We thus have two main dependent variables in our main empirical analysis: voter turnout and the first factor score for these other measures of political participation.⁴

Our right hand side variables are derived from questions in the ULF surveys on civil society associations. We include information on passive or active membership in an association. We also account for the type of association

¹The Swedish Living Conditions Survey is a high-quality product with population-based sampling and high response rates. Even if the non-response has increased over time, the response rate in our three waves amounts to 80% (1992–1993), 77% (2000–2001) and 71% (2008–2009).

²These exact wording of these questions in Swedish and an English translation is listed in the appendix.

³Please see Table A1 for a list of variables included in the factor analysis and their factor loadings.

⁴All these outcomes originates from the ULF-survey, except for voter turnout in the last election in our panel, for which we have access to register data. The reader should note that there is a difference between the survey question which ask whether the the individual voted in the last election to the European parliament (the 1999 election). The register data tells us that the individual actually voted in the 2009 election.

individuals were members of. In the main analysis we include binary indicators for reported passive or active membership in any organization and a count variable for the number of passive and active memberships a respondent reports. We only focus on those associations that were included twice in the survey so that we can run panel regressions.⁵

Our final dataset consists of a pooled panel dataset administered in three different waves. The first wave consists of the years 1992 and 1993, the second wave of 2000 and 2001, and the third from 2008 and 2009. For voter turnout, we may make use of only the second and the third waves because Sweden did not elect representatives to the European parliament before 1995. For our secondary analysis where we use the factor score to capture the other types of political participation activities, we utilize data from all three waves of the ULF survey.

Empirical framework

The empirical analysis is conducted in two parts. First, we pool the data from all years together and estimate the correlations between membership (separating between passive membership and active membership) and our two outcome variables. Next, we conduct a panel data analysis. We estimate the two regression equations below.

$$Y_i = \beta_0 + \beta_1 Association_i + \beta_2 W_i + u_i \quad (1)$$

$$Y_{i,t} = \beta_0 + \beta_1 Association_{i,t} + \beta_2 W_{i,t} + f_i + \tau_t + e_{i,t} \quad (2)$$

$$t \in \{1, 2\}$$

Y is voter turnout or the first factor for the other political participation measures. u_i and $e_{i,t}$ are error terms. *Association* corresponds to an individual's reported membership in the survey. This variable is either a binary variable for any type of passive or active membership or a count variable for the number of passive or active membership. W is a vector of covariates which includes years of education, employment status, age, gender, indicator variable for immigration status, standardized income for each cohort and year, and an indicator for whether the person lives in a family that receives social welfare. f_i refers to individual fixed effects, and τ_t represents period fixed effects.

⁵The number of included associations differ between the years in the survey, see table A13. We do not include associations that in themselves are acts of political participation, for example being a member of a political party.

The results from Equation (1) serve to replicate much of the analyses from prior scholarship. But as previously noted, self-selection is a key concern. In Equation (1), self-selection is severe and the estimated coefficients are expected to be highly biased. Another way of expressing this is that Equation (1) can also give rise to concerns about reverse causality explaining the relationship between political participation and membership in civil associations. For instance, after having participated in politics, an individual may become a member an organization because they enjoyed the experience of working for a common objective. To assess the effects of membership in associations on political participation, it is helpful to think about the ideal randomized experiment. In such an experiment, we would randomize individuals into passive, active, and no membership in different types of civil society organizations. This type of design would keep all other factors constant and would isolate the causal effect of interest.

Given that we are unable to run such an experiment, we attempt to partially overcome some of these concerns in Equation (2). In Equation (2), we control for many factors that may bias the results. We rely only on variation in membership for each individual that may vary between the two time periods in the panel. By including fixed effects, we compensate for all characteristics that fluctuates between individuals but that are constant over periods and characteristics that vary over time periods but that are constant between individuals. We are careful to not argue that these estimated coefficients in Equation (2) amount to causal estimates however. For such an analysis, one needs a more elaborate identification strategy with exogenous variation in membership. Notwithstanding these limitations, the estimates in Equation (2) are less plagued with self-selection and can provide us with empirical results that may nuance earlier empirical findings on the relationship between membership in organizations and political participation. In this case we are only using the variation in political participation and civil association membership within the individual unit over the two time periods. We demonstrate the degree of between- and within-unit-variation in our dependent and independent variables in tables [A2–A5](#).

Main results

Table 1 presents the raw correlations between memberships in civil associations and political participation. We distinguish between passive membership and active membership where an individual cannot be an active member without also being a passive member too. The estimated coefficients for active membership should thus be interpreted as the additional impact of active

Table 1: Benchmark raw correlations. Pooled data

	(1)	(2)	(3)	(4)
	Turnout EP	Turnout EP	PP factor score	PP factor score
Member in any org.	0.104*** (0.012)		0.203*** (0.030)	
Active in any org.	0.059*** (0.017)		0.286*** (0.025)	
Member in # of org.		0.067*** (0.006)		0.184*** (0.012)
Active in # of org.		0.017* (0.010)		0.132*** (0.021)
Constant	0.595*** (0.009)	0.595*** (0.008)	-0.226*** (0.027)	-0.312*** (0.019)
Covariates?	No	No	No	No
Time dimension data?	Pooled data	Pooled data	Pooled data	Pooled data
Adjusted R2	0.014	0.020	0.026	0.063
Observations	8128	8209	8963	8963

Robust standard errors in parenthesis. * p<0.1, ** p<0.05, *** p<0.01

membership.⁶

We estimate positive correlations for our passive membership variables and our active membership variables for both our outcomes. The first column in Table 1 reveals that being a passive member of any organization is associated with an increase in the probability of voting in the European election by approximately 10.4 percentage points. For someone who is also an active member of the organization, their voting propensity increases by an additional 6 percentage points. A similar pattern is found for other forms of participation. Being a passive member of an organization is associated with an increase in the factor score of political participation by 0.2 standard deviations. For active members the factor score is estimated to increase by approximately 0.5 (0.203 + 0.286) standard deviations.

Table 2 adds covariates to the benchmark analysis. We observe that the estimated coefficients decrease in magnitude, but the overall relationship between membership and political participation remains. All estimated coefficients are positive and all except one are statistically significant on the 5 % level.

The results from Tables 1 and 2 confirm prior scholarship and reveal a positive relationship between membership and political participation, but the estimated coefficients are plagued with self-selection. Members of civil associations are likely very different from non-members, and it is highly un-

⁶Note that we code all those who are not active members as 0 when we study active memberships. As such, this variable includes both those who are not members at all and those who are only passive members.

Table 2: Pooled data with covariates

	(1)	(2)	(3)	(4)
	Turnout EP	Turnout EP	PP factor score	PP factor score
Member in any org.	0.072*** (0.012)		0.121*** (0.033)	
Active in any org.	0.033** (0.016)		0.260*** (0.025)	
Member in # of org.		0.044*** (0.007)		0.139*** (0.013)
Active in # of org.		0.016* (0.010)		0.136*** (0.021)
Constant	0.162*** (0.039)	0.185*** (0.038)	-1.554*** (0.082)	-1.481*** (0.079)
Covariates?	Yes	Yes	Yes	Yes
Time dimension data?	Pooled data	Pooled data	Pooled data	Pooled data
Adjusted R2	0.050	0.054	0.088	0.110
Observations	8118	8198	8468	8468

Robust standard errors in parenthesis. * p<0.1, ** p<0.05, *** p<0.01

likely that we may control away these differences and obtain estimates where everything else is equal except for civil association membership.

Next, we therefore turn to our panel analysis and present the results in Table 3. When we use this empirical strategy, the estimated coefficients decrease substantially in magnitude, but remains positive although seldom no longer statistically significant. Turning to voter turnout in the first column, we find that being a passive member is no longer associated with a large increase in the probability of voting in European parliament elections. The estimated coefficient for the passive membership dummy should be interpreted as a 1.3 percentage point increase in the likelihood of voting for passive members of any civil association. This coefficient is furthermore no longer statistically significant. Active membership in an organization continues to have a statistically significant impact on the factor score if considering the dummy variable specification, although the estimated impact is smaller in comparison to Table 2. For the factor score, we do still estimate one positive and statistically significant coefficient for the number of passive membership, but the coefficient is again smaller in size.⁷

These results provide evidence that the relationship between membership in civil associations and political participation is rather nuanced and that the previously observed strong effects of civil association membership is likely due to a high degree of self-selection behavior. In the subsequent section, we take

⁷We have also ran the same panel analysis for the other political participation measures with an additive index instead of a factor analysis where the results are presented in Table A6 and an analysis with each variable in the factor analysis separately in Table A7

Table 3: Panel data analysis

	(1)	(2)	(3)	(4)
	Turnout EP	Turnout EP	PP factor score	PP factor score
Member in any org.	0.013 (0.012)		0.054 (0.041)	
Active in any org.	0.022 (0.016)		0.071** (0.028)	
Member in # of org.		0.005 (0.007)		0.042*** (0.015)
Active in # of org.		0.016 (0.010)		0.028 (0.023)
Constant	6.927 (12.979)	6.542 (12.878)	61.950*** (1.807)	62.283*** (1.592)
Covariates?	Yes	Yes	Yes	Yes
Individual fixed effects?	Yes	Yes	Yes	Yes
Time period fixed effects?	Yes	Yes	Yes	Yes
Time dimension data?	Panel	Panel	Panel	Panel
Adjusted R2	0.218	0.220	0.012	0.013
Observations	8118	8198	8468	8468

Clustered robust standard errors on the individual level in parenthesis.

* p<0.1, ** p<0.05, *** p<0.01

the analysis one step further by looking at different types of civil associations.

Separating between different types of associations

Given that the theoretical causal chain runs from membership to social capital and finally to political participation, it is likely that different associations yield various degrees of social capital, and thus have differential impacts on political participation. The degree of self-selection is also likely larger for some types of associations compared to others. The panel data analysis in the main results section rests on the premise that the difference in characteristics between individuals is captured with the inclusion of individual fixed effects, time fixed effects, and covariates where the identifying variation stems from a within-subject variation between time periods 1 and 2. However, it is unlikely that the estimated coefficients from the previous section are causal estimates, given that we have not accounted for all types of self-selection behavior in our analyses.

To take these analysis one step further, we introduce an alternative approach of categorizing associations into two groups and run the panel data analysis for each organization separately. Our purpose here is to investigate

if the positive associations found in Table 3 are primarily driven by membership in associations where we suspect a high degree of self-selection to exist. If that is the case, the claim that membership in civil associations leads to higher political participation is further weakened.⁸

We separate between high and low self-selection to address two different concerns. First, we worry about reverse causality, which is likely present for membership in organizations more closely connected to the political sphere. As previously discussed, a person who is participating in demonstrations may be more likely to join a political organization or a protest group. We have therefore put peace organizations, environmental organizations and women organizations in the high self-selection group. Second, some associations (e.g., parental and pension associations) are only open to people who fall within a certain age range. For such associations, our fixed effects are not able to capture latent confounding factors that may be shaping their membership. Thus, we expect a higher degree of selection bias to still be present in the panel regression with membership in these organizations. Thus, these associations also fall into the high self-selection group. Those associations that remain are categorized into the low self-selection group. Here, we find sports, housing, and culture associations (theatre and dance) as well organizations for immigrants and persons with disabilities.

For this robustness analysis, we estimate the same model as we presented in Table 3, but with separate effects for associations where we expect high self-selection and for those where we expect smaller selection bias. The results are presented in Table A8. Beginning with voter turnout, membership in low self-selection associations either in the form of passive membership or active membership does not have any positive impact on voter turnout. The point estimates are sometimes positive and sometimes negative, but always small in magnitude and statistically insignificant. For the high self-selection associations, we estimate consistently positive and sometimes statistically significant coefficients for both passive membership and active membership. Overall, this points towards a conclusion that the positive “effect” of membership on voter turnout is mainly driven by high self-selection associations, which could mean that the remaining impact is simply a result of self-selection due to political interest and not due to a causal effect of membership in civic society associations. For the factor score analysis, we estimate both negative and positive coefficients depending on the specification. We find two

⁸Since we only have voter turnout data from 1995, we may not use the first survey wave for this outcome variable. This means that the types of organizations differ somewhat between the analysis for voter turnout and factor score since questions concerning the explicit type of association differed somewhat between the different waves of the survey. See Table A13 for details

statistically significant results for the number of associations a person is a member of. Here, we find positive impact for both the high and the low selection group on the factor score. Nonetheless, these results should however be interpreted with caution, given that the other estimates vary a great deal.

For completeness, we have also run the entire analysis for all types of association separately (not grouped together in high and low selection). These results are presented in Tables A9–A12.

Discussion and conclusion

Political scientists have for a long time acknowledged social capital when explaining political participation. Notably, Putnam (2000) argued that trust between individuals is promoted through active participation in associations. Theoretically, this hypothesis is intuitive given that trust is likely to form in the presence of face-to-face contact. Others have instead reasoned that quantity is more important than quality, and that the number of associations is more important when it comes to increase political participation (Teorell, 2003).

As we have discussed and showed in this research note, there are obstacles connected to both hypotheses. People optimize based on what they derive utility from, meaning that an individual who has a high interest in politics is also likely to enjoy spending time in an association. More generally, a person who already possesses trust in others is likely to seek out participation in associations. When operationalizing social capital, researchers should take into account that both passive membership and active participation in associations is highly endogenous.

Our results raise the question whether membership in civil associations actually has a causal effect on political participation. While they reaffirm that there is a correlation between memberships in associations and political participation, it rather seems as if this correlation is due to selection bias and not a causal effect.

References

- Commission, European. 2010. Study on Volunteering in the European Union: Country Report Sweden. Technical report European Commission.
URL: ec.europa.eu/citizenship/pdf/national_report_se_en.pdf
- Cook, Fay Lomax, Benjamin I Page and Rachel L Moskowitz. 2014. “Political engagement by wealthy Americans.” *Political Science Quarterly* 129(3):381–398.
- Fleischmann, Fenella, Borja Martinovic and Magdalena Böhm. 2016. “Mobilising mosques? The role of service attendance for political participation of Turkish and Moroccan minorities in the Netherlands.” *Ethnic and Racial Studies* 39(5):746–763.
- Fukuyama, Francis. 1995. *Trust: The social virtues and the creation of prosperity*. New York: Free Press Paperbacks.
- Grasso, Maria Teresa, Stephen Farrall, Emily Gray, Colin Hay and Will Jennings. 2018. “Socialization and generational political trajectories: an age, period and cohort analysis of political participation in Britain.” *Journal of Elections, Public Opinion and Parties* pp. 1–23.
- Hooghe, Marc and Dietlind Stolle. 2003. *Generating social capital: Civil society and institutions in comparative perspective*. New York: Palgrave Macmillan.
- Hooghe, Marc, Dietlind Stolle and Patrick Stouthuysen. 2004. “Head start in politics: The recruitment function of youth organizations of political parties in Belgium (Flanders).” *Party Politics* 10(2):193–212.
- La Due Lake, Ronald and Robert Huckfeldt. 1998. “Social capital, social networks, and political participation.” *Political Psychology* 19(3):567–584.
- Lundin, Martin, Oskar Nordström-Skans and Pär Zetterberg. 2016. “Leadership Experiences Within Civil Organizations and Candidacy in Public Elections: Causal Evidence from a Quasi-Experimental Approach.” *Political Behavior* 38(2):433–454.
- Lundström, Tommy and Filip Wijkström. 1997. *The nonprofit sector in Sweden*. Manchester: Manchester University Press.
- Ostrom, Elinor and Toh-Kyeong Ahn. 2008. Social Capital and Collective Action. In *The handbook of social capital*, ed. Dario Castiglione, Jan W

- Van Deth and Guglielmo Wolleb. Oxford: Oxford University Press pp. 70–100.
- Paxton, Pamela. 2002. “Social capital and democracy: An interdependent relationship.” *American sociological review* 67(2):254–277.
- Putnam, Robert D. 2000. Bowling Alone: America’s Declining Social Capital. In *Culture and Politics: A Reader*, ed. Lane Crothers and Charles Lockhart. New York: Palgrave Macmillan.
- Schlüter, Andreas, Volker Then and Peter Walkenhorst. 2001. *Foundations in Europe*. Washington: Brookings Institution Press.
- Stolle, Dietlind and Thomas R Rochon. 1998. “Are all associations alike? Member diversity, associational type, and the creation of social capital.” *American Behavioral Scientist* 42(1):47–65.
- Teorell, Jan. 2003. “Linking social capital to political participation: Voluntary associations and networks of recruitment in Sweden.” *Scandinavian Political Studies* 26(1):49–66.
- Verba, Sidney, Kay Lehman Schlozman and Henry E Brady. 1995. *Voice and equality: Civic voluntarism in American politics*. Cambridge, Mass.: Harvard University Press.
- Verba, Sidney and Norman H Nie. 1987. *Participation in America: Political democracy and social equality*. Chicago: University of Chicago Press.
- Wijkström, Filip and Stefan Einarsson. 2004. *Foundations in Sweden: their scope, roles and visions*. Economic Research Institute, Stockholm School of Economics.
- Wollebaek, Dag and Per Selle. 2002. “Does participation in voluntary associations contribute to social capital? The impact of intensity, scope, and type.” *Nonprofit and voluntary sector quarterly* 31(1):32–61.
- Wollebaek, Dag and Per Selle. 2003. The importance of passive membership for social capital formation. In *Generating social capital*, ed. Marc Hooghe and Dietlind Stolle. New York: Palgrave Macmillan pp. 67–88.

Online appendix

Figure A1: Screeplot of eigenvalues, other political participation measures excluding voter turnout

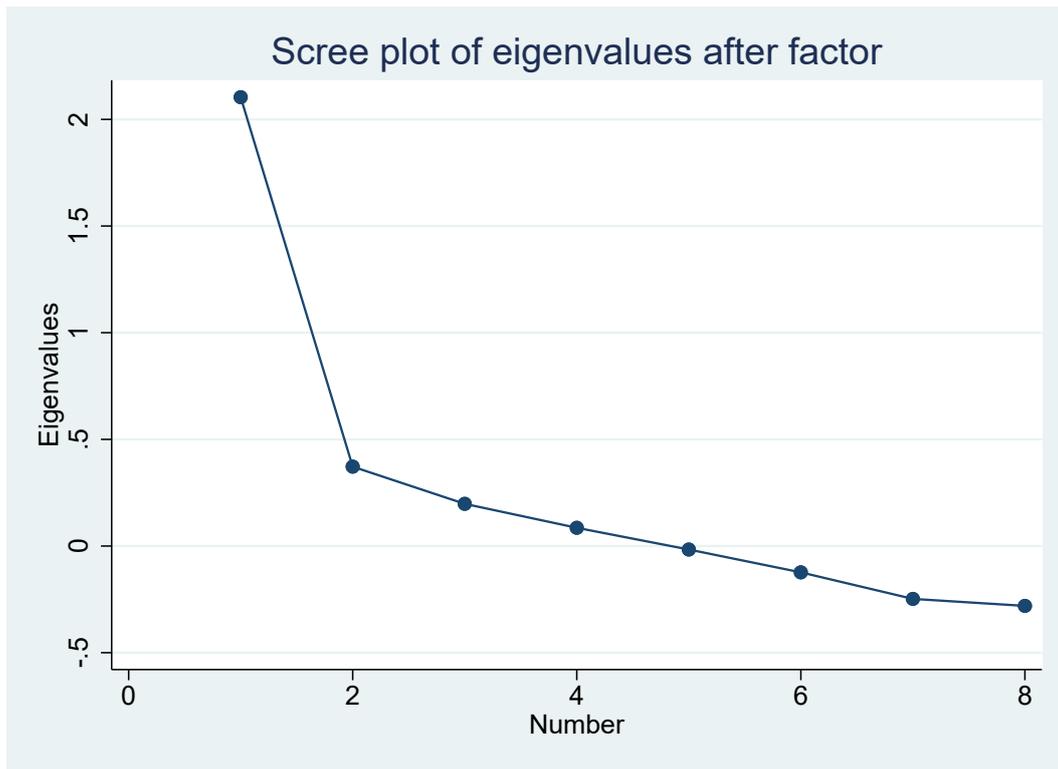


Table A1: Factor loadings, other political participation measures

	e(L)
	Factor1
Contact municipal civil servant	.4554695
Writing local opinion piece	.5022683
Signed local petition	.5553899
Demonstration/Protest, local	.5313061
Other local	.3999563
Writing opinion piece	.4894728
Signed petition	.5894669
Demonstration/Protest	.5536229

Variance decomposition

Decomposing the variance of our dependent variable and our independent variable.

We have a two period pooled panel where the the unit of observation is on the individual level. The between variation is hence the variation of Y and X between individuals whereas the within variation is the average variance for individuals in the two periods.

Given that we have two samples, we analyze the variance decomposition for the number of association membership for both data samples when we look at the independent variable.

Table A2: Variance decomposition dependent variable: EP turnout

	Turnout EP
Mean dependent variable	.6663418
SD overall	.471548
SD between	.4182556
SD within	.2276833
N.	8209

Table A3: Variance decomposition dependent variable: Factor score

	Factor score
Mean dependent variable	.0528789
SD overall	1.030126
SD between	.9424692
SD within	.4371551
N.	8963

Table A4: Variance decomposition independent variable: Number of associations, turnout sample

	Number of memberships
Mean dependent variable	.6663418
SD overall	.9001443
SD between	.7500876
SD within	.4976888
N.	8566

Table A5: Variance decomposition independent variable: Number of associations, factor score sample

	Number of memberships
Mean dependent variable	.6663418
SD overall	1.103743
SD between	.9337907
SD within	.5885373
N.	9342

Table A6: Additive index instead of factor analysis for other political participation measures. Panel analysis

	(1)	(2)
	Index pol.part	Index pol.part
Member in any org.	0.103 (0.086)	
Active in any org.	0.153** (0.061)	
Member in # of org.		0.094*** (0.032)
Active in # of org.		0.064 (0.048)
Constant	128.061*** (3.906)	128.610*** (3.423)
Covariates?	Yes	Yes
Individual fixed effects?	Yes	Yes
Time period fixed effects?	Yes	Yes
Time dimension data?	Panel	Panel
Adjusted R2	0.012	0.014
Observations	8468	8468

Clustered robust standard errors on the individual level in parenthesis.

* p<0.1, ** p<0.05, *** p<0.01

Table A7: Other political participation measures separately. Panel analysis

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Con Muni.of	L.Comment	L.appeal	L.Demon	L.Other	Comment	Appeal	Demon
Member in any org.	0.022 (0.023)	0.021 (0.017)	0.023 (0.033)	-0.022 (0.022)	-0.011 (0.013)	0.025 (0.015)	0.037 (0.027)	0.015 (0.020)
Active in any org.	0.043** (0.019)	0.024* (0.012)	0.007 (0.022)	0.018 (0.015)	0.015 (0.012)	0.008 (0.009)	0.021 (0.018)	0.004 (0.013)
Covariates?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Individual fixed effects?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Time period fixed effects?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Time dimension data?	Panel	Panel	Panel	Panel	Panel	Panel	Panel	Panel
Adjusted R2	0.008	0.010	0.006	0.003	0.002	0.005	0.004	0.002
Observations	8749	8759	8686	8759	8664	8756	8681	8750

Clustered robust standard errors on the individual level in parenthesis.

* p<0.1, ** p<0.05, *** p<0.01

Table A8: Organizations grouped with different level of estimation bias (high and low)

	(1)	(2)	(3)	(4)
	Turnout EP	Turnout EP	PP factor score	PP factor score
Member in any high-selection	0.057** (0.025)		-0.136 (0.098)	
Active in any high-selection	0.042 (0.032)		0.129 (0.204)	
Member in any low-selection	-0.023 (0.025)		0.669 (0.480)	
Active in any low-selection	0.013 (0.025)		-0.191 (0.467)	
Member in # of high-selection		0.031** (0.014)		-0.026 (0.036)
Active in # of high-selection		0.033 (0.024)		0.132** (0.062)
Member in # of low-selection		-0.005 (0.009)		0.033 (0.021)
Active in # of low-selection		0.014 (0.012)		0.056** (0.028)
Constant	9.350 (14.780)	7.514 (12.654)	69.204*** (4.635)	65.336*** (1.854)
Covariates?	Yes	Yes	Yes	Yes
Individual fixed effects?	Yes	Yes	Yes	Yes
Time period fixed effects?	Yes	Yes	Yes	Yes
Time dimension data?	Panel	Panel	Panel	Panel
Adjusted R2	0.257	0.221	0.023	0.014
Observations	5070	8198	3445	8468

Clustered robust standard errors on the individual level in parenthesis.

* p<0.1, ** p<0.05, *** p<0.01

Table A9: High self-selection organizations separately. Voter turnout

	(1)	(2)
	Turnout EP	Turnout EP
Member Peace	0.019 (0.017)	
Active Peace	0.059* (0.033)	
Member Pension		0.056** (0.026)
Active Pension		0.016 (0.037)
Constant	6.397 (12.785)	8.661 (15.122)
Covariates?	Yes	Yes
Individual fixed effects?	Yes	Yes
Time period fixed effects?	Yes	Yes
Time dimension data?	Panel	Panel
Adjusted R2	0.218	0.254
Observations	8120	5072

Clustered robust standard errors on the individual level in parenthesis.

* p<0.1, ** p<0.05, *** p<0.01

Table A10: Low self-selection organizations separately. Voter turnout

	(1)	(2)	(3)
	Turnout EP	Turnout EP	Turnout EP
Member Housing	-0.005 (0.013)		
Active Housing	0.025 (0.020)		
Member Sport		-0.018 (0.014)	
Active Sport		0.007 (0.017)	
Member Culture			0.010 (0.033)
Active Culture			-0.013 (0.039)
Constant	6.474 (12.689)	6.762 (12.681)	6.863 (12.650)
Covariates?	Yes	Yes	Yes
Individual fixed effects?	Yes	Yes	Yes
Time period fixed effects?	Yes	Yes	Yes
Time dimension data?	Panel	Panel	Panel
Adjusted R2	0.217	0.218	0.211
Observations	8118	8120	6199

Clustered robust standard errors on the individual level in parenthesis.

* p<0.1, ** p<0.05, *** p<0.01

Table A11: High self-selection organizations separately. Factor score

	(1)	(2)	(3)	(4)
	PP factor score	PP factor score	PP factor score	PP factor score
Member Environmental	0.037 (0.059)			
Active Environmental	-0.065 (0.215)			
Member Pension		-0.011 (0.086)		
Active Pension		0.156 (0.097)		
Member Parent			-0.060 (0.058)	
Active Parent			0.233*** (0.083)	
Constant	64.529*** (1.307)	64.143*** (1.325)	64.226*** (1.315)	69.988*** (7.027)
Covariates?	Yes	Yes	Yes	Yes
Individual fixed effects?	Yes	Yes	Yes	Yes
Time period fixed effects?	Yes	Yes	Yes	Yes
Time dimension data?	Panel	Panel	Panel	Panel
Adjusted R2	0.009	0.010	0.012	0.009
Observations	8468	8466	8465	8466

Clustered robust standard errors on the individual level in parenthesis.

* p<0.1, ** p<0.05, *** p<0.01

Table A12: Low self-selection organizations separately. Factor score

	(1)	(2)	(3)	(4)
	PP factor score	PP factor score	PP factor score	PP factor score
Member Housing	0.021 (0.030)			
Active Housing	0.098* (0.057)			
Member Sport		0.018 (0.033)		
Active Sport		0.063* (0.034)		
Member Handicap			0.083 (0.080)	
Active Handicap			-0.060 (0.184)	
Member Immigration				0.418* (0.244)
Active Immigration				-0.160 (0.283)
Constant	64.511*** (1.304)	64.522*** (1.312)	64.450*** (1.305)	64.635*** (1.301)
Covariates?	Yes	Yes	Yes	Yes
Individual fixed effects?	Yes	Yes	Yes	Yes
Time period fixed effects?	Yes	Yes	Yes	Yes
Time dimension data?	Panel	Panel	Panel	Panel
Adjusted R2	0.010	0.010	0.009	0.011
Observations	8468	8468	8468	8468

Clustered robust standard errors on the individual level in parenthesis.

* p<0.1, ** p<0.05, *** p<0.01

Table A13: Coverage in survey, different kinds of associations

Type of association	1992–1993	2000–2001	2008–2009
<i>High self-selection</i>			
Peace and humanitarian		x	x
Pension	x	x	x
Environmental	x	x	
Parent	x	x	
Woman	x	x	
<i>Low self-selection</i>			
Housing	x	x	x
Sport	x	x	x
Culture, dance and theatre		x	x
Handicap	x	x	
Immigrant	x	x	

Survey questions

Questions included in the ULF-survey. Direct quotations from surveys and English translation. Full refereces presented at the end of this subsection.

1992–1993

Surveyyear	Swedish survey question/English translation
1992–1993	<p>Introfråga: “Har du själv någon gång försökt att göra någonting åt någon brist eller felaktighet här i (kommunens namn)?:”</p> <p>Intro question: Have you tried to take action over a shortage or problem here in the municipality (name)?</p> <ol style="list-style-type: none">1. “Tagit direkt kontakt med någon tjänsteman eller förtroendeman?” Have you been in contact with a civil servant?2. “Skrivit insändare eller artikel i någon tidning?” Have you written an opinion piece or an article in a newspaper?3. “Undertecknat något upprop?” Have you signed a petition?4. “Deltagit i någon demonstration?” Have you participated in a demonstration?5. “Gjort på något annat sätt, nämligen?” Have you in any other way [tried to take action]?
1992–1993	<p>Introfråga: “Om vi ser till politiska frågor i huvud taget, inte bara de lokala här i kommunen, har du någon gång...”</p> <p>Intro question: If we consider political questions in general and not just the local issues here in the municipality, have you ever...?</p> <ol style="list-style-type: none">1. “Skrivit insändare eller artikel i någon tidning eller tidsskrift?” Written an opinion piece or article in a newspaper or periodical?2. “Undertecknat något upprop?” Have you signed a petition?3. “Deltagit i någon demonstration?” “Participated in a demonstration”
1992–1993	<p>“Är du medlem i någon eller några av följande organisationer och sammanslutningar?” Lista med föreningar Are you a member in any of the following organizations or associations? Individual is presented with a list. List varies depending on year</p> <p>“Har du under de senaste 12 månaderna varit aktiv inom föreningen? (enbart om medlem?)” Have you during the last 12 months been active in the association? (only if member)</p>

2000–2001

Surveyyear **Swedish survey question/English translation**
2000–2001 “Röstade du i det senaste valet till EU-parlamentet?”
Did you vote in the last election to the European parliament?

2000–2001 Introfråga: “Man kan välja olika sätt att försöka påverka sådant som man tycker är fel i sin kommun. Har du själv någon gång försökt att göra någonting åt någon brist eller felaktighet här i (kommunens namn) (eller där du bott tidigare)?”

Intro question: One may choose different ways to take actions against issues one finds wrong in a municipality. Have you yourself tried to do something about a shortage or problem here in (municipality name) or (municipality where you have lived previously)

1. “Tagit direkt kontakt med någon tjänsteman eller förtroendeman?”

Have you been in contact with a civil servant?

2. “Skrivit insändare eller artikel i någon tidning eller tidsskrift?”

Written an opinion piece or article in a newspaper or periodical?

3. “Undertecknat något uppprop?”

Have you signed a petition?

4. “Deltagit i någon demonstration?”

Have you participated in a demonstration?

5. “Gjort på något annat sätt nämligen?”

Have you in any other way [tried to take action]?

2000–2001 Introfråga: “Om vi ser till politiska frågor i huvud taget, vid sidan om de lokala här i kommunen, har du någon gång... ”

Intro question: If we consider political questions in general and not just the local issues here in the municipality, have you ever...?

1. “Skrivit insändare eller artikel i någon tidning eller tidsskrift?”

Written an opinion piece or article in a newspaper or periodical?

2. “Undertecknat något uppprop?”

Have you signed a petition?

3. “Deltagit i någon demonstration?”

Have you participated²⁵ in a demonstration?

2000–2001 Introfråga: “Är du medlem i någon eller några av följande organisationer och sammanslutningar?” Faktiskt fråga: “Är du medlem i en sådan förening/organisation eller i flera?” Lista med föreningar

Intro question: Are you a member of any of the following organizations and associations? Individual is presented

2008–2009

Surveyyear	Swedish survey question/English translation
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2008–2009	“Har du någon gång under de senaste 5 åren tagit direkt kontakt med någon lokal politiker i den kommun du nu bor eller tidigare bott?”
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Have you during the last 5 years been in direct contact with a local politician in the municipality where you now live or where you previously lived?

“Har du någon gång under de senaste 5 åren tagit direkt kontakt med en kommunal tjänsteman i den kommun du nu bor eller tidigare bott?”

Have you during the last 5 years been in contact with a local civil servant in the municipality where you now lives or where you previously lived?

“Har du någon gång under de senaste 5 åren skrivit insändare eller artiklar om lokala frågor i någon tidning?”

Have you during the last 5 years written an opinion piece or article about local issues in a newspaper?

“Har du någon gång under de senaste 5 åren skrivit insändare eller artiklar om annat än lokala frågor i någon tidning?”

Have you during the last 5 years written an opinion piece or article on issues other than local issues in a newspaper?

“Har du någon gång under de senaste 5 åren skrivit på en namninsamling för att stödja eller protestera mot något på lokal nivå? (GÄLLER ÄVEN NAMNINSAMLINGAR VIA E-POST O.DYL.)”

Have you during the last 5 years signed a petition in order to support or protest against something on the local level? (also applies to petitions signatures through e-mail)

“Har du någon gång under de senaste 5 åren skrivit på en namninsamling för något som inte handlade om lokala frågor? (GÄLLER ÄVEN NAMNINSAMLINGAR VIA E-POST O.DYL.)”

Have you during the last 5 years signed petitions regarding something that was not about local issues? (also applies to petitions signatures through e-mail)

“Har du någon gång under de senaste 5 åren deltagit i en demonstration för att stödja eller protestera mot något på lokal nivå?”

Have you during the last 5 year participated in a demonstration in order to support or protest against a local issue?

“Har du någon gång under de senaste 5 åren deltagit i en demonstration som inte handlade om lokala frågor?”

Have you during the last 5 year participated in a demonstration that was not concerned with local issues?

2008–2009	<p>“Är du medlem i någon boendeförening?” Are you a member of any housing organization? “Deltar du aktivt i föreningens verksamhet?” Do you participate actively in the activities of the association? ‘Är du medlem i någon idrottsföreningen eller friluftsförening?’ Are you a member of any sports or outdoor organization? ‘Deltar du aktivt i föreningens verksamhet?’ Do you participate actively in the activities of the association? “Är Du medlem i någon humanitär hjälporganisation, fredorganisation eller annan grupp för internationella frågor? ” Are you a member of any humanitarian aid organization, peace organization or any other associations related to international issues? “Deltar du aktivt i föreningens verksamhet?” Do you participate actively in the activities of the association? “Är du medlem i någon kultur-, musik-, dans- eller teaterförening? ” Are you a member of any culture, music, dance or theatre association? “Deltar du aktivt i föreningens verksamhet? ” Do you participate actively in the activities of the association? ‘Är du medlem i någon pensionärsförening?’ Are you a member of any pension organization? “Deltar du aktivt i föreningens verksamhet?” Do you participate actively in the activities of the association?</p>
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References survey questions (years 1992, 1993, 2000, 2001, 2008, 2009):

Statistiska Centralbyrån (SCB). Undersökningen av levnadsförhållanden ULF 92:3-4, Medborgerliga aktiviteter, p. 48–53. Available at: <https://www.scb.se/hitta-statistik/statistik-efter-amne/levnadsforhallanden/levnadsforhallanden/undersokningarna-av-levnadsforhallanden-ulf-silc/produktrelaterat/Fordjupad-information/ulfsilc--intervjuformular/>. Accessed 181128

Statistiska Centralbyrån (SCB). Undersökningen av levnadsförhållanden ULF 93:3-4, Medborgerliga aktiviteter, p. 48–51. Available at: <https://www.scb.se/hitta-statistik/statistik-efter-amne/levnadsforhallanden/levnadsforhallanden/undersokningarna-av-levnadsforhallanden-ulf-silc/produktrelaterat/Fordjupad-information/ulfsilc--intervjuformular/> Accessed 181128

Statistiska Centralbyrån (SCB). Undersökningen av levnadsförhållanden ULF 2000:3-4, Medborgerliga aktiviteter, p. 50–55. Available at: <https://www.scb.se/hitta-statistik/statistik-efter-amne/levnadsforhallanden/levnadsforhallanden/undersokningarna-av-levnadsforhallanden-ulf-silc/produktrelaterat/Fordjupad-information/ulfsilc--intervjuformular/> Accessed 181128

Statistiska Centralbyrån (SCB). Undersökningen av levnadsförhållanden ULF 2001:2, Medborgerliga aktiviteter, p. 54–57. Available at: <https://www.scb.se/hitta-statistik/statistik-efter-amne/levnadsforhallanden/levnadsforhallanden/undersokningarna-av-levnadsforhallanden-ulf-silc/produktrelaterat/Fordjupad-information/ulfsilc--intervjuformular/> Accessed 181128

Statistiska Centralbyrån (SCB). ULF-SILC 2008 Frågeformulär ULF SILC (tvärsnitt), Medborgerliga aktiviteter, p. 97–105. Available at: <https://www.scb.se/hitta-statistik/statistik-efter-amne/levnadsforhallanden/levnadsforhallanden/undersokningarna-av-levnadsforhallanden-ulf-silc/produktrelaterat/Fordjupad-information/ulfsilc--intervjuformular/> Accessed 181128

Statistiska Centralbyrån (SCB). ULF-SILC 2009 Frågeformulär ULF SILC (tvärsnitt), Medborgerliga aktiviteter, p. 108–117. Available at: <https://www.scb.se/hitta-statistik/statistik-efter-amne/levnadsforhallanden/levnadsforhallanden/undersokningarna-av-levnadsforhallanden-ulf-silc/produktrelaterat/Fordjupad-information/ulfsilc--intervjuformular/> Accessed 181128

Data availability and replication

The data we use in this paper originates from Swedish administrative registers and from a survey carried out by Statistics Sweden. The data material is part of a larger data source provided to our research group where different data sets may be linked together. This data is according to the regulations stored at an encrypted server and we are not allowed to disseminate this data according to our contract given that the data source contain sensitive information on the individual level. We have therefore requested an exception from the journal's data availability policy at the first time of submission.

There are two ways to replicate our empirical findings. First, researchers who want to replicate our findings may come to Sweden and be added temporally to our research group in order to get access to the remote desktop system that we have used. Please note that anyone interested in this option needs to contact us beforehand so that we may obtain approval from the regional ethics board to temporally add a researcher to our research group.

The second option is to order the same data as we have used directly from Statistics Sweden. Please note that this first entails obtaining a separate approval from a regional ethical review board. Data from Statistics Sweden may be ordered from here: http://www.scb.se/sv_/Vara-tjanster/Bestalla-mikrodata). We provide a complete list of variables that we used for this paper together with our dofiles and Stata-logs to facilitate replication.

Variables

This is a list of variables that we use in the final data analysis.

Serial number: Research project specific serial number to designate an individual.

ulfyear: Year of the ULF survey.

period: Variable equal to 1 or 2 depending on whether the observation belongs to the first or the second part of the panel.

turnout EU: Variable that originates from two sources. One part comes from a survey question in ULF (see separate table on survey questions). The other part originates from register data. Variable that takes the value 1 if the individual voted/stated that he or she voted in the last election to the European parliament.

memberculture. Dummy variables that takes the value 1 if the individual is a member of a cultural organization and 0 otherwise. Data from the ULF-survey.

memberpension. Dummy variables that takes the value 1 if the individual is a member of a pension organization and 0 otherwise. Data from the ULF-survey.

membersport. Dummy variables that takes the value 1 if the individual is a member of a sport organization and 0 otherwise. Data from the ULF-survey.

memberpeace. Dummy variables that takes the value 1 if the individual is a member of a peace organization and 0 otherwise. Data from the ULF-survey.

memberboende. Dummy variables that takes the value 1 if the individual is a member of a housing organization and 0 otherwise. Data from the ULF-survey.

activeculture. Dummy variables that takes the value 1 if the individual is an active member of a culture organization and 0 otherwise. Non members are coded as 0. Data from the ULF-survey.

activepension. Dummy variables that takes the value 1 if the individual is an active member of a pension organization and 0 otherwise. Non members are coded as 0. Data from the ULF-survey.

activesport. Dummy variables that takes the value 1 if the individual is an active member of a sport organization and 0 otherwise. Non members are coded as 0. Data from the ULF-survey.

activepeace. Dummy variables that takes the value 1 if the individual is an active member of a peace organization and 0 otherwise. Non members are coded as 0. Data from the ULF-survey.

activeboende. Dummy variables that takes the value 1 if the individual is an active member of a housing organization and 0 otherwise. Non members are coded as 0. Data from the ULF-survey.

Nmemberships. Number of memberships. Data from the ULF-survey.

Nactive. Number of active memberships. Data from the ULF-survey.

Memberany. Dummy variable equal to one if member in any of the included organizations and 0 otherwise. Data from the ULF-survey.

Memberany. Dummy variable equal to one if active member in any of the included organizations and 0 otherwise. Data from the ULF-survey.

Income. Individual income before tax. Data from the LISA-database. Data from the ULF-survey.

Standardized income. Standardized income for year in the ULF survey before tax. Data from the LISA-database.

Years of education. Variable created from SUN2000 classification where we set the years of education to 6.6/7.5/9.4/11.2/12.4/14.2/17.0/20.4 for the corre-

sponding 1–7 SUN-codes. Highest attained level of education. Data comes from the LISA-database.

Welfare recipient dummy. A dummy variable equal to 1 if the individual lives in a family that have received welfare and 0 otherwise. Data from the LISA-database.

Employment dummy. Dummy variable equal to 1 if the individual is employed and 0 otherwise. Data from the LISA-database.

Age. Age in years. Data from Swedish population registers.

Gender dummy. A dummy variable equal to 0 if male and 1 if female. Data from Swedish population registers.

Immigration dummy. A dummy variable equal to 1 if the individual is not born in Sweden and 0 otherwise. Data from Swedish population registers.

Contact Municipal official. A three-point scale coded 2 (Yes, many times), 1 (Yes, occasionally) or 0 (No). Data from the ULF-survey.

Writing opinion piece local A three-point scale coded 2 (Yes, many times), 1 (Yes, occasionally) or 0 (No). Data from the ULF-survey.

Writing opinion piece A three-point scale coded 2 (Yes, many times), 1 (Yes, occasionally) or 0 (No). Data from the ULF-survey.

Signed petition local A three-point scale coded 2 (Yes, many times), 1 (Yes, occasionally) or 0 (No). Data from the ULF-survey.

Signed petition A three-point scale coded 2 (Yes, many times), 1 (Yes, occasionally) or 0 (No). Data from the ULF-survey.

Demonstration local A three-point scale coded 2 (Yes, many times), 1 (Yes, occasionally) or 0 (No). Data from the ULF-survey.

Demonstration A three-point scale coded 2 (Yes, many times), 1 (Yes, occasionally) or 0 (No). Data from the ULF-survey.

Other local activity A three-point scale coded 2 (Yes, many times), 1 (Yes, occasionally) or 0 (No). Data from the ULF-survey.

Factor score: First factor score including the other political participation measures (above). Data from the ULF-survey.

Index: Additive index including the other political participation measures (above). Data from the ULF-survey.