



Public employees as swing voters: Empirical evidence on opposition to public reform *

JØRN RATTSSØ & RUNE J. SØRENSEN

Department of Economics, Norwegian University of Science and Technology (NTNU), N-7491 Trondheim, Norway; e-mail: Jorn.Rattso@svt.ntnu.no; Norwegian School of Management (BI), N-1301 Sandvika, Norway; e-mail: rune.sorensen@bi.no

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Abstract. Reform offers economic gains for society at large, but can represent a threat to the interests of public employees. Public sector reform faces opposition from voters employed in public sector. Norwegian data allow for an analysis this interpretation. Survey data show that public employees prefer less reform than the rest of the population. The voting behavior of public employees is more sensitive to reform than is that of other voters (the swing voter hypothesis), and hence: shares of public employees in a local jurisdiction have a negative impact on the probability of reform.

1. Introduction

Public sector reforms, in particular the introduction of competition in service production, are controversial. While the overall social benefits of reform are expected to be positive, some groups may suffer costs. Public sector employees and their trade unions strongly oppose reform in many countries. In Scandinavia, attention has focused more broadly on the role of the ‘welfare coalition’ in reform politics – i.e. on groups of voters dependent on the welfare state via jobs or transfers. This paper offers an empirical analysis of the role of the welfare coalition in reform decisions.

Studies show that competitive reforms in the public sector generally generate cost reductions (see meta study of Domberger and Jensen, 1997). At the same time reform processes are limited and slow in most countries, and large parts of the public sector are still organized according to the old monopoly service model. But if reform is such a good idea, why does it not happen more? The literature has looked for explanations in the political decision making system. The two most prominent theories posit status quo bias related

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to uncertainty and conflicting interests resulting in delays, the former theory developed by Fernandez and Rodrik (1991), the latter by Alesina and Drazen (1991). While status quo bias and conflicting interests are certainly part of the explanation, they do not offer a complete story of political decisions. We suggest addressing these issues in the context of an electoral model of politics.

Recent theories of political decision making suggest that minority voter groups may have a blocking influence. Starting out from the standard median voter model, the political explanation implies that the 'weighted average voter' determines community fiscal policy. The early version of this is the probabilistic voting model where vote-maximization on the part of the incumbent implies that the marginal expected votes of the different voter groups determines their political impact. This interpretation of interest groups and electoral politics is developed by Coughlin, Mueller, and Murrell (1990) and is related to Holtz-Eakin's (1992) demand model of fiscal policy. In principle all voters matter for the formation of fiscal policy, but some voters' response to policy proposals matter more than others. Applications cover many areas of fiscal policy, and have been vigorously promoted to understand tax structure (Hettich and Winer, 1988).

Richer political models have emerged in a recent literature addressing policy formation and redistribution policy. While the probabilistic voting model addresses the behavior of the incumbent, the vote purchasing models of Lindbeck and Weibull (1993), and Dixit and Londregan (1998) introduce two parties determining their policies in a Nash-equilibrium of electoral competition. Responsiveness of voters again comes out as the main determinant of fiscal policy; politicians will offer tactical allocation of transfers to groups and regions with concentrated and responsive voters, also called swing voters. Both approaches imply that small groups can have big impact on policy.

The limited empirical literature in this area has basically addressed redistribution policy and has been inspired by Wright's (1974) analysis of the New Deal. He found that political rather than economic factors explain New Deal spending, and introduces the concept of 'political productivity' of a state as it relates to number of electoral votes, historical variability of vote shares, and the closeness of elections. Recent empirical studies taking benefit of tactical redistribution have exploited data about grants distribution (including Case, 2001, on Albania; Stømberg, 1998 on the U.S. – [New Deal]; Johansson, forthcoming; Dahlberg and Johansson, 2002 on Sweden). All these studies indicate that grants are tactically motivated and reflect the responsiveness of voters.

We propose another empirical look at the swing voter model. We link the responsiveness of voters to reform, which has consequences for distribution among electoral groups. The main hypothesis developed is that the welfare

coalition is responsive to reform proposals and may, therefore, have political power to hold back reform. The hypothesis is developed in a theoretical framework in Section 2. We have three types of empirical material to throw light on the issue of welfare coalition and reform. In Section 3 we present survey data on voters showing that the welfare coalition is more negative to reform than the rest of the voters. In Section 4 we show that the welfare coalition is more responsive to reform proposals than the rest of the electorate. Finally, in Section 5 we show that the size of the welfare coalition, in particular the share of public employees, impacts on the actual reform process of Norwegian communities.

2. Voter responsiveness and public sector reform decision

Our theoretical framework emphasizes electoral behavior or 'pre-election' politics. Voter characteristics are assumed to be important for the political outcome. Political competition induces parties to adjust to electoral preferences. As will become clear, this competition may imply that small groups of voters may achieve relative strong influence by being responsive.

The theoretical framework is a modification of Johansson's (forthcoming) model of tactical redistribution, which is based on the work of Lindbeck and Weibull (1993) and Dixit and Londregan (1998). The political system is described by two parties competing for the political leadership of the community, party A and party B. They are assumed to have identical preferences for the welfare of the voters, but they compete in their interest of having political power. To have power they need to win votes. They set reform policy to reach the combined goal of social welfare and political power.

To highlight the conflicting interests, we specify reform as pure redistribution. We assume for simplicity only two groups of voters: members of the welfare coalition (w) are financed by taxes, and voters in the market alliance (m) are financed by market transactions. The groups comprise N_w and N_m voters respectively. Reform policy, notably privatization and/or competitive tendering, is described as a transfer from the welfare coalition to the market financed population. Details on the distributive coalitions will be addressed in the empirical part of the paper. The size of this transfer reflects the size of reform. The transfer is best understood as a public consumption benefit to the market financed population at the expense of a consumption benefit to the welfare coalition. Reform is assumed to cause a collective disutility to the welfare coalition. No real effects of reform are identified below and attention is fully concentrated on political implications.

The voters in each group are identical, and members of the welfare coalition have income Y_w , while the market financed population has income

Y_m . When reform is measured by R , the consumption benefit of the voters in each of the two groups consequently can be written $C_m = Y_m + R$ and $C_w = Y_w - R$. Voters have preferences for their own consumption, C_m or C_w , but also have preference for ideology. Ideological orientation of the two parties is described independently of the reform policy R . We define X_i as voter i 's preference for party A over party B. The distributions of ideological preferences in the two groups are described by distribution functions $F_w(X)$ and $F_m(X)$ with associated density functions $f_w(X)$ and $f_m(X)$.

The individual voter compares the utility of consumption outcomes of the reform policies proposed of the two parties and the ideological factor. The utility of consumption for each group depends on reform policy, and the utility functions related to parties A and B are $U(C_m^A)$ and $U(C_m^B)$ for the market financed and $U(C_w^A)$ and $U(C_w^B)$ for the welfare coalition. The utility functions have standard properties with positive and declining marginal utilities. The voters will vote for party B if the utility gain (loss) of party B reform policy R^B compared to party A reform policy R^A is larger (smaller) than the ideological preference for party A:

$$\begin{aligned} U(Y_m + R^B) - U(Y_m + R^A) &> X^m \\ U(Y_w - R^B) - U(Y_w - R^A) &> X^w \end{aligned}$$

F_m denotes the cumulative distribution function for X^m , and it follows that the vote share for party B among market financed voters can be written:

$$F_m[U(Y_m + R^B) - U(Y_m + R^A)]$$

The vote share for party A among market-financed voters consequently is $1 - F_m[\cdot]$. The vote shares for the welfare coalition are equivalent.

The objective functions of the parties are a combination of social welfare and desire for power. When α is the weight given to social welfare, the objective function of party B can be written:

$$\begin{aligned} &\alpha [N_m U(Y_m + R^B) + N_w U(Y_w - R^B)] \\ &+ (1 - \alpha) [N_m F_m(U(Y_m + R^B) - U(Y_m + R^A)) \\ &+ N_w F_w(U(Y_w - R^B) - U(Y_w - R^A))] \end{aligned}$$

Two extreme objective functions are captured by $\alpha = 1$, maximization of social welfare, and $\alpha = 0$, maximization of political power. Party B sets its reform policy R^B so that the objective function is maximized (U_c denotes the derivative of the utility function):

$$\begin{aligned} & \alpha [N_m U_c(C_m^B) - N_w U_c(C_w^B)] \\ & + (1 - \alpha) [N_m f_m (U(C_w^B) - U(C_m^A)) U_c(C_m^B) \\ & - N_w f_w (U(C_w^B) - U(C_w^A)) U_c(C_w^B)] = 0 \end{aligned}$$

The first order condition for party B reform policy is easy to interpret under the two extreme cases. When $\alpha = 1$, the social welfare maximization implies:

$$N_m U_c(C_m^B) = N_w U_c(C_w^B)$$

Reform policy R^B will be set so that the marginal utility of consumption is equal between the two groups, taking into account their size. When $\alpha = 0$ and the reform policy is set only to maximize votes, this condition must be satisfied:

$$N_m f_m (U(C_m^B) - U(C_m^A)) U_c(C_m^B) = N_w f_w (U(C_w^B) - U(C_w^A)) U_c(C_w^B)$$

In this case, marginal utilities of consumption between the two groups should be equalized taking into account the density of each group. The group with the highest density will have an advantage over the other group, reflecting the responsiveness of this group to reform policy. If the welfare coalition is very responsive to reform proposals, represented here as high density, the reforms proposed by party A are expected to be small. Differentiating the first order condition with respect to policy and welfare coalition density in this case, we get:

$$\frac{dR^B}{df_w} = \frac{N_w U_c(C_w^B)}{N_m f_m U_{cc}(C_m^B) + N_w f_w U_{cc}(C_w^B)} < 0$$

Higher responsiveness and density of the welfare coalition, f_w , will reduce the ambition of the reform policy of party B.

It is easy to show that the first-order condition for party A is the same as for party B. The parties converge to the same policies since we have assumed that they share a common social welfare policy and the weight on social welfare α is exogenous. The game between the two parties is symmetric, and we will assume that the conditions for a unique Nash-equilibrium are fulfilled (depending on forms of utility functions and distribution functions).

This swing voter model has three important empirical implications for the welfare coalition. First, members of the welfare coalition are more negative to reform than the rest of the population. Reform is specified as a cost for the welfare coalition and a gain for the market financed population. Second, we derive from the model that more influence is given to the more responsive

voters. The strength of the welfare coalition will increase with its responsiveness to reform proposals. Third, if the welfare coalition is negative to reform and also responsive to reform proposals, we expect to observe a negative relationship between the size of the welfare coalition and the extent of reform.

3. Interview data: Reform attitudes among voters and politicians

Major reforms have been implemented in the Norwegian public sector during the 1990s. The central government has imposed competition in parts of the postal services, the telecommunication industry has been completely liberalized and electricity generation and distribution have been fully deregulated. Local governments have exposed significant parts of public transportation, infrastructure services and auxiliary services to competitive tendering. A few local governments have introduced competition and private service provision in old-age care and health care services. In child care there is a long tradition for private kindergartens. Primary schools are subject to extensive central controls, and very limited shares of pupils attend private schools.

Variation in local government reform across the country allows us to study how reforms correlate with changes in electoral preferences. Our data stem from two surveys designed to capture preferences of voters and local politicians/administrators. They offer information about differences in preferences among different groups of voters, notably the welfare coalition versus the rest, and make possible a comparison of voters' preferences with those of local politicians/administrators. The surveys form the basis for a statistical analysis of different preferences among voters.

In the evaluation of voter preferences, the respondents were asked to consider whether privatization was appropriate for different types of public services. Identical questions were used in a postal survey in 1988, and in telephone surveys in 1999 and 2001. In the Appendix we present more documentation about the survey. Table 1 displays the percentage that considers privatization of the service to be highly or fairly appropriate for eight public services.

People are increasingly supportive of privatization of welfare state services over time. Only reform in two services – child care and refuse collection/snow clearing – collected a majority support in 1988. In 1999, a majority of the voters preferred that four of the services be privatized, and this increased to five public services in 2001. The bottom row in Table 1 displays the average percentage in favor of privatization calculated for all the services. Support for privatization has increased from 41% in 1988 to 52% in 2001. Apart from a significant fall in support for privatization in child care services in 2001 as compared to sentiments in 1988 (all in all a modest fall

Table 1. Voters' attitudes towards privatization in Norway, 1988, 1999 and 2001. Percentage who considers privatization highly or fairly appropriate. Average score. (N).

Service	1988		1999		2001	
	Pct	Av	Pct	Av	Pct	Av
Child care, e.g. private kindergartens	77	0.35	78	0.35	69***	0.17***
Refuse collection and snow clearing	59	0.08	67***	0.17**	65**	0.12
Postal and telephone services	33	-0.30	53***	-0.05***	58***	0.01***
Health care, e.g. private hospitals and nursing homes	40	-0.21	51***	-0.07***	53***	-0.06***
Care for the elderly	36	-0.27	46***	-0.13***	50***	-0.06***
Education, e.g. private schools	30	-0.31	35*	-0.32	45***	-0.16***
Pensions and social security, e.g. private insurance	31	-0.33	29	-0.40*	43***	-0.21***
Fire protection	19	-0.53	25**	-0.52	28***	-0.44***
Average – all service sectors	41	-0.19	48***	-0.12***	52***	-0.08***

Source: National Survey (Bogen and Langeland, 1989), Norwegian School of Management BI/MMI (1999 and 2001).

Notes. Response coding: "Privatisation not appropriate" = -1, "Privatization less appropriate" = -1/3, "Privatization fairly appropriate" = 1/3, "Privatization highly appropriate" = 1. Tests of significance for percentages in favor of privatization (a score of 1 or 1/3) are two-tailed two-sample z-tests for the difference between the 1988-percentage, and the 1999 and 2001 percentages respectively. Tests of significance for average scores are based on Wald chi-square tests from ordinal logistic regressions with dummies for the two most recent polling periods as independent variables and the score ordered as described above as the response. The tests for averages over all service sectors (bottom row) are based on t-statistics for the mentioned polling period dummies in OLS regressions of respondents' share of sectors in which they favor privatization and their average score over all sectors respectively. In 2001 the cross sector measures include seven service sectors, as the 'Care for the elderly' question was put to a separate sample. *** p < 0.001; ** p < 0.01; * p < 0.05.

in the high support region), all other service sectors (and all sectors combined) experience significant and generally far greater increases in support for privatization over time.

Support for privatization is greatest in those sectors that traditionally have had a significant share of private providers. Child care and refuse collection/snow clearing are good examples of sectors with a large private component, while primary education and fire protection are sectors with extremely few private providers. Also, voter support of reform during the period has increased most in service sectors with a small private component, such as fire protection, primary education, and postal services and telecommunications. In addition, substantial changes are observed in health care services, old age care services, and pensions and social security. Note that changes have taken place both in service sectors that have been reformed (e.g., postal services, telecommunications), and in sectors which have not been reformed (e.g., primary education, fire protection). This pattern provides no clear-cut support for the status quo interpretation of popular attitudes.

The other survey questionnaire addresses a large sample of local politicians. The sample comprises all members of 120 municipal councils (out of 435) and all county councils except Oslo (due to the fact that Oslo is a combined municipality and county government). Responses were collected at the end of the local election period 1995–1999 (fall of 1998), and we obtained a turnout of 60%. Identical question formulations were applied in a survey questionnaire to all top administrators (rådmenn) in the municipalities. They were questioned about their attitudes towards competitive tendering of services, use of private providers of services and consumer discretion in the choice of service provider. The Appendix presents further information on the survey questionnaires and the wording of the questions. In Table 2 we present responses to these questions.

Voters are generally more inclined to support competitive tendering than elected politicians and chief administrators; they tend to be more positive towards the use of private firms or organizations to provide public services, and they are considerably more in favor of free consumer choice than council members and administrators. The only exception is that politicians and chief administrators are even more willing than voters to apply competitive tendering in refuse collection. Politicians and chief administrators are also inclined to use private organizations in child-care and refuse collection. As mentioned in the introduction, an influential approach has emphasized that citizens are antagonistic to reform and want to maintain the status quo (Fernandez and Rodrik, 1991; Lupia, 1992). According to our interview data it is hard to argue that elected representatives are more reform-friendly and that voters generally have held them back.

Table 2. Attitudes towards privatization and competition in public services among voters, elected politicians and local administrators. 1999. Percentage in favor of privatization/competition. (N).

Service	Competitive tendering			Use/funding of private firms/organizations			Free-consumer choice of service provider		
	Voters	Elected politicians	Chief administrators	Voters	Elected politicians	Chief administrators	Voters	Elected politicians	Chief administrators
Child care	59 (775)	43 (2638)	37 (318)	66 (809)	76 (2660)	82 (319)	89 (840)	67 (2654)	65 (318)
Primary schools	24 (808)	11 (2652)	6 (318)	37 (837)	22 (2648)	21 (318)	50 (852)	31 (2652)	30 (319)
Old-age care institutions	45 (791)	35 (2644)	33 (318)	49 (824)	45 (2650)	45 (318)	75 (870)	57 (2652)	42 (319)
Secondary schools	34 (785)	19 (569)	--	47 (820)	49 (568)	--	78 (871)	49 (564)	--
Hospitals ^a	43 (786)	26 (572)	--	49 (828)	42 (569)	--	73 (862)	68 (570)	--
Refuse collection	72 (829)	85 (2672)	94 (320)	55 (798)	82 (2539)	87 (312)	--	--	--
Road maintenance	70 (829)	73 (578)	--	51 (810)	--	--	--	--	--
Bus routes	79 (812)	75 (572)	--	70 (792)	--	--	--	--	--
Public transportation ^b	--	--	--	--	80 (2607)	88 (316)	--	--	--
					88 (570)				

Source: Norwegian School of Management BI/NIBR (1999), Norwegian School of Management BI/MMI (1999).

^aFigure for elected politicians' attitudes towards competitive tendering pertain to somatic hospitals only. Competitive tendering of psychiatric hospital services has the support of 17% of elected politicians (N = 572).

^bFigures for elected politicians' attitudes towards use/funding refer to support among municipal and county council representatives respectively.

The different preferences of members of the welfare coalition are investigated in a statistical analysis reported in Table 3. The analysis includes competitive tendering and the use of private sector providers in public service areas. Classifications of voter characteristics are related to voter attitudes to reform. The welfare coalition is separated into two groups, public employees and retired/unemployed dependent on public transfers. The estimates show that both voters employed in the public sector and retired/unemployed are significantly less sympathetic to the use of competition and private firms or institutions. This is in line with the idea that the welfare coalition opposes privatization and competition reforms. Similar results have been obtained on Swedish data (Wise and Szücs, 1996). Since the retired are old, we also control for age. The elderly are somewhat more skeptical towards competitive tendering and use of private sector providers than younger people, but the difference is not of much quantitative importance.

The welfare coalition also has an ideological aspect and the members are typically oriented towards the socialist parties. As shown in Table 3, when voters' party affiliation is included in the regression, most of the impact of public sector affiliation disappears (columns III). The impact of being retired or unemployed is substantially reduced when we control for party preference. It follows that the voters' preference for reform may be expressed by their voting behavior. In a parallel study of Norwegian local politicians, we find that representatives with a public sector background are less likely to support competition reform than representatives with a background in the private sector (Sørensen and Bay, 2002). But most of this is due to the fact that socialist parties have considerably more politicians with a public sector background than non-socialist parties.

Before the early 1970s, public and private employees did not systematically vote for different parties (Listhaug, 1997; Bjørklund, 1999). From the late 1970s on we can observe an increasing tendency for public sector employees to vote for left-wing parties, while private sector workers are more inclined to vote for the Conservative Party or the Progress Party. This voting pattern has become more prevalent during the 1980s and 1990s. The fact that public sector employees are more prone to vote for left-wing parties appears to signify the importance of ideological factors for reform politics.

In Table 3, we see that voters who are members of unions are less likely to support competition reform and privatization reform. Support for reform is significantly lower among members of the socialist trade union (LO). A very similar pattern exists at the elite level: local council members with a leadership position in a union are less likely to support competitive tendering and the use of private sector producers (Sørensen and Bay, 2002).

Table 3. Voters' attitudes towards privatization and competitive tendering of public services, 2001. Regression analyses (t-values in parentheses).

	Competitive tendering			Use of private sector providers		
	I	II	III	I	II	III
Intercept	1.499*** (43.169)	1.555*** (37.504)	0.999*** (12.638)	1.415*** (47.070)	1.468*** (40.819)	0.933*** (13.382)
Age less than 30 (=1)	0.022 (0.395)	-0.006 (-0.111)	0.020 (0.357)	0.127** (2.694)	0.102* (2.116)	0.091 (1.862)
Age greater than 70 (=1)	-0.147 (-1.849)	-0.155 (-1.961)	-0.162* (-2.033)	-0.208** (-3.018)	-0.217** (-3.154)	-0.253*** (-3.597)
Employed in public sector (=1)	-0.152** (-2.971)	-0.128* (-2.367)	-0.052 (-0.973)	-0.169*** (-3.811)	-0.142** (-3.024)	-0.077 (-1.625)
Retired/unemployed (=1)	-0.188** (-3.279)	-0.211*** (-3.675)	-0.151** (-2.638)	-0.134** (-2.697)	-0.155** (-3.107)	-0.075 (-1.482)
Trade union membership (LO) (=1)		-0.238*** (-3.805)	-0.199** (-3.229)		-0.204*** (-3.766)	-0.167** (-3.063)
Trade union membership (AF) (=1)		-0.193 (-1.765)	-0.204 (-1.942)		-0.081 (-0.856)	-0.047 (-0.504)
Trade union membership (others) (=1)		-0.007 (-0.126)	-0.013 (-0.243)		-0.042 (-0.857)	-0.034 (-0.699)
Left-right self placement scale (1 = far left, 10 = far right)			0.099*** (8.759)			0.092*** (9.280)
Adj. R ²	0.022	0.037	0.117	0.040	0.051	0.136
N	1006	1006	903	1006	1006	903

Source: Norwegian School of Management BI/MMI (2001).

Notes. Dependent variables are log (number of public services deemed suitable for exposure to competitive tendering + 1) and log (number of public services deemed suitable for privatization + 1) respectively. The survey included eight services for the first variable and seven for the second variable.

*** p < 0.001; ** p < 0.01; * p < 0.05

Finally, voters on the right-hand side of the political spectrum (measured by the 10-point self-placement scale) are more likely to support the use of competitive tendering and the use of private sector providers. This ideological component of reform can be identified in each of the services that are included in our response variables. For example, voters located on the left side of the ideological scale are less supportive of competitive tendering and the use of private sector suppliers in providing public infrastructure (refuse collection, road maintenance) than those on the right-hand side.

4. Interview data: Voter responsiveness to reform

A core assumption in the electoral model is that voters cast their ballots in response to election promises. In our context, the pre-election assumption implies that a party that declares that it wants to implement competitive tendering (or privatization) will get more or less votes. If most of the voters remain loyal to their party irrespective of the party's election promises, this indicates that pre-election politics is of lesser importance for privatization and competition reforms. This could either be due to the fact that voters do not regard the election promises as credible, or that voting is determined by other policy concerns.

On the basis of prior information about the voters' party preference, we first asked them to state whether they would change party should it want to privatize public services or submit public services to competition. We also asked whether they would remain loyal to the party should it declare that it would oppose privatization or the use of competition. Note that half the sample was inquired about 'privatization' and the others about 'competition'. We direct the reader to the Appendix for information on the detailed design of these survey questions.

We regressed the respondent's probability of changing party against a set of voter characteristics, particularly age, occupational status, trade-union membership, and political affiliation (the 10-point left-right self placement index). Respondents' opinions about privatization and competitive tendering were measured by two additive indexes counting the number of public services considered appropriate for privatization and competition respectively. As a control variable, we included a dummy-variable measuring whether the respondent was asked about 'privatization' or 'competition'. In Table 4, we display a set of logistic regression results showing the respondents' probability of switching party, contingent on the declared reform policy of the original party of choice (pro versus contra use of private providers/use of competition).

Table 4. Voters' propensity to switch political party in response to preferred party's position (pro/contra) on contracting out or privatization of public services, 2001. Logistic regression analyses (chi-squares in parentheses).

	I		II		III	
	Pro	Contra	Pro	Contra	Pro	Contra
Intercept 1	-1.463*** (67.956)	-1.503*** (71.337)	-1.571*** (58.380)	-1.289*** (41.697)	2.497*** (32.363)	-3.529*** (61.324)
Intercept 2	-0.617*** (13.581)	-0.370* (5.156)	-0.724*** (13.581)	-0.144 (0.584)	3.517*** (60.301)	-2.315*** (28.161)
Contracting out (=1)	-0.597*** (12.403)	0.006 (0.001)	-0.598*** (12.168)	0.004 (0.001)	-0.672*** (11.968)	-0.170 (0.864)
Age less than 30 (=1)	0.454* (4.428)	0.191 (0.761)	0.510* (5.259)	0.065 (0.082)	0.853*** (11.769)	0.042 (0.032)
Age greater than 70 (=1)	-0.127 (0.179)	-0.101 (0.107)	-0.876 (0.083)	-0.189 (0.365)	-0.529 (2.164)	0.055 (0.026)
Employed in public sector (=1)	0.706*** (12.158)	-0.569** (7.409)	0.633** (8.508)	-0.379 (2.810)	0.127 (0.273)	-0.222 (0.835)
Retired/unemployed (=1)	0.352 (2.219)	-0.409 (3.047)	0.379 (2.542)	-0.478* (4.080)	-0.233 (0.745)	-0.379 (2.135)
Trade union membership (LO) (=1)			0.327 (1.662)	-0.770** (7.676)	-0.131 (0.210)	-0.747* (5.996)
Trade union membership (AF) (=1)			0.286 (0.505)	-0.655 (2.110)	0.153 (0.122)	-0.663 (1.880)
Trade union membership (others) (=1)			0.134 (0.344)	-0.304 (1.762)	-0.065 (0.065)	-0.323 (1.789)

Table 4. Continued.

	I		II		III	
	Pro	Contra	Pro	Contra	Pro	Contra
Left-right self placement scale (1 = far left, 10 = far right)					-0.406*** (50.148)	0.123* (5.908)
Number of public sector services (+1) deemed suitable for privatisation (log)					-0.797*** (18.628)	0.622** (9.048)
Number of public sector services (+1) deemed suitable for exposure to competitive tendering (log)					-0.396* (6.025)	0.370* (4.415)
Gamma	0.231	0.147	0.225	0.210	0.569	0.395
N	607	607	607	607	581	581

Source: Norwegian School of Management BI/MMI (2001).

*** p < 0.001; ** p < 0.01; * p < 0.05

As to be expected, the term ‘privatization’ is politically more sensitive than the term ‘use of competition’. The voters are less inclined to change party in response to the use of ‘competition’ in public service provision than to ‘privatization’ of public services. No such difference exists when parties announce that they oppose the use of privatization and competition.

The analysis shows the importance of separating between public employees and the transfer dependent part of the welfare coalition. Occupational status has a significant impact on the probability of switching party. Voters employed in the public sector are more likely to change party when the party declares that it supports competition/privatization, and less likely to change party when it states that it rejects competition/privatization. Controlling for union membership (columns II) does not change this much. Public sector employees are also more prone to vote for left-wing parties. The effect is much weaker for the retired/unemployed, and we expect this to be related to the role of age.

When parties declare that they support the use of competition/ privatization, the younger voters are more inclined to change party than older voters. No age difference exists when the parties state that they oppose such reforms. This could imply that the political parties adjust their reform policies more according to the preferences of the younger voters. However, we know from Table 3 that reform preferences are quite similar for young and elderly voters. This means that we would not expect the age composition of a municipality to affect the likelihood of such reforms.

As to be expected, the probability of changing party (in response to a stated policy) is influenced by the respondent’s preferences, i.e., the extent to which she favors policies of competition or privatization. Like in Table 3, we find that ideology is important. If the party (first choice) states that it will support competition/privatization, the voters on the left-hand side of the left-right self-placement scale are more likely to switch party than those on the right. Conversely, if the party declares that it will oppose competition/privatization, the voters on the right-hand side of the political scale are most likely to change party. Liberalist voters are less sensitive to a status-quo policy (no competition or privatization) than socialist voters are to a reform policy (more competition or privatization). This asymmetry in voter behavior suggests that reform is a politically risky project.

5. Estimating the impact of swing voters on reform

The Scandinavian welfare states provide the welfare services in the public sector. Education at all levels, kindergartens, hospitals, care for the elderly and infrastructure services are mostly government monopolies. Much service

production has been decentralized to local authorities, but has been subjected to extensive national regulation. The national bureaucracy reaches from the relevant ministry down to the service provider at the local level. The governance system is a network of laws and regulations, and is dominated by professional norms and values. Producer interests are certainly in the front seat. The services are run as government monopolies, which are legitimized by local democratic institutions. The system is based on an optimistic evaluation of the advantages of combined bureaucratic control and local democracy. Neither market mechanisms nor inter-jurisdictional competition have been seen as adequate instruments for improving service efficiency and quality. Service production in Norway has been based on hierarchical control and limited performance incentives. Budgets have been allocated to institutions in incremental budget processes in which evaluation of results has been missing. Beginning in the mid-1970s, the major strategy has been to reform the government monopoly system from the inside. Elaborate systems of result measurement and performance evaluation have been developed. Financial incentives have been established and agency managers are assigned greater managerial discretion and responsibility.

Issues related to competition and ownership have gradually been set on the political agenda, and the monopoly service provision model now is under strong pressure. Patients look to private alternatives, if necessary abroad, when waiting lists at hospitals are too long. Parents look to private schools for their children due to worry about the quality of teaching in the public school system. Some local governments have opened up for contracting with outside providers, particularly in the infrastructure sector. Both government agencies and private organizations typically take part in competing, and the services are provided under detailed contract regulation by the local authority. Private suppliers then may produce services under public responsibility. Private companies and non-profit organizations may also be contracted without prior competitive bidding.

Few empirical analyses are available about the reform process. Dubin and Navarro (1988) present a formal model with two electoral groups – organized labor and other constituents – including a government seeking re-election. Both groups seek higher levels of a public good and a composite commodity. They have conflicting interests as to the type of market organization. Organized labor prefers municipal or private monopoly (private franchise), whereas other citizens prefer the more cost-efficient alternatives of competition and contracting. The government maximizes the utility functions of the two groups with their relative influence as weights. This leads to a qualitative choice model (multinomial logit model) where the probability of a particular organizational solution for household refuse collection can be analyzed

as a function of variables like party control and unionization in different communities.

López-de-Silanes, Shleifer, and Vishny (1997) argue that privatization involves a trade-off between achieving social goals (in-house government provision) and cost efficiency (private provision). In addition to this normative concern, governments prefer public ownership as this gives the ruling party greater scope for providing benefits to political supporters (see prior discussion in Shleifer and Vishny, 1994). The major recipients of such benefits are members of public sector unions. It is the pressure of voter preferences for lower taxes and lower public budgets that force governments to get rid of publicly owned institutions. The existence of clean-government laws is a core variable in the empirical analysis. Such regulations reduce the benefits of political discretion, and make it more attractive to contract out the service so that the private firm must bear the costs of compliance. The empirical analysis is based on data on service organization in U.S. counties in 1987 and 1992. They find that state clean-government laws promote privatization, that the political strength of the public unions discourage privatization, and that hard budget constraints encourage privatization. On the basis of these results, López-de-Silanes, Shleifer, and Vishny claim that politicians get political benefits from in-house government provision, which means that it is the electoral demands for lower taxes which make privatization more likely.

Two Scandinavian studies are relevant in this context. Hagen and Sørensen (1998) analyze privatization and competitive tendering in Norwegian local government. They document that most of these reforms have been initiated by central government policies and local fiscal austerity. The strength of the local unions has a negative influence on the likelihood of reform. Christoffersen and Paldam (2003) find that the share of the electorate receiving most of their income from public sources impacts negatively on the market orientation of Danish municipalities. The welfare coalition (consisting of public employees and non-working citizens) may have a decisive say in local politics and in particular issues of reform. The strength of the welfare coalition appears to be considerably more important than that of ideological factors.

Our empirical analysis of electoral influence on reform focuses on the role of the welfare coalition. The welfare coalition is measured by the share of public employees and the share of retired and unemployed in the local population. The interview data indicate first and foremost that public employees are responsive to reform policies, since the retired are elderly and have more stable political behavior. Public employees consequently are the key swing voter group in our data. Their influence is analyzed in a demand model of reform including the budget constraint of the local government, local eco-

conomic conditions for service production, and the party composition of the local council.

In the ensuing empirical analysis, we use the organizational database of the Ministry of Local Government. The data shows the use of competitive tendering in 2000, and this situation can be compared with the use of competition in 1996. The Appendix provides additional information about the database. The data enables us to measure competition reform during that period, and link it up to economic and political characteristics.

We have information about the number of services where each local government is free to use competitive tendering. As response variables, we measure the use of competitive tendering in infrastructure services (a maximum of 3 services) and in auxiliary services (a maximum of 7 services). Since some of the municipalities have made use of competition for some time, a better indicator of reform would measure the changes in the use of competitive tendering. By subtracting the number of services exposed to competition in 1996, we obtain two further measures of reform: the number of infrastructure services exposed to competitive tendering 1996–2000, and, the number of auxiliary services exposed to competitive tendering 1996–2000. These four reform indicators (REFORM) are analyzed in relation to variables describing voter characteristics (VOTERS) and background controls for the local budget (BUDGET), local economic conditions (STRUCTURAL), and party composition (PARTY). The estimated regression models are of the general form:

$$\text{REFORM} = a + b \text{VOTERS} + c \text{BUDGET} + d \text{STRUCTURAL} + e \text{PARTY} + f$$

The main budget control is exogenous per capita revenue of the local government. Local revenues come from central government grants and regulated income tax sharing. An important hypothesis in the reform literature is that fiscal crisis can promote reform, subject to a consolidation of political power (Alesina and Drazen, 1991:1173). To control for fiscal conditions, we include changes in local government revenue in the period 1994–1998 in the reform regressions. Another important control is local economic conditions affecting the effects of competitive tendering. Degree of urbanization represents a measure of the development of private markets. Finally we control for the seats share of each of the (major) political party constellations in the local council and the party fragmentation of the council. The ideological aspect of party politics may have an independent role in extensions of the model of Section 2.

When reform is measured as changes in the use of competitive tendering, those municipalities that already apply competition in all services cannot implement further reform. One set of the regressions includes the extent of

Table 5. Policies of competitive tendering in infrastructure and auxiliary services in 1999/2000 and changes since 1996. Regression analyses in parentheses).

	Infrastructure services						Auxiliary services						
	2000 level		1996–2000 change		2000 level		2000 level		1996–2000 change		1996–2000 change		
	I	II	I	II	I	II	I	II	I	II	I	II	III
Intercept	2.069** (2.653)	1.973* (2.139)	2.133* (2.120)	1.729 (1.421)	1.938 (1.804)	1.420** (2.618)	1.984** (3.119)	0.891 (1.235)	0.960 (1.093)	1.552* (2.184)			
Number of infrastructure/auxiliary services exposed to competitive tendering in 1996					-0.784*** (-8.753)								-0.780*** (-11.818)
Municipal centrality index (1998)	0.034 (1.567)	0.049* (2.160)	-0.002 (-0.083)	0.018 (0.640)	0.043 (1.696)	-0.008 (-0.527)	-0.017 (-1.112)	-0.029 (-1.450)	-0.039 (-1.885)	-0.033* (-1.992)			
Municipal income per capita in 1998	0.021** (2.777)	0.015 (1.913)	0.015 (1.543)	0.003 (0.308)	0.009 (0.962)	-0.014** (-2.728)	-0.011* (-2.127)	-0.013* (-2.015)	-0.013 (-1.760)	-0.011 (-1.940)			
Municipal income per capita in 1998 as proportion of municipal income per capita in 1994	-1.007* (-2.029)	-1.043* (-2.091)	-1.479* (-2.316)	-1.495* (-2.336)	-1.316* (-2.329)	-0.549 (-1.582)	-0.563 (-1.617)	-0.390 (-0.838)	-0.482 (1.024)	-0.525 (-1.381)			
Population share of public employees (1998)	-3.569* (-2.577)	-3.106* (-2.207)	-1.474 (-0.830)	-0.640 (-0.356)	-2.610 (-1.631)	0.529 (0.553)	0.048 (0.050)	1.011 (0.804)	0.635 (0.495)	0.471 (0.455)			
Population share of retired and unemployed (1998)	1.322 (1.267)	1.113 (1.007)	1.170 (0.885)	0.783 (0.555)	1.341 (1.076)	-0.115 (-0.159)	-0.365 (-0.478)	-0.089 (-0.094)	0.010 (0.010)	-0.071 (-0.086)			
Center parties' proportion of municipal council representatives (1995–1999)	0.383 (1.261)	0.834* (2.085)	0.732* (2.072)					-0.518* (-2.451)	-0.321 (-1.079)	-0.422 (-1.758)			

Table 5. Continued

	Infrastructure services						Auxiliary services									
	2000 level			1996–2000 change			2000 level			1996–2000 change						
	I	II	III	I	II	III	I	II	III	I	II	III				
Right wing parties' proportion of municipal council representatives (1995–1999)		-0.469 (-0.979)			-0.328 (4534)	-0.293 (-0.541)					-0.140 (-0.426)				0.404 (0.875)	0.134 (0.360)
Herfindahl index of municipal council fragmentation by party share (1995–1999)		0.777 (1.157)			1.664 (2.034)	1.248* (1.824)					-0.687 (-1.479)				0.467 (0.765)	-0.376 (-0.756)
Adj. R ²	0.031	0.041	0.014	0.014	0.041	0.253	0.024	0.036	0.002	0.008	0.354					
N	353	353	275	275	275	275	350	350	268	268	268					

Source: KRD (1996 and 2000), SSB (1998) and NSD (1995).

Notes. Dependent variables are 1) number of infrastructure or auxiliary services exposed to competitive tendering in 1999/2000 and 2) number of infrastructure or auxiliary services exposed to competitive tendering in 1999/2000 less the number of services in same category exposed in 1996. *** P < 0.001; ** P < 0.01; * P < 0.05

competition in 1996 as a control variable. A number of other factors can be assumed to be invariant across authorities, such as the basic institutional framework and the revenue generation system. The estimated OLS models are presented in Table 5.

The key finding is that the share of public employees in the electorate has a clear negative impact on the likelihood of competitive tendering in infrastructure services. The effect survives the inclusion of political controls, but is not identified for auxiliary services. The results corroborate our analysis of voter preferences (Table 3) and the analysis of voters' likelihood of switching party (Table 4). They are consistent with the argument that public employees have strong influence on reform politics because they are responsive voters.

The share of public employees may capture other aspects of the political process than preferences. The large number of public employees tend to be related to the unionization of the labor force and thereby a different channel of influence (see Tables 3 and 4). We have not been able to separate these effects in this data set. A number of previous studies have shown that unionization affect competition and privatization policies. Dubin and Navarro (1988: 229) find that union strength affects the organization of household refuse collection. The share of union members increases the probability of municipal production relative to provision by means of contracting. Lopez-de-Silanes, Shleifer, and Vishny (1997) address privatization policies in U.S. counties. They report that the fraction of county government employees in unions has a negative impact on the probability of using a private contractor, which further indicates that strong public sector unions deter privatization.

Extension of the model to capture voter preferences expressed through party representation does not add much to the understanding of reform. Despite the fact that privatization and use of competition are politically sensitive issues (ref. Tables 3 and 4), we find little evidence suggesting that party ideology affects the actual organizational choice. The result is also at odds with much research that has found ideology to be an important determinant of competitive bidding and privatization.¹ The minor role of political parties in promoting or impeding reform is consistent with the tactical swing voter model.

From a voter perspective, election promises cannot be seen as credible if changes in the economic situation may force the political leadership to implement reform or delay reform. This is an important control in our swing voter context. In principle, political parties can formulate election promises that are contingent on the economic situation, but this is hardly a viable option in real-world politics. If reforms have been delayed as a result of a war of attrition between political parties and public unions, a swift deterioration of fiscal conditions may trigger the implementation of reform decisions (Alesina and

Drazen, 1991). The political leadership can now present competitive tendering as a 'necessity' rather than an 'option'. In this context, most voters would be more willing to support efficiency-improving reforms (i.e., retrospective voting in a post-election politics setting) since further postponement would mean a deteriorating public service supply.

The present analysis provides strong support for the austerity hypothesis, particularly in the infrastructure sector. The municipal revenue level in 1998 relative to 1994 has a consistent negative effect on the likelihood of reform. This corroborates many of the studies reviewed in Section 3 (for further review, see Drazen, 2000: Ch. 10.8). Sørensen and Bay (2002) show that council members in municipalities with relatively low revenue growth are more likely to support the use of competitive tendering in public services. These results confirm the notion that economic crisis paves the way for an active political leadership.

Political fragmentation can be seen as a control for post-election politics in our econometric framework. We would not expect the size-composition of parties to affect policy outcomes in a pre-election world where parties can commit themselves to particular reform policies. When the political parties are unable to commit themselves, we may expect party effects (see the discussion of party trademarks in Persson and Tabellini, 1998). The Herfindahl index measuring party fragmentation can therefore be used to test the significance of the post-election model. In Table 5 (model specifications II and III) we observe that party fragmentation seems to hold back the use of competitive tendering in the infrastructure sector. This result is consistent with a large empirical political economy literature showing that political fragmentation affects fiscal outcomes (for an overview, see Kontopoulos and Perotti, 1999). The result supports Boix's (1997) cross-national analysis of privatization programs. He finds that divided governments are likely to maintain the status quo while unified governments produce policies that are consistent with their ideological disposition.

Finally, we expect that the probability of using competitive tendering will be influenced by potential variations in cost savings (economies of density in refuse collection, the existence of a geographically defined competitive market place). In Table 5, we observe a modest positive effect of urbanization (as measured by an index of centrality) on the amount of competition in the infrastructure sector, and no effect on reform as such. The centrality index has no impact on the use of competition in auxiliary services. This result deviates somewhat from the results obtained in a Danish analysis conducted by Christoffersen and Paldam (2003). The finding corroborates the results of Dubin and Navarro (1988: 230): they report that economies of density have

no bearing on the choice of municipal refuse collection versus contracting or franchise.

6. Concluding remarks

Public sector reform has traditionally been understood as a result of electoral preferences, and the role of voters has implicitly been interpreted in terms of pre-election politics. Voter preferences have been characterized by status quo bias, and politicians have been forced to hold back reform. This analysis challenges this interpretation within the electoral model. Analysis of survey questionnaires shows voters as more progressive than their elected representatives. Based on our data it is hard to argue that politicians are ahead of the voters.

We suggest an alternative interpretation of the electoral model. The welfare coalition relies on government financing, and public employees in particular play a key role in elections. We have documented how public employees prefer less reform and are more politically sensitive to reform proposals than other groups of voters. Based on our interview data, we have estimated the importance for reform of public employment. The results are consistent with the swing voter hypothesis.

The swing voter story is not the single explanation of reluctance to reform. We have also identified fiscal austerity as a decisive factor, in accordance with the Alesina-Drazen hypothesis of reform delay. The fiscal austerity finding indicates that post-election politics also may play a role. The influence of public employees also may be the result of strong public unions in a post-election setting. Future research should address such alternative interpretations of driving forces in public sector reform.

Notes

1. Ideology has usually been measured by the party composition of the executive. Examples are Boix (1997) and Lopez-de-Silanes, Schleifer and Vishny (1997). Our findings are in line with the Danish results reported in Christoffersen and Paldam (2003).
2. Available for downloading at the ministry's web site (in Norwegian only): <http://odin.dep.no/krd/norsk/velgtema/kommune/p10001006/index-b-n-a.html>
3. The former is the Norwegian Census Bureau equivalent, the latter an interdisciplinary service facility under the Research Council of Norway charged with several official responsibilities such as research documentation and advisement on privacy issues.

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Appendix with sources and definitions of analysis variables

Four main sources of data are utilized in our statistical analyses:

Opinion polls: *MMI (2001), MMI (1999) and Scan Fact (1988)*

First there is population data from three representative sample surveys conducted by the Norwegian pollster companies ScanFact (1988) (N=997) (reported in Bogen and Langeland, 1989) and MMI (1999 and 2001) (N=958 and 1006 respectively). Four relevant questions gauging the Norwegian population's opinion about public sector reform were asked. First, in all three surveys, there is the following question:

“It has been argued that a number of societal responsibilities may be privatized, i.e., transferred to private organizations or become a private responsibility. For each of the following services, how appropriate do you consider privatization in excess of today's level to be?”

Respondents' valid answers to this question were recorded on a scale ranging from “highly appropriate” through “fairly appropriate” and “less appropriate” to “not appropriate”. Results based on this question are reported in Table 1, and the question from the 2001 survey also forms the basis of the variables labeled “Use of private providers” and “Number of public sector services deemed suitable for privatization” in Tables 3 and 4 respectively. In counting the number of services deemed suitable for privatization (as is done in Tables 3 and 4) a response of either “highly appropriate” or “fairly appropriate” renders the service “suitable” for privatization.

Next, from the 1999 and 2001 surveys there is this question:

“For each of the services read back, do you think that competitive tendering should be applied in advance of any decision on who is to provide the service, or do you think that the service should be provided by government agencies without the use of competitive tendering, or do you have no opinion about this?”

Respondents' valid answers were recorded as “should be competitive tendering” and “should not be competitive tendering”. Results based on the 1999 question are reported in Table 2, and the question from the 2001 survey also forms the basis of the variables labeled “Competitive tendering” and “Number of public sector services deemed suitable for exposure to competitive tendering” in Tables 3 and 4 respectively.

Then, from the 1999 survey there is this question:

“For each of the services read back, do you think that the government to some extent should fund volunteer organizations and/or private companies, or do

you think that the government should provide the service altogether, or do you have no opinion about this?"

Respondents' valid answers were recorded as "should fund to some extent" and "should altogether be provided by government". Results for this question are reported in Table 2.

Finally, again from the 1999 survey, there is this question:

"With reference to public services, do you think that one should be allowed to freely choose which institutions to use in the following service areas, or do you think that the government should decide upon this on the basis of certain criteria, or do you have no opinion about this?"

Respondents' valid answers were recorded as "free choice" and "government should decide". Results for this question are also reported in Table 2.

In the 2001 survey respondents disclosing their political party of preference were also asked whether that party's position on public sector reform would cause them to switch parties:

"Should this party [i.e. respondent's preferred party] take on a policy of public service privatization in general, would you still vote for it, or would you vote for another party?"

and

"Should this party [i.e. respondent's preferred party] go against a policy of public service privatization in general, would you still vote for it, or would you vote for another party?"

One half of the respondents answered the above pair of questions, while the other half answered the same questions with "exposure to competition" substituted for "privatization". Respondents' valid answers were recorded as "vote for another party", "uncertain" and "still vote for party" (ordinarily coded in that order in the analyses of Table 4).

Naturally, all other explanatory and background variables made use of in Tables 3 and 4 stems from the above-mentioned surveys. All results are weighted according to geography, age and gender.

Surveys among elected politicians and municipal chief administrators:

NIBR (1999)

There are two surveys covering elected politicians responses to questions about competitive reform, one surveying municipal council representatives in 120 randomly selected municipalities out of a total of 435 municipalities (N=2706 and

a turnout of 64%), and another surveying representatives in all nineteen Norwegian counties (N=1404 with a turnout of 62%). Another survey covers the responses of municipal chief administrators. All surveys were conducted by the Norwegian Institute for Urban and Regional Research (NIBR) in late 1998/early 1999. There are three relevant questions (with identical wording across all surveys), the results for which are reported in Table 2 (politician survey results are weighted according to survey wide representativeness of respondents' party group):

“In the political debate it is sometimes maintained that municipal/county services should be exposed to competition. For the following services areas, do you think that competitive tendering should be applied in advance of any decision on who is to provide the service?”

Respondents' valid answers were recorded as “should be competitive tendering” and “should not be competitive tendering”.

“In the political debate it is sometimes maintained that one should increase the scope for volunteer private/private companies in the purchase of municipal/county services. For the following service areas, do you think that the municipality/county to some extent should fund volunteer organizations/private companies, or do you think that the municipality/county should provide the service altogether?”

Respondents' valid answers were recorded as “should fund to some extent” and “should altogether be municipal/county responsibility”.

“In the political debate it is sometimes maintained that consumers should have greater freedom of choice when it comes to public services. Do you think that consumers should be allowed to freely choose which institutions to use in the following service areas, or do you think that the municipality/government agencies should decide upon this on the basis of certain criteria?”

Respondents' valid answers were recorded as “free choice” and “municipality/government should decide”.

Surveys among municipal administrators: KRD (1996) and KRD (1999)

Finally there is the Ministry of Local Government's (KRD) Organizational Database (organisasjonsdatabasen) with data for 1999/2000 and 1996.¹ The database covers municipal administrators' responses to various questions about municipal political, administrative and auditing practices, among them whether competitive tendering predominates in the following eleven services in 1999/2000: water supply, real estate management, road maintenance and snow clearing, refuse collection and disposal, school cleaning services, school janitorial services, nursing home cleaning services, nursing home laundering services, kindergartens, municipal central administration catering services, management of swimming facilities, institutionalized nursing

services and residential nursing services. In 1996 a similar question asked whether competitive tendering predominates in electrical power production and distribution, water supply, housing policy management, refuse collection and disposal, laundering services, cleaning services, catering services and cinemas. The Norwegian Institute collected the data in these surveys for Urban and Regional Research (NIBR) and Statistics Norway (SSB) in late 1999/early 2000 and in 1996 respectively. In both cases the wording of the relevant question was as follows:

“Is provision of the greater portion of the particular service listed below awarded providers following initiatory rounds of bidding?”

Responses to this question form the basis for both the dependent variables and the 1996 level control variable in the analyses presented in Table 5: from the 1999/2000 survey, water supply, road maintenance and snow clearing and refuse collection and disposal go into *infrastructure services*, whereas real estate management, school cleaning services, school janitorial services, nursing home cleaning services, nursing home laundering services, municipal central administration catering services and management of swimming facilities are grouped into *auxiliary services*. From the 1996 survey the two relevant *infrastructure services* are refuse collection and disposal and water supply, and the three relevant *auxiliary services* were catering, cleaning and laundering services.

Municipal level background data: SSB (1998) and NSD (1995)

Independent variables used in analyses in Table 5 are by and large simple enough raw figures provided by Statistics Norway (SSB) and Norwegian Social Science Data Services (NSD)² (the latter with respect to variables based on municipal council party representation). Some notes are warranted, however:

- Reported municipal population is population over the age of sixteen. All variables presented as shares or proportions of municipal population are based on this definition of the term.
- Municipal income per capita is the sum of income and property tax revenue and state block grants divided by the size of the population.
- Right-wing parties’ proportion of representatives measures the proportion of Conservative Party and Progress Party representatives in the municipal council.
- Center parties’ proportion of representatives measures the proportion of Christian Democratic Party, Center Party and Liberal Party representatives in the municipal council.
- The Herfindahl index measures municipal council fragmentation by party share as

$$\sum_{i=1}^n p_i^2$$

there being n parties, with shares p_1 to p_n , represented.

- Share of public sector employees is the number of municipal, county and state employees in proportion to the population.
- The municipal centrality index is a Statistics Norway (SSB) standard for codifying municipalities according to their interior population concentrations and their proximity to centers of greater population. It takes on the following seven values:
 1. Sparsely populated (population center(s) of less than 5,000 inhabitants) in fair distance from greater population center (more than 50,000 inhabitants).
 2. Sparsely populated in short distance from greater population center.
 3. Contains small population center(s) (5,000 to 15,000 inhabitants) and in fair distance from greater population center.
 4. Contains small population center(s) and in short distance from greater population center.
 5. Contains medium sized population center(s) (15,000 to 50,000 inhabitants) and in fair distance from greater population center.
 6. Contains medium sized population center(s) and in short distance from greater population center.
 7. Greater population center.