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Do Politicians' Preferences Correspond to those of the Voters? An Investigation of Political Representation*

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Abstract

This paper investigates political representation by exploring the relationship between citizens' preferences and the preferences of their elected representatives. Using Swedish survey data, the empirical analysis shows that voters and politicians have significantly different preferences for local welfare services, implying that voters do not elect representatives with the same preferences as their own. The results show that when comparing a politician of a certain age, gender, educational level and marital status, with a voter with identical characteristics, the politician still has preferences for a significantly higher level of spending on the locally provided services. Hence, our results indicate that the representation of different socio-economic groups does not necessarily lead to a larger degree of representation of these groups' agendas. Moreover, we find the observed difference to be largest for the least salient expenditure item. We do, however, not find any evidence for differences in preferences between the two groups being associated with a decline in trust for politicians among voters.

Keywords: Political representation, Local public services, Survey data, Voters' and politicians' preferences

JEL classifications: C35, H40, H72

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1 Introduction

Political decisions are seldom made directly by citizens. Instead, voters elect politicians to represent them and make policy decisions on their behalf. Will these policy decisions be in accordance with the voters' preferences? Alesina (1988) has shown that if politicians cannot commit to election promises, policy decisions will be sensitive to the preferences of politicians. This theoretical finding has received support in a number of recent empirical studies showing that the identity of the politician in power affects the policy outcome. For example, Pettersson-Lidbom (2003) (investigating spending, revenues and tax rates in Swedish municipalities) and Lee, Moretti and Butler (2004) (investigating roll call voting records in the US House of Representatives) show that parties are of importance for policy outcomes.¹ Furthermore, Levitt (1996) finds that senators' roll call votes mainly depend on the politicians' own preferences, rather than voters' preferences or the official party line. This evidence shows that policy outcomes need not be representative of the preferences of voters at large, if these preferences differ from those of the politicians. When investigating political representation, there are hence two important components in the political process; the implementation of preferences into actual policy and the correspondence (congruence) in policy preferences between citizens and their representatives.

This paper investigates political representation by exploring the relationship between citizens' preferences and the preferences of their elected representatives.² The preferences of voters and politicians are compared using Swedish survey data, where both voters and local politicians are asked about their preferences for locally provided welfare services.³ We study the preferences for total local expenditures as well as for local public expenditures on schooling, child care and social care; services for which the local governments are almost the sole providers and that, in the latter part of the period studied, add up to over 70 percent of local public spending.⁴

The empirical analysis shows that voters and politicians have significantly different

¹These two studies use regression-discontinuity approaches to account for the fact that parties might be endogenous. There are also earlier studies relying on cross-sectional or longitudinal data that find parties to be of importance, see Blais, Blake and Dion (1993, 1996) for an overview and for two studies. An early contribution to the literature is Cameron (1978). These studies do not take the possibility that parties are endogenous into account, however.

²Ågren (2005) investigates the implementation of preferences into actual policy.

³Correspondence in preferences between voters and representatives has also been studied in the political science literature by, e.g., Miller and Stokes (1968), and Herrera, Herrera and Smith (1992). The analysis conducted in these studies is problematic, however. In comparison to the present paper, they do not, for example, take willingness to pay into account and the questions to politicians and voters differ. For earlier political science evidence on Swedish data on this topic, see, e.g., Gustafsson (1988) and Strömberg (1974). However, the Swedish evidence is quite descriptive.

⁴The local public sector plays a dominant role in the Swedish economy and there is also a long tradition of strong and autonomous local governments.

preferences for local welfare services, implying that voters do not elect representatives with the same preferences as their own. In the second part of the paper, we explore three potential explanations for the difference in preferences.

First, are the results a consequence of the selection of politicians? Given that different groups of individuals (with respect to, e.g., gender, age and/or education) have different preferences for publicly provided welfare services, the under-representation of different groups may explain the difference between voters' and politicians' preferences. Descriptive statistics for Sweden show that women, young and less educated are typically under-represented among local politicians. To investigate whether this selection causes the results, we include a number of individual-specific characteristics when estimating spending preferences. This is indeed a relevant question from a policy perspective. For example, strategies including quotas and affirmative action aiming at increasing female representation in elected assemblies are often discussed in the public debate.⁵

Second, the policy space is multidimensional, thereby implying that it might be the case that voters elect politicians with the same preferences as their own for some services, but not for others. Besley and Coate (2002) show that electing politicians with different preferences may be an optimal choice for voters, if the policy space is multidimensional. In this case, preferences may differ for some less salient issue but correspond for the most important ones. Saliency is also discussed within the political science literature, where it is argued that politicians should be closest to voters on issues considered to be of most importance to the voters (see, e.g., Page and Shapiro, 1983). For these reasons, we investigate the relationship between the observed difference in preferences and the saliency of the different public services.

Finally, it can be optimal for voters to elect politicians with preferences for a higher level of spending than that preferred by the electorate, in the literature referred to as strategic delegation. In a related setting, Besley and Coate (2003) do, for example, show that it might be optimal for voters to elect politicians with other preferences than their own; if the policy outcome is decided in negotiations between politicians representing different regions. Similarly, consider local politicians, representing different groups of people, negotiating within the local council on how much to spend on different local services. In such a setting, it might be optimal for a voter

⁵That increased representation may matter is shown by Pande (2003) and Chattopadhyay and Duflo (2004). Pande investigates the effect of increased political representation of disadvantaged minorities in India, using a natural experiment where the constitution provides political reservation for disadvantaged castes and tribes in state elections. She finds that increased representation has led to a rise in targeted redistribution towards these groups. Chattopadhyay and Duflo (2004) use another natural experiment in India. They find that districts led by females showed a different spending pattern than those run by males. Using Swedish survey data, Svaleryd (2002) also finds evidence supporting that female representation matters for policy choice.

to elect politicians with preferences for a higher level of spending for a certain service, as compared to voters. We investigate whether the electorate has intentionally elected politicians with preferences differing from their own by linking the observed difference to the voters' stated trust in local politicians. In the presence of strategic delegation, rational voters can be expected to choose politicians with different preferences than their own and, in such a case, we would not expect an observed difference in preferences to be negatively associated with the perceived trust in politicians.

The result shows that when comparing a politician of a certain age, gender, educational level and marital status, with a voter with identical characteristics, the politician still has preferences for a significantly higher level of spending on the locally provided services. Moreover, we find the observed difference to be largest for the least salient expenditure item. Finally, we do not find any evidence for differences in preferences between the two groups being associated with a decline in trust for politicians.

The remainder of the paper is organized as follows. Section 2 presents the data. Section 3 discusses potential shortcomings of survey data and presents how this is handled in the empirical analysis. Section 4 investigates whether voters and politicians have the same preferences for locally provided services. Section 5 seeks different explanations for the results obtained and finally, section 6 concludes.

2 Data

This study uses a rather unique combination of data sets, spanning a period from the second half of the 1960s to the first half of the 1990s. It combines data from surveys directed at voters, data from surveys directed at local politicians, and municipal-level register data. The survey data contains information from six different election studies conducted in connection with three local elections; the election studies for voters concern the election years 1966, 1979 and 1991 and the associated election studies for politicians concern the years 1968, 1980 and 1993. The timing of the surveys is such that just before, or in connection with, an election, we observe voters' preferences and background characteristics, while the elected politicians' preferences and background characteristics are observed after each election. In the surveys, both voters and local politicians are asked about their preferences for locally provided services.⁶ Hence, we

⁶The surveys were directed at a random sample of citizens in a number of different Swedish municipalities and to all elected politicians in these municipalities (except in 1993 when a sample of politicians was drawn). The municipalities were chosen so as to represent different types of municipalities with respect to population and population density. The reply frequency was as follows; voters 1966: 87 %, politicians 1968: 92 %, voters 1979: 82 %, politicians 1980: 77 %, voters 1991: 46 %, and politicians 1993: 79%. The lower reply frequency among voters 1991 is probably a result of the fact that the 1991 survey was conducted via mail rather than direct interviews.

can directly investigate whether voters elect politicians with the same preferences as their own.

Besides providing interesting data, Sweden also constitutes a good testing ground. The local public sector plays a dominant role in the Swedish economy and there is also a long tradition of strong and autonomous local governments. In trying to quantify the municipalities' economic importance, it can be noted that during the 1980s and 1990s, their share of spending of GDP was 25 percent and they employed approximately 20 percent of the total Swedish workforce. The Swedish municipalities are responsible for supplying many important welfare services such as child care, schooling, care of the elderly, and social welfare services. The degree to which citizens depend on municipal services contributes to the importance of local authorities. The major source of income is a proportional income tax and, on average, only 25 percent of municipal income is intergovernmental grants. The degree of autonomy refers both to the right to decide on the provision of local public services (above certain minimum standards) and the right to set the local tax rate. The municipalities are lead by municipal councils elected in local elections, with a proportional election system. Election turnout has typically been high in Sweden and during the period studied, the turnout in the local elections has fluctuated around 80 percent. Sweden is a multi-party system where, to a large extent, the same parties appear at both the local and the central level. There are also local parties, however. Even though Sweden has a multi-party system, it is standard among economists and political scientists to treat Sweden as a bipartisan system (see, e.g., Alesina, Roubini and Cohen, 1997) where the parties can be divided into a left-wing and a right-wing bloc.

In principle, the analysis can be conducted on any of the three cross sections established for the time periods 1966/68, 1979/80 and 1991/93.⁷ However, to gain efficiency, we pool the data to a large cross section.⁸ The respondents are asked to state their preferences for total municipal spending, as well as for spending on different municipal services. More specifically, each respondent is asked to state whether he or she prefers more or less spending or is satisfied with the current level.⁹ As regards the question on total spending, an increase in spending is linked to an increase in local taxes, thereby directly considering the respondent's willingness to pay. However, for the different services, this is not the case. Following Ahlin and Johansson (2001), this is handled in the following manner: the respondents' announced preferences for

⁷The pooled cross section covers 36 municipalities and 3179 individuals for the years 1966/68, 25 municipalities and 2678 individuals for 1979/80 and 28 municipalities and 5233 individuals for the years 1991/93. The same municipalities are not observed over time but importantly, in each period, the same municipalities are observed for voters and politicians.

⁸We gain efficiency by getting more observations (more individuals), but also in the sense that we increase the number of municipalities, which is an important aspect since some of the variables in the econometric analysis are identified only through the variation over municipalities.

⁹For the exact formulation of the questions, see the Appendix.

an increased/decreased level of spending is combined with their preferences for a tax increase/decrease.¹⁰ The importance of taking willingness to pay into account can be seen in Table 1. The table shows a comparison of preferences before and after preferred spending has been associated with tax changes. As expected, a smaller fraction prefers more spending on all categories when willingness to pay is controlled for than if disregarded. The opposite is true for "less". However, the preferences of politicians change to a lesser extent than those of the voters (see, e.g., schooling where the percent preferring "less" increases by 20 percentage points for the voters, but only by 10 for the politicians). The results indicate that politicians incorporate costs of provision to a larger degree than voters when answering the questions. This emphasizes the need to control for willingness to pay when comparing the groups, since it is important that both groups have had the same question in mind when stating their preferences.

Table 1: Voters' and politicians' preferences

Preferences	Total spending	Schooling	Child care	Social care
Voters				
less	21.6	0.9/21.5	2.5/17.8	32.4/48.0
same	53.0	59.8/43	41.5/30.3	49.0/35.9
more	25.4	39.3/35.5	56.0/51.8	18.5/16.2
Politicians				
less	11.0	1.6/10.9	5.3/16.9	12.0/24.5
same	48.9	51.7/43.5	42.1/31.3	67.7/55.8
more	40.1	46.7/45.67	52.7/51.8	20.3/19.7

Note: Percent with stated preferences without willingness to pay (wtp)/with wtp.

As a preamble, Table 1 provides an overview of the (unconditional) distribution of preferences for voters and politicians, respectively. Typically, politicians want spending to be larger than do voters.¹¹ As another crude first way of testing whether the preference structures are different we can perform non-parametric tests. We use the Pearson χ^2 test where the null hypothesis implies dependence of the two distributions.¹² The hypothesis being tested is therefore that voters and politicians

¹⁰See the Appendix for the construction of preferences. Ahlin and Johansson (2001) use three alternative ways of adjusting for the individual's willingness to pay in a paper estimating the demand for local public schooling. They show that the qualitative results are the same regardless of which of the three ways they use and conclude that the results are not particularly sensitive to the definition of the dependent variable.

¹¹It may seem surprising that the share of both politicians and voters preferring an increase in child care expenditures is above 50 %. However, preferences for increasing child care expenditures have gradually decreased over time along with an expansion of the public child care sector.

¹²The test statistic is calculated as follows. Let n_{ij} denote the observed frequency in row i and column j of a 3×2 contingency table, $i = 1, \dots, K$, $j = 1, \dots, J$ and the column marginals as $n_{i\cdot} = \sum_{j=1}^J n_{ij}$, $n_{\cdot j} = \sum_{i=1}^I n_{ij}$. The Pearson test statistic can then be defined according to

$$\chi^2 = \sum_i \sum_j \frac{(n_{ij} - E_{ij})^2}{E_{ij}}, \quad (1)$$

have the same preferences for the local public services under study. The results are displayed in Table 2.

Table 2: Non-Parametric test (Pearson chi square) for three spending categories.

	Total Spending	Schooling	Child care	Social care
χ^2	303.637	158.418	5.561	443.406
p-value	(0.000)	(0.000)	(0.062)	(0.000)
# Obs.	9984	9658	8656	7858

The results in Table 2 show that the null hypothesis can be rejected at a 1 percent significance level for schooling, social care and total spending, and at a 10 percent level for child care.¹³ The non-parametric test does not, however, take certain background characteristics of the municipalities (such as their actual expenditure level on local public services and their income) into account.

3 Can we trust survey data? Empirical strategy

In this paper, we make use of subjective survey data. An important question is then to what extent we can rely on such data. More precisely: Do people mean what they say? This has been discussed by e.g., Bertrand and Mullainathan (2001). Drawing on experimental evidence, they discuss several reasons why a respondent might state an attitude different from his or her true one, reasons that are based on cognitive problems (including problems derived from the ordering of the questions, the wording of the questions, the scales presented to the respondents, and that respondents may make little effort in answering the question), social desirability (the respondent wants to avoid looking bad in front of the interviewer), non-attitudes (respondents do not admit the lack of an attitude), soft attitudes (problems related to cognitive dissonance, i.e., the phenomenon that a respondent may state an attitude that rationalizes the respondent's past behaviour and past attitudes), and wrong attitudes (respondents may not accurately forecast their behaviour). What might constitute the major problems for the question analysed in this paper is, in our opinion, wrong attitudes, non-attitudes, and that the respondents may make little effort in answering the questions.¹⁴

with $(I - 1)(J - 1)$ degrees of freedom and where $n = \sum_i \sum_j n_{ij}$ is the total number of observations, and $E_{ij} = n_i \cdot n_j / n$ is the expected value.

¹³For example, concentrating on schooling, we can see from the second column, first row, that the test-statistic is 158.4, which is indeed higher than the critical value, which is also clear from the p-value on the row below. Therefore, we reject the null that politicians and voters have the same preferences for schooling.

¹⁴As mentioned earlier, both voters and politicians are asked the same questions with identical scales. By controlling for the willingness to pay, we also ensure that both groups consider costs when answering the questions. The questions are also non-controversial; from an ethical point of view, there are no "right" or "wrong" answers when it comes to locally provided services as opposed

In the context relevant for the present paper, why should a respondent express anything but his or her true attitude? To provide a way of considering this issue, it can be useful to state the respondent's problem in a choice model based on economic theory. Assume that a respondent i states preferences for decreased spending if his or her desired level of spending (E_i^*) is lower than the actual level of spending in the respondent's municipality (E_i), that is, if $E_i^* < E_i$, and, likewise, increased spending if $E_i^* > E_i$, and a maintained level of actual expenditures if $E_i^* = E_i$. Thus, the respondent will answer

$$\begin{aligned} & \text{"less" if } E_i^* < E_i \\ & \text{"same" if } E_i^* = E_i \\ & \text{"more" if } E_i^* > E_i. \end{aligned} \tag{2}$$

Assume also that the derived optimal demand function for each individual i is of the form

$$E_i^* = \beta_0 + \sum_{j=1}^J \beta_j x_{ij}, \tag{3}$$

where E_i^* is demanded per capita spending on a locally provided private good and x_{ij} are variables determining E_i^* (such as the individual's income and grants received by the municipality). Now, why should a respondent express anything but his or her true attitude? From equations (2) and (3), it is clear that a misrepresentation of a respondent's true attitudes might have two sources: The respondent makes an error in calculating his or her optimal demand (i.e., E_i^* is derived with an error in equation (3)) or the respondent misperceives the actual spending level in the municipality (does not observe the true E_i). These sources are mainly related to wrong attitudes (respondents may not accurately forecast their behaviour), but also to non-attitudes and that the respondents may make little effort in answering the questions. It turns out that we can use these potential errors when performing the estimations.

3.1 Errors in calculating the optimal demand function

Let us start with the case where the respondent makes an error in calculating his or her optimal demand. Assuming the error, ε_i , to be an independently and identically distributed random variable that enters the optimally derived demand function additively, equation (3) can be rewritten as

$$E_i^* = \beta_0 + \sum_{j=1}^J \beta_j x_{ij} - \varepsilon_i. \tag{4}$$

to, e.g., questions about racism. For these reasons, we believe the problems discussed by Bertrand and Mullainathan to be related to cognitive problems, social desirability, and soft attitudes to be of minor importance for the present paper.

Equation (4) implies that we can derive the probability for answering "less", "same" or "more". Before doing that note, however, that the assumption that the distribution function of ε is continuous implies that the probability of $E_i^* = E_i$ is zero for all i . This will be overcome by recasting the model in a way that was suggested by Luce (1956) and used by Bergstrom, Rubinfeld and Shapiro (1982): By introducing a threshold, formalized by the parameter δ , we allow for the fact that even though strict preference is transitive, indifference may be intransitive because consumers are unable to perceive very small differences. Hence, individuals are assumed to want

$$\begin{aligned}
& \text{"less" if } E_i^* < E_i - \delta \\
& \text{"same" if } (E_i - \delta) \leq E_i^* \leq (E_i + \delta) \\
& \text{"more" if } E_i^* > E_i + \delta.
\end{aligned} \tag{5}$$

By combining equations (4) and (5) and by assuming a functional form for ε_i , we would be able to derive a likelihood function for the stated responses. Assuming, for example, that ε_i follows a logistic distribution with mean zero and variance σ^2 , then ε_i/σ follows a logistic distribution with zero mean and unit variance. If we let $F(\cdot)$ denote the cumulative distribution function, the likelihood for each outcome can be expressed as:

$$\begin{aligned}
P(\text{less}) &= 1 - F\left(\frac{\beta_0}{\sigma} + \sum_{j=1}^J \left(\frac{\beta_j}{\sigma}\right) x_{ij} + \frac{1}{\sigma}\delta - \frac{1}{\sigma}E_i\right) \\
P(\text{same}) &= F\left(\frac{\beta_0}{\sigma} + \sum_{j=1}^J \left(\frac{\beta_j}{\sigma}\right) x_{ij} + \frac{1}{\sigma}\delta - \frac{1}{\sigma}E_i\right) - F\left(\frac{\beta_0}{\sigma} + \sum_{j=1}^J \left(\frac{\beta_j}{\sigma}\right) x_{ij} - \frac{1}{\sigma}\delta - \frac{1}{\sigma}E_i\right) \\
P(\text{more}) &= F\left(\frac{\beta_0}{\sigma} + \sum_{j=1}^J \left(\frac{\beta_j}{\sigma}\right) x_{ij} - \frac{1}{\sigma}\delta - \frac{1}{\sigma}E_i\right).
\end{aligned} \tag{6}$$

The likelihood function to be maximized is then given by

$$L = \prod_{\in \text{more}} P(\text{more}) \times \prod_{\in \text{less}} P(\text{less}) \times \prod_{\in \text{same}} [1 - [P(\text{more}) + P(\text{less})]], \tag{7}$$

that is, a standard ordered logit model. Maximizing equation (7) yields consistent estimates of the coefficients (β_j/σ) and $(1/\sigma)$.¹⁵ That is, by assuming that the respondents might report wrong attitudes because they make mistakes when calculating their optimal demand function, and by assuming that the errors follow a certain distribution, we are able to derive a likelihood function whose maximization yields consistent estimates.

¹⁵Note that by assuming ε to be normally distributed, we would end up in an ordered probit model. The likelihood function given in (7) is identical to the likelihood function maximized by Bergstrom et al. (1982). However, instead of phrasing it in measurement error terms, they characterized the survey as a random draw from a population that has been partitioned by a vector of personal and environmental attributes.

3.2 Misperception of the actual spending level

The second source that might lead to a misrepresentation of a respondent's true attitudes is if the respondent misperceives the actual spending level in the municipality. Assume that the respondent does not make any errors in calculating the optimal demand function, but perceives the actual spending level to be

$$E_i = E_i^{true} - \eta_i; \tag{8}$$

that is, the true spending level, E_i^{true} , plus an additive perception error, η_i , where η_i is an independently and identically distributed random variable. By combining equations (3), (5), and (8) and by assuming a functional form for η_i , we are once again able to derive a likelihood function for the stated responses, which will be maximized in the following empirical analysis.

4 Do voters' preferences correspond to those of their elected representatives?

The non-parametric analysis in section 2 indicates that there is a difference in the distribution of preferences between voters and politicians. However, since the expenditure levels as well as the municipalities' income differ between the different cross-sectional samples (i.e., over time), and also across municipalities within each cross section, we need to control for expenditures and income to be able to decide whether voters have the same preferences as politicians. In this section, we will therefore turn to a parametric analysis along the lines described in the previous section.

4.1 Baseline results

We start out by examining if politicians' preferences match those of the voters by estimating demand equations for total municipal spending as well as spending on the three welfare services schooling, child care and social care, and by comparing the preferences of voters with those of politicians. To control for differences in municipal income, we include central government grants and taxable income. Moreover, we include time dummies, capturing common time trends in preferences for different local public services (these can, e.g., be results of discussions in the media or influence by interest groups).¹⁶ The empirical specification, corresponding to equation (3), is thus

¹⁶The question of primary interest is whether voters elect politicians with the same preferences as their own, regardless of their personal characteristics. To that end, we compare the group of voters with the group of politicians without conditioning on the individuals' socio-economic characteristics. That is, we do not intend to explain the individuals' preferences as functions of individual-specific characteristics, such as age and gender. Given an observed difference in preferences between the two groups, it is naturally of interest to investigate what might explain such a difference. We return to

given by (since we have repeated cross sections, we add a time indicator, t , to the variables):

$$E_{it} = \beta_0 + \beta_1 T_{it} + \beta_2 G_{it} + \gamma POL_{it} + YEAR_{79/80} + YEAR_{91/93}, \quad (9)$$

where T_{it} is the taxable income per capita in individual i 's municipality in year t , G_{it} is intergovernmental grants per capita directed at the specific service¹⁷ received by the municipality, and POL_{it} is a dummy taking on the value of 1 if the respondent is a politician, and 0 otherwise.¹⁸ Estimates of γ then inform us whether politicians have different preferences for municipal services relative to voters. Using the empirical strategy put forth in section 3, we use an ordered logit model where we also control for the actual spending level in the municipality.¹⁹ Results from these estimations are given in Table 3.

The coefficient of primary interest is the parameter estimate for the politician dummy. The table shows the estimate to be significant for total spending as well as for all three services, indicating that the preferences of politicians differ from those of the voters. Furthermore, the sign of the coefficient is positive for total spending, schooling and social care, and negative for child care.

What is the interpretation of these results? As argued in Greene (1993, p 674), it is far from obvious how to interpret the coefficients in an ordered logit. In addition to the fact that the marginal effects of the regressors on the probabilities are not equal to the coefficients, the signs of the coefficients only inform us about the direction of the change in probability of the boulder alternatives, in our case $Prob(Y = more)$ (which is positive if the coefficient is positive) and $Prob(Y = less)$ (which is negative if the coefficient is positive). The direction of the change in probability of the middle-alternatives cannot be determined, in our case $Prob(Y = same)$. However, a positive sign of the dummy can still be interpreted as an indication that politicians prefer more spending than voters.²⁰ The results thus indicate that politicians have preferences for a higher level of total spending and spending on schooling and social care, as this issue in section 5.

¹⁷For 1991, grants are available for the social sector in total, but not for child care and social care separately. We have, however, divided grants between the two sectors according to how spending on each sector relates to spending in the total social sector. In 1993, there was a major grant reform, where most of the targeted grants became general. To obtain a figure of grants directed to each sector, we calculated the fractions of total spending on the different services and divided grants accordingly. However, the estimations for 1991/1993 using total grants instead yield the same estimated coefficients and statistical significance levels. For total spending, we control for total intergovernmental grants.

¹⁸Since we do not observe the same municipalities over time, we cannot control for a municipality specific fixed effect.

¹⁹In Table 3, column 1 we choose to control for the municipal tax rate rather than the total level of spending. We believe this variable to be measured with fewer errors. However, the results remain unchanged if we instead control for total municipal spending.

²⁰Given that the coefficient is positive, we know that the probability for a politician of answering

compared to voters, and preferences for lower spending on child care.

Table 3: Estimation results for total spending and spending on schooling, child care, and social care

	Total Spending	Schooling	Child care	Social care
Tax rate/expenditures ($\times 10^{-5}$)	-0.019*** (0.01)	-9.420*** (0.26)	-7.840* (4.41)	-4.83 (6.00)
Taxable income ($\times 10^{-3}$)	0.231 (0.24)	2.465*** (0.23)	1.981*** (0.34)	-0.08 (0.27)
Grants ($\times 10^{-5}$)	2.48*** (0.08)	4.390 (2.91)	2.446*** (0.68)	8.460 (17.4)
Politician	0.759*** (0.04)	0.456*** (0.04)	-0.137*** (0.05)	0.706*** (0.04)
<i>YEAR</i> _{79/80}	0.067 (0.07)	-0.071 (0.09)	-1.335*** (0.08)	-0.333*** (0.07)
<i>YEAR</i> _{91/93}	0.243** (0.10)	-0.176 (0.12)	-2.012*** (0.12)	-0.279** (0.11)
# Obs.	9911	9658	8656	7858
Log L	-9849.6	-9678.2	-8261.0	-8002.8

Note: Standard errors corrected for heteroscedasticity (White 1980) are shown in parenthesis. ***, ** and * denote significance at the 1, 5 and 10 percent level, respectively. Expenditures, taxable income and grants are expressed in 1991 SEK per capita. The pooled cross section covers 36 municipalities for the years 1966/68, 25 for 1979/80 and 28 for the years 1991/93.

Focusing on the remaining parameters, we find that expenditures enter negatively (significantly so for total spending and spending on schooling and child care) and that taxable income and grants enter positively (significantly so for schooling and child care).²¹ The signs are as anticipated and in accordance with economic theory; the higher is the income in the municipality, the higher is the probability of an individual answering the question with "more", and the higher is the level of expenditures, the lower is the probability of a "more"-answer.

From the above findings, we conclude that politicians have different preferences than voters. Are these differences of any economic importance? We examine the economic significance by calculating marginal effects. Focusing on the variable of primary interest, the dummy for politicians, we calculate the effect of a discrete change in the dummy variable from 0 to 1. The results from these calculations are presented in Table 4.

"more" is larger than for a voter, and that the probability of answering "less" is smaller for a politician than for a voter. It follows that a positive coefficient can be interpreted as politicians demanding more municipal spending than voters.

²¹All expenditure variables are normalized with the population in each municipality. Alternatively, normalizing with "potential" users (e.g., school expenditures per number of children of school age in the municipality or child care expenditures per number of children of child care age in the municipality) does not change the results.

Table 4: Marginal effects of the politician dummy

	Total spending	Schooling	Child care	Social care
Prob(less)	-0.100*** (0.005)	-0.059*** (0.005)	0.018*** (0.006)	-0.163*** (0.001)
Prob(same)	-0.065*** (0.005)	-0.051*** (0.005)	0.002*** (0.005)	0.058*** (0.005)
Prob(more)	0.166*** (0.009)	0.110*** (0.010)	-0.034*** (0.011)	0.104*** (0.006)

Note: Standard errors are shown in parenthesis. ***, ** and * denote significance at the 1, 5 and 10 percent level, respectively.

Since there are three outcomes, it is not obvious how to interpret the marginal effects, even though the sign of the effect of being a politician can be determined on the middle alternative in this case. The perhaps most promising way is to compare the change in the probability that a person wants "more" spending rather than "same" *and* "less" (the third row in Table 4), or the change in the probability of a person wanting "less" spending rather than "same" *and* "more" (the first row in Table 4).

The marginal effects for total municipal spending in Table 4, column 1, show that the probability of answering "less" decreases by 10 percent if the respondent is a politician and the probability of answering "more" increases by 17 percent. Regarding the different services, the difference in preferences is largest for social care: The probability of answering "less" decreases the most (by 16 percentage points) and the probability of answering "more" increases by 10 percentage points. Following the same line of reasoning for schooling, the probability of answering "less" decreases by 6 percent and the probability of answering "more" increases by 11 percent. The marginal effect for child care is the smallest in absolute terms. Hence, according to our results, the difference in preferences between voters and politicians is of economic significance for total spending, schooling and social care expenditures.²²

4.2 Sensitivity analysis

In this section, we address the sensitivity of our results with respect to correlated errors within and across groups and with respect to party affiliation.

4.2.1 Allowing for correlated errors within groups

So far, we have assumed the regression errors to be independent across observations. Given that politicians interact within the local council and that voters within a municipality are exposed to the same influences, for example by reading the local newspaper, it is plausible that the errors are correlated within each group (i.e., correlated within

²² A way of visualizing the differences in preferences is to estimate and plot the distributions of preferences for the two groups using Kernel density estimation. The estimated preference distributions are displayed in the Appendix.

the group of voters and within the group of politicians) and within each municipality. To examine the sensitivity of the results in this respect, we re-estimate the parsimonious model presented in Table 3, allowing for the possibility that the errors are correlated both within municipality and within group. The results are not affected by allowing for within group correlation. When allowing for correlation within municipality as well as within both municipality and within group, the point estimate on the politician dummy for child care is no longer significant at conventional levels of significance.²³ A potential explanation for this result is that the correlation within municipality and within municipality and group could pick up omitted variables that are common, such as age structure and gender. We will return to this issue in more detail in section 5.1. In the following, the results are not sensitive to correlation in the errors. To save space, the estimation results are not reported but are available upon request.

4.2.2 Allowing for different errors and behavioural parameters across groups

The empirical strategy in section 3 outlined a model where we allowed the individuals to make errors when reporting their preferences. We implicitly assumed that the errors voters and politicians make are identically distributed. There are, however, reasons to believe that the errors might differ systematically between the two groups. For example, if there is asymmetric information about the municipalities' budget constraints, this will affect both the derived optimal demand function and the perception of the actual spending level: Politicians can be expected to have an information advantage and they will therefore not misperceive the actual spending level to the same extent as voters and hence, they will make smaller errors when calculating the optimal demand function. Furthermore, since it is the responsibility of politicians to have opinions about the issues raised in the survey, they might put more effort into answering the questions than voters. This implies that we would expect a systematic difference in the errors between the groups. More precisely, we would expect the variance of the error term to be smaller for politicians.

Technically, this is handled in the following way: Instead of assuming that ε_i (η_i) follows a logistic distribution with mean zero and variance σ^2 , we assume that ε_i^v follows a logistic distribution with mean zero and variance σ^{2v} , and that ε_i^p follows a logistic distribution with mean zero and variance σ^{2p} (where v denotes voters and p politicians). This results in two different log-likelihood expressions to maximize

²³We allow for correlated errors using the clustering routine in STATA. For within group correlation, we cluster the standard errors on the politician-dummy; for within municipality, we cluster on municipality. When allowing for correlation within group and within municipality, we cluster on a variable which is allowed to vary across the two groups as well as across municipalities.

Table 5: Estimation results for total spending and spending on schooling, day care, and social care: fully interacted model

	Total Spending	Schooling	Child care	Social care
Tax rate/expenditures ($\times 10^{-4}$)	-0.019** (0.01)	-0.707** (0.36)	-1.141*** (0.61)	-0.735 (1.11)
Expenditures $\times pol$ ($\times 10^{-4}$)	0.030 (0.02)	0.704 (0.55)	-0.008 (0.89)	-1.873 (1.38)
# Obs.	9687	9658	8656	7858
Log L	-9474.1	-9628.2	-8227.9	-7988.8

Note: Standard errors corrected for heteroscedasticity (White 1980) are shown in parenthesis. ***, ** and * denote significance at the 1, 5 and 10 percent level, respectively. Expenditures, taxable income and grants are expressed in 1991 SEK per capita. The model is fully interacted with *pol* taking the value of 1 if the respondent is a politician, and 0 otherwise.

with different parameter vectors for politicians and voters, which is equivalent to maximizing a fully interacted model.²⁴

Considering equation (6), we see that the estimated coefficients consist of two components; the parameter-vector (β) and the standard deviation of the error (σ^2). This is true for all parameters except the coefficient for the expenditure variable, which is a function of σ^2 alone. Hence, if we want to examine whether the errors committed by voters and politicians have different variation, this can be done by testing whether the coefficient for the expenditures variable interacted with the politician dummy is significant. As is clear from Table 5, the coefficient for expenditures $\times pol$ is insignificant, indicating that there is no significant difference in the variance of the errors across groups.²⁵

4.2.3 Controlling for party affiliation

The finding that politicians and voters have different preferences for local public goods might depend on party affiliation.²⁶ More specifically, the difference might be explained by the relationship between voters and politicians in one political party alone. As a sensitivity analysis on the generality of our results in this respect, we will divide the sample into different political blocs²⁷ and re-estimate the parsimonious

²⁴That is, the parsimonious model in section 4.1 is fully interacted with the politician dummy. Note that when estimating a fully interacted model, we allow voters and politicians to also have different β -vectors. More about this below.

²⁵In the following analysis we use the parsimonious model, and not the fully interacted model, since we, in this section, mainly are interested in examining the robustness of our baseline results. In the next section, we will return to potential explanations for the observed difference in preferences.

²⁶Each voter is assigned a party affiliation according to the party for which the voter cast his or her vote in the local election.

²⁷Even though Sweden is a multiparty system, it is standard to treat Sweden as a bipartisan system among political scientists and economists (see, e.g., Alesina, Roubini and Cohen 1997). The parties can be divided into a left-wing and a right-wing bloc. Following the categorization in Petersson (1992), the left-wing parties are the Left Party and the Social Democratic Party, and the parties characterized as right-wing are the Conservative Party, the Centrist Party and the Liberal Party (a

Table 6: Politicians vs. voters: By party affiliation

	Total Spending	Schooling	Child care	Social care
Total	0.759*** (0.04)	0.456*** (0.04)	-0.137*** (0.05)	0.706*** (0.04)
Left-wing politicians – left-wing voters	1.372*** (0.07)	0.833*** (0.07)	0.395*** (0.08)	1.082*** (0.07)
Right-wing politicians – right-wing voters	0.253*** (0.06)	0.177*** (0.06)	-0.552*** (0.07)	0.549*** (0.07)
Left-wing politicians – right-wing voters	2.367*** (0.07)	0.933*** (0.07)	0.996*** (0.07)	2.204*** (0.08)
Right-wing politicians – left-wing voters	-0.707*** (0.06)	0.009 (0.07)	-1.195*** (0.07)	-0.424*** (0.07)

Note: Standard errors corrected for heteroscedasticity (White 1980) are shown in parenthesis. ***, ** and * denote significance at the 1, 5 and 10 percent level, respectively. We only report the coefficient for the politician dummy.

model from section 4.1. The preferences of left-wing (right-wing) politicians are compared to those of left-wing (right-wing) voters. Table 6 presents the results.²⁸

Concentrating on the sub-sample "left-wing", it is clear from the second row in Table 6 that left-wing politicians do not have the same preferences as left-wing voters; they want significantly more to be spent on all three welfare services (including child care) as well as on total municipal services. Using the sub-sample "right-wing", the results show that right-wing politicians want significantly more to be spent on total municipal services, schooling and social care, but less on child care, than do right-wing voters. These estimates imply that politicians typically do not have the same preferences as voters, even within political blocs. For child care, for example, the results suggest the difference in preferences to be even greater within political blocs.²⁹

To further investigate the results, we compare left-wing politicians to right-wing voters. The idea is that given that both politicians and left-wings typically favour more spending on schooling and social care than voters and right-wings, there would be cause for concern if we were to find that right-wing voters prefer significantly more spending than do left-wing politicians. However, we find that left-wing politicians prefer significantly more spending than right-wing voters for all three services as well as total municipal services (c.f. the third row in Table 6). To make the picture complete, we compare right-wing politicians to left-wing voters. As can be seen in the lower part of Table 6, right-wing politicians want significantly less spending on

fourth party, the Christian Democratic party, was included in 1988, and a fifth party, New Democracy, was added in 1991).

²⁸We only report the coefficient for the dummy variable indicating whether the respondent is a voter or a politician, since this is the variable of primary interest. The control variables used in each regression are those presented in Table 3.

²⁹The difference is negative for the left-wing bloc and positive for the right-wing bloc.

total municipal services, child care and social care than do left-wing voters. This suggests party affiliation to be stronger than the mere fact of being a politician.

5 Why do the preferences of voters and politicians differ?

The results in the previous section show that there is a difference between politicians' and voters' preferences. The difference in preferences is both robust and economically significant. Given that politicians implement their own preferences, as recent research has shown, why do voters elect politicians with preferences different from their own? This section addresses three potential explanations for this pattern.

5.1 The selection of politicians

From descriptive statistics, shown in Table A.2 in the Appendix, we see that politicians are typically older, married males with a high level of education, which implies that they are not representative of the whole population. This section aims at investigating whether this heterogeneity can explain the observed difference in preferences or if the result is a pure effect of being a politician. Indeed, this is an important question when discussing how to improve the match between politicians' preferences and public opinion. Consider the extended model where, in addition to the municipality-specific variables, we control for individual-specific characteristics:

$$E_{it} = \beta_0 + \beta_1 T_{it} + \beta_2 G_{it} + \alpha' X + \gamma POL_{it} + YEAR_{79/80} + YEAR_{91/93}, \quad (10)$$

where X is a vector containing the individual-specific characteristics gender, age, age squared, educational level and marital status.³⁰ In this specification, γ tells us whether politicians have different preferences than voters, *given* individual-specific characteristics. That is, an insignificant estimate on γ indicates that the difference in preferences between voters and politicians found in the parsimonious model can be explained by the fact that the two groups have different socio-economic characteristics. The potential problem of differing preferences between voters and politicians could then be solved by ensuring that politicians are representative of the electorate with respect to socio-economic characteristics. A significant estimate on γ would, however, indicate a more fundamental difference in preferences. The results are given in Table 7.

The results clearly show that when controlling for individual-specific characteristics, the dummy for politicians still enters significantly. This indicates that the difference in composition between the groups cannot explain the results obtained

³⁰Note that by using this standard set of controls, we implicitly control for the respondents' income.

Table 7: Estimation results for total spending and spending on schooling, child care, and social care: extended model

	Total Spending	Schooling	Child care	Social care
Tax rate/expenditures ($\times 10^{-5}$)	-0.018** (0.01)	-8.54*** (0.26)	-10.23** (4.52)	-6.700 (6.13)
Taxable income ($\times 10^{-3}$)	0.397 (0.25)	2.297*** (0.23)	2.155*** (0.36)	0.000 (0.28)
Grants ($\times 10^{-5}$)	2.31*** (0.87)	0.993 (2.98)	21.56*** (6.96)	-11.62 (17.64)
Education	-0.325*** (0.05)	0.083* (0.05)	-0.305*** (0.05)	-0.244*** (0.05)
Female	0.131*** (0.04)	0.212*** (0.042)	0.367*** (0.05)	0.259*** (0.05)
Age	0.004 (0.01)	0.021** (0.08)	-0.059*** (0.01)	-0.001 (0.01)
Age ² ($\times 10^{-4}$)	-2.02** (0.85)	-4.26*** (0.88)	2.762*** (0.97)	0.818 (1.00)
Marital status	-0.122 (0.05)	0.174*** (0.04)	0.177*** (0.05)	0.008 (0.05)
Politician	0.962*** (0.05)	0.620*** (0.05)	0.320*** (0.05)	0.874*** (0.05)
$YEAR_{79/80}$	0.093 (0.07)	-0.120 (0.09)	-1.414*** (0.09)	-0.327*** (0.07)
$YEAR_{91/93}$	0.353*** (0.10)	0.248** (0.13)	-1.88*** (0.13)	-0.260*** (0.11)
# Obs.	9687	9481	8504	7672
Log L	-9538.3	-9362.1	-7866.8	-7765.5

Note: Standard errors corrected for heteroscedasticity (White 1980) are shown in parenthesis. ***, ** and * denote significance at the 1, 5 and 10 percent level, respectively. Expenditures, taxable income and grants are expressed in 1991 SEK per capita. The pooled cross section covers 37 municipalities for the years 1966/68, 25 for 1979/80 and 28 for the years 1991/93.

when estimating the parsimonious model. When comparing a politician of a certain age, sex, educational level and marital status, to a voter with identical characteristics, the politician still has preferences for a higher level of spending on the locally provided services. Note that, in contrast to the previous result, the dummy for politicians is positive and significant also for child care.³¹

Turning to the socio-economic characteristics, we note that females prefer higher spending on all three welfare services than do males, individuals with higher education prefer more spending on schooling, but less on child care and social care, married individuals more spending on schooling and child care (this result seems intuitive, given that marriage is a proxy for having children) and the older is the individual, the more spending on schooling does he/she demand and the less on child care. Overall, the effects of socio-economic background might explain the change in sign of the dummy for politicians for child care. Given that males, highly educated, and older people have a lower demand for child care and given that these groups are over-represented among politicians, controlling for these background characteristics is likely

³¹This result is robust to allowing for correlated errors within municipality and within group.

to affect the results.

To conclude, we find socio-economic characteristics to be of importance for individuals' demand for local public services. It cannot explain the observed difference between voters and their representatives, however. The results suggest that, for example, increasing female representation will not necessarily imply that policy choices will, to a larger extent, reflect the policy preferences of female voters.³² Hence, increasing the share of female politicians need not be the only issue when trying to increase the political representation of women. However, the potential indirect effect of an increase in participation is not to be neglected. An increased share of females in the political sphere might induce a larger involvement of female voters in the policy-making process. Hence, female voters may, to a greater extent, elect politicians with the same preferences as their own, irrespective of gender. This is consistent with the idea that political communication is influenced by citizens and leaders being of the same sex. The effect of reservation policy for women on the involvement of women finds some support in Chattopadhyay and Duflo (2004).

5.2 Differences in preferences and salience

Even though the policy space is multidimensional, each citizen only has one vote to cast. This implies that voters may elect politicians with the same preferences as themselves for some services, but not for others. We find that politicians prefer a higher level of spending on all public services compared to voters; however, the size of the observed difference depends on the spending category. The three services analysed in the present paper are somewhat different in nature. Whereas schooling and child care foremost benefit parents, social welfare services are targeted to the poor. It is likely that the three services are considered as more or less salient to the voters. In this section, we want to investigate whether the salience of the different public services can explain the difference in preferences.

The importance of salience is discussed by, e.g., Besley and Coate (2002) in a related context. They show that different preferences may be an optimal choice for voters if the policy space is multidimensional. In this case, preferences may differ for some less salient issue, but correspond for the most important ones. Moreover, in the political science literature (see, e.g., Page and Shapiro, 1983), it has been argued that politicians should be closest to voters on issues considered to be of most importance for the voters. Considering that we analyse three different local services, we will compare the differences in preferences for the welfare services linking these differences

³²A further test could be to estimate the demand functions using only female voters and female politicians. This is done in the working paper version of this paper, see Dahlberg, Mörk and Ågren (2004). The results support the findings in this section: female politicians typically have different preferences than female voters.

to the salience of the issues. Is it for the least salient issue that we observe the largest differences in preferences between voters and politicians? Following Page and Shapiro (1983), we measure salience as the proportion of responding voters answering "do not know/no opinion" when asked whether they want less, the same or more to be spent on a certain welfare service. A low proportion answering "do not know/no opinion" is interpreted as a sign of more public interest. This measure of salience is reported in Table 8. According to the table, social care exhibits the lowest degree of salience, while more than 39 percent of the voters answered "do not know/no opinion" when asked about spending on social care, the corresponding figures for schooling and child care are 19 and 31 percent, respectively.

Table 8: Salience: Proportion answering "do not know/no opinion"

Schooling	Child care	Social care
19.0	31.0	39.3

Turning to the differences between voters' and politicians' preferences, both the calculated marginal effects and the kernel density estimations show that it is for the least salient issue that the largest difference is observed. This finding supports the argument in Besley and Coate (2002). Preferences are, however, most alike for child care and not for schooling which, according to Table 8, is the most salient issue.

5.3 Differences in preferences and trust in politicians

As discussed earlier, rational voters can choose politicians with certain preferences such that he or she will implement the desired policy. Voters can strategically elect politicians with preferences for a higher level of spending than the level preferred by the electorate. Besley and Coate (2003), for example, discuss centralization vs decentralization and show that voters will use strategic delegation in a centralized setting. Similarly, one might think of local politicians, representing different groups of individuals, negotiating within the local council on how much to spend on different local services. In such a setting, it might be optimal for a voter to elect politicians with preferences for a higher level of spending, for a certain service, as compared to the voter.

We investigate whether the electorate has intentionally elected politicians with preferences differing from their own by linking the observed difference to the voters' stated trust in local politicians. In the presence of strategic delegation, rational voters choose to vote for politicians with different preferences than their own. Therefore, we would not expect an observed difference to be negatively associated with the perceived trust in politicians. An agreement would then imply an insignificant or positive correlation.³³

³³Moreover, relating to a multidimensional policy space and the issue of salience, if different

As an indication of whether voters are satisfied with the differences in preferences, we estimate trust equations to examine whether some of the variation in stated trust can be explained by the estimated difference in preferences between voters and politicians.

The methodology is as follows. First, by means of ordered logit estimations, individual voters' and politicians' preferences are estimated for the different local public services. The estimations are based on the richest model specification, c.f. eq. (10), that is, a specification where we control for municipality characteristics, individual characteristics, and interaction terms where we have interacted the politician dummy with all explanatory variables. Second, using the ordered logit estimates, we calculate predicted probabilities for all individuals (i.e., for both voters and politicians), thereby obtaining estimated preferences when controlling for a number of variables. Third, for each municipality, we calculate the absolute difference between the mean politician's preferences and each voter's estimated preferences.³⁴

Unfortunately, there are only reliable indicators for trust for the endpoint years (i.e., for 1966/68 and 1991/93). The analysis in this section is therefore restricted to using data for these two cross sections. Trust is defined as dummy variables taking on the value of 1 if the voter expresses trust in a number of named local politicians and distrust in none of the local politicians, and 0 otherwise. We elaborate with two different trust-variables with different degree of distrust, labeled as "soft" and "hard".³⁵

The trust results are presented in Table 9. As can be see from the table, only one of the parameters on the difference in preferences is significant at the 10 percent level. In addition, the estimate is positive, indicating that the larger the differences between voters' and politicians' preferences for spending on schooling, the larger is the voters' trust in politicians. The results suggest that voters are satisfied with the observed differences.

preferences are the result of an optimal choice by voters, we would not expect to observe a correlation between the voters' stated trust and the estimated difference for any of the spending categories.

³⁴There is a need to find a "typical" politician in each individual's municipality to determine which politician's preferences to compare with for each individual. We have elaborated with two definitions: The mean of the estimated preferences of politicians and the median of the estimated preferences. The results are very similar and we have chosen to present those results where we use the politician with mean preferences. The reason for using absolute values is that we want a negative deviation to attribute as much to any potential decline in trust as a positive deviation of the same magnitude.

³⁵In order to be coded a 0 in the "hard" definition, the respondent must really express distrust in some of the politicians, whereas the respondent is coded as a 0 according to the "soft" definition, even if he/she expresses neither trust, nor distrust or has no opinion. See the Appendix for the exact construction of the two trust variables.

Table 9: Trust-estimations

	Trust "soft" definition	Trust "hard" definition
Total spending	-0.022 (0.047)	-0.055 (0.062)
Schooling	0.152* (0.082)	0.085 (0.110)
Child care	0.052 (0.088)	0.031 (0.108)
Social care	-0.052 (0.074)	-0.043 (0.099)
# Obs.	5112	5112

Note: Standard errors corrected for heteroscedasticity (White 1980) are shown in parenthesis. ***, ** and * denote significance at the 1, 5 and 10 percent level, respectively. A cross section indicator for 1991 and a constant are included.

6 Conclusions

The main conclusion reached in this paper is that citizens elect representatives with other preferences for local public services than their own. More precisely, our estimates show that politicians want significantly more to be spent on total municipal services, schooling and social care, but less on child care, than do voters. Hence, this result indicates that voters do not elect politicians with the same preferences for local public services as their own. If politicians implement their own preferred policy if elected, the implemented policy will hence not be in line with the preferences of the electorate.

This paper also discusses several potential explanations for this somewhat surprising result. One of these explanations might be the selection of politicians: given that different groups have different preferences and given that some groups are underrepresented in the political sphere, the differences revealed by the empirical analysis might be expected. Taking the difference in individual-specific characteristics between voters and their representatives into account, we do, however, find that politicians have preferences for significantly higher spending than voters. This result is consistent for all three welfare services under study as well as for total spending. Hence, our results indicate that the representation of different socio-economic groups does not necessarily lead to a larger degree of representation of these groups' agendas.

Divergence in preferences between voters and politicians might also be an optimal choice from the voters' point of view, if policy space is multidimensional. We find the largest difference in preferences for social care which, according to voters, is the least salient local public service.

Finally, it might also be optimal for voters to strategically elect politicians with preferences other than their own (strategic delegation). This can be the result of policy choices being decided in negotiations between politicians representing different groups. In this case, voters would not be dissatisfied with the observed differences. To

get a first indication of whether this is the case, we investigate whether the electorate has intentionally elected politicians with preferences differing from their own by linking the observed difference to the voters' stated trust (or distrust) in local politicians. The results suggest that there is no relationship between the estimated differences in preferences and voters' stated trust in politicians. The trust results must be interpreted with some care, however. The data only covers two elections (1966 and 1991) and, more importantly, voters state their perceived trust in local politicians before each local election, which implies that if voters distrust local politicians, they have the option of ousting them out of office. An alternative approach is to investigate the relationship between the observed differences in preferences and politicians' chances of reelection.

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A Appendix

A.1 Description of the data

A.1.1 Survey data

The Survey data is handled and distributed by the *Swedish Social Science Data Service* (SSD). Neither SSD, nor the principal investigators bear responsibility for the analysis in this paper.

Year:	1966	1968
SSD:	0111	0110
Population:	The Electorate	Local Politicians
No of Municipalities:	36	36
Principal Investigator:	Jörgen Westerståhl, Dep of Political Science, Göteborg University	Lars Strömberg, Dep of Political Science, Göteborg University
Year:	1979	1979/80
SSD:	0100	0101
Population:	The Electorate	Local Politicians
No of Municipalities:	50	50
Principal Investigator:	Jörgen Westerståhl, Dep of Political Science, Göteborg University	Gunnar Wallin, Dep of Political Science, Stockholm University
Year:	1991	1993
SSD:	0306	0482
Population:	The Electorate	Local Politicians
No of Municipalities:	28	32
Principal Investigator:	Folke Johansson, Dep of Political Science, Göteborg University	Henry Bäck, Dep of Political Science, Stockholm University

The survey data on voters and politicians is pooled resulting in three cross sections, namely 1966/68, 1979/80 and 1991/93. *Statistics Sweden* has provided us with the municipality-level register data.³⁶

³⁶Included municipalities in the pooled cross-section 1966/68: Höör, Bodafors, Karlsborg, Hultsfred, Torshäll, Svegs Köping, Ängelholm, Alingsås, Strängnäs, Nybro, Köping, Sandviken, Karlskoga, Borås, Uppsala, Helsingborg, Uddevalla, Gävle, Skurup, Visnum, Ramsjö, Fliseryd, Mellösa, Åsele, Värnmo, Skara, Mora Köping, Mjölby, Arvika, Överkalix, Ätran, Stora Mellösa, Bygdeå, Härslöv, Mörsil.

Included municipalities in the pooled cross section 1979/80: Upplands Väsby, Tyresö, Nacka, Tierp, Uppsala, Enköping, Vingåker, Katrineholm, Valdemarsvik, Gnosjö, Eksjö, Tranås, Ljungby, Torsås, Kalmar, Borgholm, Östra Göinge, Örkelljunga, Bromölla, Staffanstorps, Kävlinge, Sjöbo, Trelleborg, Halmstad, Partille, Munkedal, Lysekil, Tranemo, Grästorp, Lidköping, Kil, Surahammar, Berg, Härjedalen, Sorsele, Kalix, Gällivare, Luleå.

Included municipalities in the pooled cross section 1991/93: Ale, Eksjö, Enköping, Grästorp, Gällivare, Göteborg, Härjedalen, Kalix, Kalmar, Katrineholm, Kil, Kävlinge, Lidköping, Luleå, Lysekil, Munkedal, Nacka, Sjöbo, Sorsele, Staffanstorps, Surahammar, Tierp, Tranemo, Trelleborg, Töreboda,

A.1.2 Construction of preferences

The respondents are asked to state their preferences for total local government expenditures as well as on the following categories: schooling, child care, elderly care, cultural activity, roads and social care. More specifically, the questions are the following:

Total spending (1966/1968):

Municipal efforts typically have effects on local taxes. Which of the following statements do you think is most appropriate for your municipality?

- 1) There are so many things that need to be done in this municipality that efforts ought to be increased even if this means that local taxes must be increased.
- 2) The local taxes are largely correct given the need of municipal efforts.
- 3) It ought to be possible to decrease spending, so that the local tax can also be decreased.
- 4) Efforts can be improved without having to raise taxes.
- 5) Do not know/Do not want to answer

Total spending (1979/1980 and 1991/1993):

It is more urgent to reduce the local tax rate than to increase the level of local services? Do you

- 1) agree completely
- 2) agree on the whole
- 3) disagree on the whole
- 4) disagree strongly
- 5) have no opinion

Different spending categories:

Certain activities for which the municipalities are responsible are presented below. Please indicate whether you feel that it is urgent that your municipality does more than it is doing at present, that generally speaking things are satisfactory at present, that the effort of the municipality could be diminished, or that you have no opinion about it.

To construct the variable preferences for total spending for the 1966/1968-survey, we concentrate on the first three alternatives and interpret (1) as preferences for increased local expenditures, (2) as being satisfied with the current expenditure level and (3) as preferences for lower local expenditures.³⁷ For the later surveys, we in-

Upplands Väsby, Uppsala, Västerås.

³⁷It would be interesting to analyse alternative (4), since this gives an indication about the respondents' view on municipal efficiency. However, only 10 voters and 12 politicians responded to this alternative. These observations are therefore excluded.

interpret (1) as preferences for lower spending and taxes, (2) and (3) as being satisfied with the current spending level, and (4) as preferences for higher spending and taxes.

To construct the variable preferences for schooling, child care and social care, we must control for the individual's willingness to pay. The respondents' announced preferences for an increased/decreased level of spending is combined with the corresponding tax increase/decrease. Further, the announced preferences for the welfare services under study are compared with the average preferences for local public services.³⁸ The questions are combined in the following manner: If the respondent answers Q2 with "more" or "same", answers Q1 with "agree completely" (for 1966/1968 with (3)) and, on average, has lower preferences for the public service under study, he/she is assumed to have preferences for less spending. If, on the other hand, the respondent answers Q2 with "more", answers Q1 with "agree on the whole" (for 1966/1968 with (2)) and has lower, or the same preferences for the public service under study than for the average, the respondent is assumed to be satisfied with the level of expenditure. Finally, if Q2 is answered with "same", Q1 with "agree on the whole" (for 1966/1968 with (3)) and the respondent expresses lower or the same preferences for the particular public service than for the average public service, the respondent is coded as demanding a decrease in spending.

A.1.3 Construction of the trust-variables

To create the trust-variables used in section 5.3, we use the following questions from the voter-surveys in 1966 and 1991:

1966:

Consider this list of members of the municipal council (a number of names). Do you:

- 1) Neither trust nor distrust any of the mentioned names.
- 2) Have a strong trust in all mentioned names
- 3) Have a strong trust in one to three names and not have a distrust in any of the names.
- 4) Have a strong trust in four names or more and not have a strong distrust in any of the names.
- 5) Distrust all mentioned names
- 6) Distrust one to three names and not have a strong trust in any of the names.
- 7) Distrust four names or more and not have a strong trust in any of the names.

³⁸The preferences for the average public service are calculated by coding each answer as follows: 1 if the respondent expresses a preference for less spending, 2 if satisfied and 3 if the respondent expresses a preference for more spending. A mean is calculated, yielding a value ranging from 1 to 3.

8) Have both a strong trust and a strong distrust in one to three names and no opinion about the other names.

9) Have both a strong trust and a strong distrust in four names or more and no opinion about the other names.

1991:

How much do you trust the way local politicians perform their work?

- 1) Very high trust
- 2) Fairly large trust
- 3) Neither trust nor distrust
- 4) Fairly low trust
- 5) Very low trust
- 7) Several options
- 8) No opinion.

We construct two different variables measuring trust; trust(soft definition) and trust(hard definition):

Trust(soft definition) is given the value of 1 if the voter answers the surveys of 1966 by 2, 3 or 4 and of 1991 by 1 or 2, and zero if he/she answers that of 1966 by 1, 5, 6, 7, 8 or 9 and 1991 by 3, 4, 5, 7 or 8.

Trust(hard definition) is given the value of 1 if the voter answers the surveys of 1966 by 2, 3 or 4 and of 1991 with 1 or 2, and zero if he/she answers that of 1966 with 5, 6 or 7 and 1991 with 4 or 5.

A.1.4 Variable definitions and summary statistics

Table A.1 Variable Definitions

Tax rate	municipal tax rate in %
Spending	municipal spending per capita
Grants	government grants per capita
Taxable Income	municipal taxable income per capita
Politician	1 if the respondent is a local politician, 0 otherwise
Female	1 if female, 0 otherwise
Education	1 if the respondent has higher education, 0 otherwise
Marital Status	1 if the respondent is married (or cohabiting), 0 otherwise
Age	the respondent's age

Table A.2 Summary Statistics

	Voters	Politicians
Tax rate %	16.68 (4.63)	16.33 (3.93)
Spending Schooling	6419.87 (1878.72)	6120.42 (1673.82)
Spending Child Care	3174.57 (1793.87)	2189.27 (1749.54)
Spending Social Care	1294.77 (1085.72)	978.44 (1077.32)
Grants Total	7634.56 (2751.92)	6480.40 (3125.55)
Grants Schooling	3113.34 (841.90)	2694.75 (1123.16)
Grants Child Care	1210.04 (683.94)	702.72 (598.10)
Grants Social Care	451.07 (366.28)	271.55 (328.02)
Taxable Income	716.76 (159.88)	671.99 (172.97)
Female	0.50 (0.50)	0.26 (0.44)
Education	0.28 (0.45)	0.44 (0.50)
Marital Status	0.62 (0.49)	0.74 (0.44)
Age	45.16 (16.77)	53.07 (11.31)

Note: Spending, taxable income and grants are expressed in 1991 SEK per capita. The election studies for voters: 1966, 1979, 1991. For politicians: 1968, 1980, 1993. Standard deviations in parenthesis.

Table A.3 Average stated preferences

	Voters	Politicians
Preferences Taxes	2.04 (0.68)	2.29 (0.65)
Preferences Schooling	2.17 (0.74)	2.35 (0.67)
Preferences Child Care	2.37 (0.76)	2.35 (0.75)
Preferences Social Care	1.70 (0.74)	1.95 (0.66)

A.2 A visualization of the estimated preference distributions

In section 4.1, we calculated marginal effects to evaluate the economic importance of the differences in preferences. Although this is the standard procedure in ordered logit models, it has a number of drawbacks. First, since the marginal effects are evaluated at the mean of the variables included in the model, it relies on the average impact. Second, as discussed above, three outcomes complicate the interpretation of the marginal effects. A more descriptive approach is to estimate and plot the distribution of preferences for voters and politicians separately. To get a more comprehensive view of the difference in preferences, this section presents and visualizes the estimated

distributions.

The procedure is as follows: the first step involves estimation of an ordered logit model to obtain estimates of the preference parameters. In the second step, we calculate predicted probabilities using the estimated preference parameters. Finally, a kernel density estimator is used to estimate the density functions of the predicted probabilities (i.e., of the preferences).

In calculating the predicted probabilities, we use the extended models presented in Table 7.³⁹ That is, the objective is to examine differences in preferences between voters and politicians when individual-specific characteristics have been taken into account. The kernel used in the estimations is the Epanechnikov kernel.⁴⁰ To construct a continuous variable of preferences, the predicted probabilities are calculated as follows:

$$\sum_i \text{Prob}(\text{pref} = i) \times i,$$

where Prob is the probability of outcome i , where i is ranging from 1 to 3, indicating less, same and more.

The estimated preference distributions are presented in Figure 1. The figure shows that the difference in preferences between voters and politicians is most clear for schooling and social care. Focusing on social care, the mass of the distribution for politicians' preferences is completely shifted to the right of the mass of the voters' preference distribution. Even though not as clear for schooling, the preference distribution of the politicians is shifted to the right at all points of the distribution, as compared to voters. For child care, it is difficult to detect a difference. The kernels presented support and are in line with the marginal effects given in Table 4.

³⁹Data on politicians and voters is collected in different years (voters are observed before the local politicians in each municipality). This is taken into account when predicting the probabilities by using the values at the time when voters are observed for both groups. Using the values at the time of observation does not qualitatively change the results, however.

⁴⁰The chosen bandwidth is the width that would minimize the mean integrated square error if data were in fact Gaussian and a Gaussian kernel were used. This bandwidth is the default chosen by STATA.

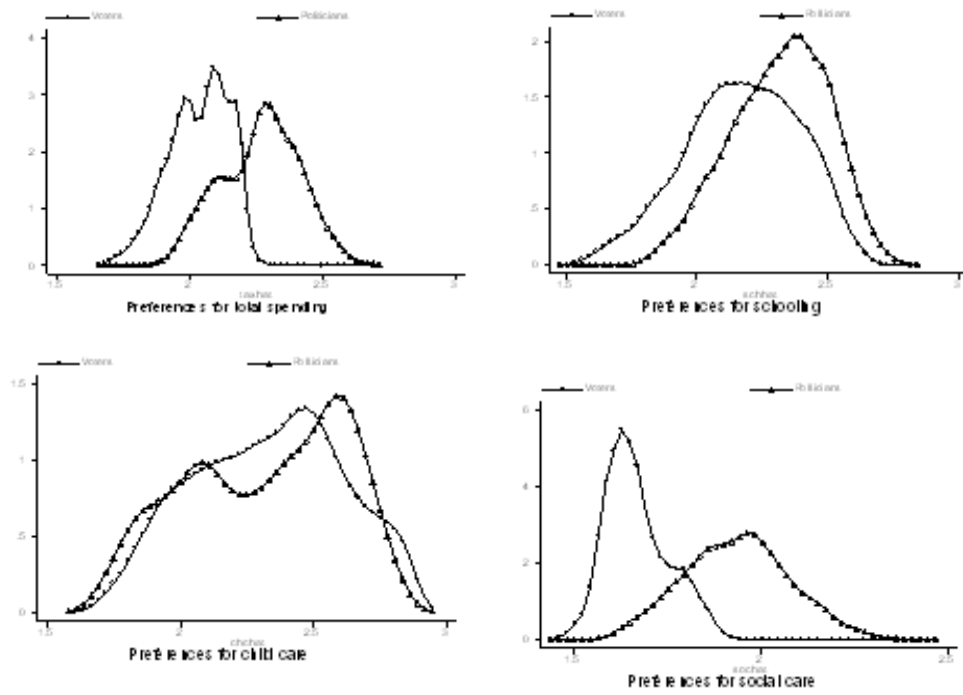


Figure 1: Kernel density estimations on preferences for voters and politicians